ELSEVIER

A review of research on tourism risk, crisis and disaster management: Launching the annals of tourism research curated collection on tourism risk, crisis and disaster management

Brent W. Ritchie*, Yawei Jiang

UQ Business School, University of Queensland, Brisbane, Australia

ARTICLE INFO

ABSTRACT

This article reviews 142 papers published between 1960 and 2018 on tourism risk, crisis and disaster management. The article (1) takes a thematic approach to synthesise past research focus and identifies gaps, (2) examines research methodologies employed, and (3) suggests future research and methodological approaches to help progress the field. The article also launches the *Annals of Tourism Research* Curated Collection on tourism risk, crisis and disaster management, which contains past and hot off the press work on the topic and will continue to grow as new articles on the topic appear in Annals.

Introduction

Risk is inherent in our daily lives in home and work contexts, and is also present when we travel. In simple terms risk includes concepts of uncertainty and potential negative consequences (Slovic, 1987), whereby something of value is lost (Chien, Sharifpour, Ritchie, & Watson, 2017). Risk can be considered from the perspective of a traveller, a business operator or a tourism destination. Risk can also be considered as comprising either (1) absolute or real risk, or (2) subjective perceptions of risk (Bauer, 1960). Subjective perceived risk is often the focus of tourism researchers, as it is the consumer or manager perceptions of risk that influence their decisions.

In a traveller context perceived risk can affect travellers' destination choice and travel behaviour (Reichel, Fuchs, & Uriely, 2007). Managers perceptions and attitudes toward risk has also shown to influence their crisis and disaster planning and response strategies (Wang & Ritchie, 2012). To delimit this review article we focus on large-scale risks, namely crises and disasters. Although we do not discuss the definitions and theoretical foundation of risk in detail, notions of perceived risk including uncertainty and negative consequences are embedded in our article. Readers are referred to Williams and Baláž (2015) for a detailed review of the theoretical foundations and definitions of risk and uncertainty in tourism.

The tourism industry and especially international tourism demand is acknowledged to be vulnerable to crises or disasters (Cró & Martins, 2017). This is because tourism is impacted by many external factors, including political instability, economic conditions, the environment and weather (Okumus, Altinay, & Arasli, 2005). The susceptibility of tourism industries has also been recognised by industry bodies and agencies. As a result a number of reports, templates and toolkits to help industry prepare and respond to crises and disasters have been published. Examples include Pacific Asia Travel Association (PATA) (2003) guide and subsequent follow up publication (Beirman & Van Walbeek, 2011) which provide a guide and templates for industry professionals. The UNWTO (2011)

provided a crisis communication toolbox, including insights and templates specifically concerning crisis communication and recovery marketing. Sectoral materials have also been produced, including hotel resilience strategies and guidelines (UNDRR, PATA, & GIRDM, 2015).

Although useful, for this review article we focus on academic journal papers related to crises and disasters, which threaten the viability of tourism businesses and destinations due to their scale and impact. Such events can create high levels of uncertainty and require urgent strategies to help businesses and destinations to respond and recovery from their negative impacts. The impact of crises and disasters on tourism can be complex based on their nature, magnitude and scale (Backer & Ritchie, 2017). Some incidents are over quickly and recovery periods can be short (i.e. terrorist attacks), while others such as natural disasters which damage infrastructure and communications (i.e. earthquakes), taking years for communities to recover. Response and recovery are likely to be different based on the nature and impact of the crisis or disaster. In some instances, the destination may not be directly affected by the crisis making it difficult to manage, such as the Ebola-induced tourism crisis in The Gambia (Novelli, Burgess, Jones, & Ritchie, 2018).

Pauchant and Mitroff (1992, p.15) define a crisis as a 'disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, its existential core'. A useful definition is provided by Sönmez et al. (1994, p.22) who stated that a tourism crisis is: 'any occurrence which can threaten the normal operation and conduct of tourism related businesses; damage a tourist destination's overall reputation for safety, attractiveness and comfort by negatively affecting visitors' perceptions of that destination; and, in turn, cause a downturn in the local travel and tourism economy and interrupt the continuity of business operations for the local travel and tourism industry by the reduction in tourist arrivals and expenditures.

Studies (Faulkner & Russell, 2001; Ritchie, 2004, 2009) distinguish between crises and disasters based on whether the cause is due to some internal organizational failure to act (a crisis) or an external event over which the organization has no control (a disaster). Natural disasters are natural hazards which affect people and property. These can include earthquakes, cyclones/typhoons, flooding and bushfire. Climate change has led to more extreme weather and increased the number and impact of natural disasters. For instance, in 2018, there were 281 natural disasters recorded across the world, resulting in 10,373 deaths, 61.7 million affected people, and US$160 billion in economic damage (CRED & UNISDR, 2019).

Although reviews of tourism crisis and disaster management have occurred, they have limitations related to scope and depth. First, Mair, Ritchie, and Walters (2016) focus only on post-crisis/disaster recovery strategies for tourism destinations and did not examine other management stages, such as planning and preparedness. In an increasingly crisis and disaster prone world, a focus on these stages is essentially to help businesses and destinations reduce vulnerability and build resilience in advance of crises and disasters. Second, a study by Jiang, Ritchie, and Benckendorff (2017) uses citation analysis and bibliometric visualisation tools to explore the network structure of the field. This provides a good macro level overview of the field and its development, but is unable to provide a detailed micro review of individual articles. This paper compliments these two review articles by providing a detailed in-depth review of 142 articles on tourism crisis and disaster planning and management from 1960 to 2018. The first section of this article provides an overview of the key findings and methodological approaches to research using a narrative synthesis approach. It then focuses on three key critiques based on gaps identified and poses future research topics under each of the themes. This helps us to identify suggestions for future research topics, prior to a short conclusion. In doing so it makes a unique contribution by helping to chart the evolution of the field and help guide future research directions.

Methodology

The review included tourism and hospitality journal articles published between 1960 and 2018 focused on tourism crisis/disaster management. Articles were selected from three sources: the Scopus database, *CiteSpace* and Google Scholar. Scopus has over 21,950 peer-reviewed journals (including more than 3600 open-access journals) and over 5000 publishers (Elsevier, 2017). It has over 1.4 billion cited reference dating back to 1970, which is on average 10%–15% larger than other database (Elsevier, 2017).

The search used the Scopus database across all tourism journal articles or reviews on the topic of tourism disaster and crisis management. The range of articles included those published between 1960 and 2018. The year 1960 was used as databases do not go beyond that year of publication. Key search words included: (a) 'tourism crisis' and (b) 'tourism disaster'. The initial data from Scopus included 1481 results (1355 articles and 126 reviews). After further screening of articles/reviews that are only from Tourism, Hospitality and Event Journals (37 journals selected from Scopus database in Appendix 1 - Supplementary Material), 495 documents were included after removing duplicates.

To complement this, Google Scholar and *CiteSpace* were also used to import papers. *CiteSpace* is a Java application designed for analysing trends and patterns in scientific literature (Chen, 2004). A co-citation network with 399 merged nodes was generated based on thresholds and articles in the network were taken for further screening. Google Scholar is the most comprehensive internet-based search engine and has been utilised in tourism studies (Benckendorff & Zehrer, 2013). In this paper, Google Scholar was used for searching supplementary data based on the raw Scopus dataset in order to improve the comprehensiveness of the data set.

A "Consideration Set" was created to first include all relevant articles to the review topic. It contained data from three sources:

(1) **166** articles selected from Scopus initial pool after reading the abstracts. Only those that focused on a 'destination/organization management' perspective were selected (excluding articles on forecasting tourists demand after a disaster/crisis, impacts on tourist behaviour, risk perception, dark tourism, etc.);

(2) **57** main co-citation articles were extracted from *CiteSpace* network after removing articles not from tourism journals and are not closely relevant to the review topic;

(3) **45** articles from Google Scholar add-on search, using keywords tourism disaster/crisis management to search for more articles related to the topic.

Many articles published on tourism crisis/disaster management have appeared in highly respected journals (Mair et al., 2016). Thus we only selected high journal papers based on the top 11 tourism and hospitality journals based on Mckercher, Law, and Lam (2006) (see Appendix 2 - Supplementary Material). Our study only reviewed (1) articles that were published before 2013, with more than 3 citations; and (2) all articles published after (include) 2013, without citation limitation. A threshold of '3 citations' for papers published before 2013 was based on McKercher and Tung's (2015) study, which found that about half papers (52%) published with 3 or less citation, while 75% of the papers published within the past 5 year has 3 or less citations due to shorter time periods for citations to occur. Following this no citation threshold was set for papers published between 2013 and 2018. Based on the selection criteria, 142 articles were identified for final in-depth review after removing duplicates.

Results

The Results section begins with an overview of the nature of the studies identified and focus areas, using the crisis and disaster management lifecycle (Faulkner, 2001; Ritchie, 2004). This is complimented by a summary of the main research approaches and methods used. The results then turn in the three main themes uncovered in the research. These three themes are critically discussed and future research topics posed to help guide future research under each theme. Appendix 3 in Supplementary Material provides a table detailing all of the 142 articles and their characteristics in chronological order.

Overview

The *Journal of Travel and Tourism Marketing* published the majority of papers on this topic, followed by *Tourism Management* and *Current Issues in Tourism* with more than 20 publications since 1960. Table 1 shows the number of articles across the type of tourism journals across 5-year periods. The largest publication period is between 2005 and 2009, with more than one third of total papers.

To provide a high level summary the three broad management stages of disasters and crises (Faulkner, 2001; Ritchie, 2004) were used to categorise the papers into: (1) preparedness and planning, (2) response and recovery, (3) resolution and reflection. Fig. 1 shows the percentage of each category in the papers. The most studied stages are '*Response and Recovery*' (55%) followed by '*Preparedness and Planning*' (13%), while 6% studied '*both Preparedness and Response/Recovery*'. A total of 15% of papers covered all management stages, while only 5% of papers focused on '*Resolution and Reflection*' or '*Resilience*'.

Key topic in each management stage were investigated and summarized in Table 2. The first stage '*preparedness and planning*' focuses on crisis management planning and strategies. Arguments focusing on moving from disaster response to reduction have been active in the past ten years (Becken & Hughey, 2013; Donohoe, Pennington-Gray, & Omodior, 2015; Ritchie, 2008; Scott, Laws, & Prideaux, 2008). A numbers of studies discuss crisis management planning and potential reasons for a lack of planning (Cioccio & Michael, 2007; Coles, 2004; de Sausmarez, 2004; Ghaderi, Mat Som, & Wang, 2014; Henderson, 1999b; Okumus et al., 2005; Orchiston, 2013). Others note influencing factors and predictors of tourism crisis planning, aiming to better understand the issue of inadequacy from a theoretical perspective (Pennington-Gray, Thapa, Kaplanidou, Cahyanto, & McLaughlin, 2011; Wang & Ritchie, 2012). Collaboration within and outside the tourism sector has been studied in order to understand and planning and preparation in tourism (Becken & Hughey, 2013; Donohoe et al., 2015; Morakabati, Page, & Fletcher, 2017; Pforr & Hosie, 2008). Another set of topics centre on risk analysis, forecasting and detection including studies covering scenario planning (Orchiston, 2012; Page, Yeoman, Munro, Connell, & Walker, 2006; Yeoman, Galt, & Mcmahon-Beattie, 2005), crisis signal detection (Paraskevas & Altinay, 2013), catastrophe assessment (Tsai & Chen, 2010, 2011) and loss probability estimates (Tsai & LinLiu, 2017).

The majority of focus for the '*response and recovery*' stage is recovery strategies from the perspective of government, industry/sector, and individual business. Although multiple strategies (e.g. marketing, product, market segmentation, media, physical and

Table 1
Journals and years publishing articles in this review.

Journal	Total	1985–1989	1990–1994	1995–1999	2000–2004	2005–2009	2010–2014	2015–2018
Annals of Tourism Research	10			1	2	1	3	3
Tourism Management	31	1	2	1	6	8	6	7
Journal of Travel Research	12			7		1	1	3
Journal of Travel & Tourism Marketing	35		1		8	21	3	2
Journal of Sustainable Tourism	5					1	2	2
International Journal of Tourism Research	7				2	2	2	1
Tourism Analysis	3					2	1	
Current Issues in Tourism	23			2	5	5	5	6
Cornell Hotel and Restaurant Administration Quarterly	7		2	1	2	1	1	
International Journal of Hospitality Management	7			1	2	2	2	
International Journal of Contemporary Hospitality Management	2					1		1
Total	142	1	5	13	27	45	26	25
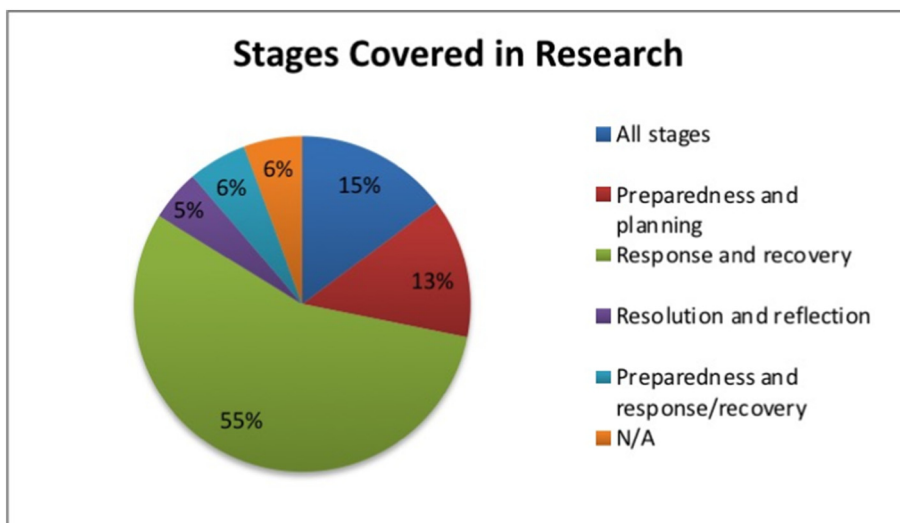
Fig. 1. Stages covered in research.

Table 2
Summary of topic areas in three major stages.

Stage studied	Topic areas
Preparedness and planning	• Proactive crisis management/response • Disaster reaction to reduction, mitigation, and preparedness • Crisis management plan and strategies • Tourism crisis/disaster planning strategies • Influencing factors and predictors of tourism crisis planning • Human resource development in crisis preparation (internal stakeholders) • Crisis leadership (internal stakeholders) • Tourism integration with emergency agency and disaster risk reduction (external stakeholders) • Risk analysis, forecasting tools, pre-assessment and detection • Crisis prevention methods • Risk assessment mechanism • Crisis learning
Response and recovery	• Tourism response and recovery strategies • Government policy response actions • Physical and financial recovery • Tourism reconstruction • Crisis/disaster communication/public relationships • Post-crisis/disaster marketing strategies and campaign • Tourism market recovery • Tourists' misperception/destination image/(re)-positioning • Press response/media and marketing • Marketing message • New market segmentation • Resource management (HR, finance) • Community collaboration • Small business recovery/business resilience • Recovery strategies measurement
Resolution and reflection	• Crisis/disaster learning • Organizational learning • Knowledge management • Destination/enterprise resilience

financial resources) have been discussed in different countries, research across countries is limited. As tourism is largely affected by physical infrastructure and destination image/reputation impacts, a large number of studies focus on post-crisis/disaster marketing, positioning, messaging and media management (Luo & Zhai, 2017; Möller, Wang, & Nguyen, 2018). Literature on business response and recovery are limited despite the prevalence of micro and small businesses in tourism. It is noteworthy that discussions on the 'resolution and reflection' stage are significantly lacking not only in numbers but also in spread of topic areas (Chowdhury, Prayag, Orchiston, & Spector, 2018; Prayag, Chowdhury, Spector, & Orchiston, 2018).

Research approaches and methodology

In terms of research approaches, methodologies and methods employed in our review dataset, *conceptual research* account for around 17% (24 out of 142 papers). Literature reviews and systematic reviews were two main research methods used in conceptual research. Literature reviews were widely used to: (1) summarize different types of crises/disasters in tourism and their impacts on the industry (e.g. Prideaux, 1999; Sönmez, Apostolopoulos, & Tarlow, 1999), (2) define the nature of crisis and disaster management in tourism (Laws & Prideaux, 2005; Santana, 2004), and (3) provide research agenda for future research (e.g. Carlsen & Liburd, 2008; Mair et al., 2016). Systematic reviews were commonly used to develop research framework (e.g. Faulkner, 2001; Pennington-Gray, 2014; Ritchie, 2008) and incorporate new concepts/theories from other disciplines (e.g. Blackman, Kennedy, & Ritchie, 2011; Blackman & Ritchie, 2008; Ritchie, 2004). As outlined earlier bibliometric visualisation is a more recent and novel approach to analyse the structure of the tourism crisis and disaster management field (Jiang et al., 2017).

Empirical research account for around 83% (118 out of 142 of papers) in our dataset. Most of the empirical research used a case study approach studying (1) a single crisis and disaster case (i.e. 9–11 terrorism attack, Christchurch earthquake, Cyprus political unrest, Asian Financial Crisis); (2) single tourism destination or region, and/or (3) single tourism type or sector such as cruise tourism, horseback tourism, adventure tourism, and the hospitality sector. Multiple case studies are seldom used to compare different types of crises and disasters, or to compare how different tourism destination/region or sectors respond or recover from crises and disasters.

Qualitative research methodologies were dominant in our review. Main methods included semi-structured interviews and secondary documentation analysis. Interview samples for crisis and disaster studies were mainly tourism business owners, managers, or staff (e.g. Anderson, 2006; Campiranon & Scott, 2014; Paraskevas & Altinay, 2013), experts with knowledge (Orchiston & Higham, 2016; Paraskevas & Arendell, 2007), or tourism authorities and policy-makers (Boukas & Ziakas, 2012). Secondary documents were usually obtained from (1) corporate data, tourism policy reports, annual reports by the local council (e.g. Boukas & Ziakas, 2012; Çakar, 2018), (2) public information on social media such as Facebook, Weibo (e.g. Luo & Zhai, 2017; Möller et al., 2018), and (3) press release information from online tourism websites, magazines and newspapers (e.g. Avraham & Ketter, 2017).

Quantitative studies relied more on questionnaires, experiments and scenario design. Data were mainly obtained from the following sources and included local residents, tourism operators, and tourism authorities:

1) online research panel company (for questionnaires) (e.g. Hajibaba, Karlsson, & Dolnicar, 2017; Walters & Mair, 2012);
2) national online surveys (e.g. Wang & Ritchie, 2012);
3) business survey on hotels, travel agents (e.g. Alonso-Almeida & Bremser, 2013; Orchiston, Prayag, & Brown, 2016);
4) time series or aggregated data of tourism demand and visitor arrival analysis (Huang & Min, 2002; Okuyama, 2018); or
5) various public economic and political data source (e.g. bureau of statistics for economic and performance analysis) (e.g. Blake & Sinclair, 2003; Ivanov, Idzhylova, & Webster, 2016).

Although observational (ethnographic) methods were limited (e.g. Çakar, 2018; Prideaux & McNamara, 2013), they could be incorporated in future studies to gain a better understanding of the ways in which tourism stakeholders make decisions. This could include participatory observation of meetings and workshops. Moreover, longitudinal study (Dahles & Susilowati, 2015) was also seen to be lacking to track business performance and outcomes from post-crisis or disaster strategies in tourism. A longitudinal approach can also provide more accurate and objective measures of outcomes rather than relying on subjective perceptions, which are prone to social desirability bias.

Critical analysis

A further narrative analysis of the data has enabled the authors to identify limitations in the current evolution of the field. The three main critiques and research gaps in the literature were considered as: (1) a lack of conceptual and theoretical foundations, (2) lack of empirical testing of models/theory, and (3) unbalanced research theme coverage. We use the metaphor of a tree and argue that the foundation and roots of the tree must be strong (theory/concepts) in order to support the strong growth of the tree (the branches or research sub-themes). We argue that the sub-fields are currently unbalanced and may lead to an unhealthy field (tree) in the future if not corrected.

Lack of conceptual and theoretical foundations

Given the increasing interest in tourism crisis/disaster management, several authors have attempted to better understand crises and disasters based on their causes, nature and magnitude. Studies often do not disclosure the nature of crisis/disaster when discussing their empirical research findings, which as outlined earlier, tend to focus on response/recovery strategies in individual case studies. An understanding of the *nature* (intrinsic vs. extrinsic; human-induced vs. natural), *type* (biological, technological, economic, or climatic), and *scales* (local, regional, or national) are essential to gain both deeper insights from research studies and provide practical recommendations for managers.

Understanding the *nature* of crises and disasters can better help in their identification and management, yet research in tourism tends to ignore the type and nature of crises and disasters. Santana (2004) establishes a crisis matrix to group different crises using two dimensions of *type of crisis* (socio-economic, nature/technology) and *level of severity* (normal, severe). Yu, Stafford, and Armoo

(2006) propose three broad categories of crises threatening tourism businesses based on the types of '*root causes*' such as *external* (physical or human/social) vs. *internal* (e.g. management failure). de Sausmarez (2007) argues that grouping crises based on their triggers is more useful for crisis planning and management as this can provide insights to reduce vulnerabilities and build resilience. Crises can be categorized as endocrisis (triggers from within the sector) with a gradual change, or exocrisis (triggers from outside the sector) which are hard to anticipate. The collapse of the Thai baht in July 1997 triggered an endocrisis in Thailand's financial sector. This resulted in an exocrisis for the tourism sector, according to de Sausmarez (2007).

Typologies can help differentiate the impacts of crises and developing corresponding management strategies (Miller & Ritchie, 2003; Zeng, Carter, & De Lacy, 2005). Racherla and Hu (2009) built a crisis matrix based on two indicators: '*probability of occurrence*' and '*level of control*'. Four quadrants were then outlined as unexpected crisis (e.g. terrorist attacks, earthquake), conventional crises (e.g. economic downturn), tractable crisis (e.g. rampant inflation), and extraneous crisis (e.g. fire, food poisoning). Past research has studied a variety of crises and disasters with detailed discussion on their negative impacts, such as natural disasters (Durocher, 1994; Pottorff & Neal, 1994), political insecurity (Ioannides & Apostolopoulos, 1999; Mansfeld, 1999), financial crises (Henderson, 1999a, 1999b; Prideaux, 1999) and Epidemics (Chien & Law, 2003; Tew, Lu, Tolomiczenko, & Gellatly, 2008). However, few studies have compared these impacts and discussed strategies based on crisis and disaster typologies. Zeng et al. (2005) tried to distinguish crises into five categories and discussed their primary effects on tourism, and key factors that influence recovery time. Strategies were also discussed for different categories. For example, they argue that key management issue for crises involving infrastructure destruction (e.g. natural disaster or war) is to develop a reconstruction strategy and a marketing strategy to rebuild consumer confidence. While more comprehensive strategies of media management and marketing as 'business as usual' are more important for crises that impact perceptions of risk (epidemic or civil strife).

Impacts of crisis also depend on their *scale* (Laws & Prideaux, 2005). Williams and Baláž (2015) argue that analysis of tourism risks at different scales should be undertaken to deepen our understanding of crises and disasters and their impacts. At the local level the impacts of a crisis (e.g. unserviceable infrastructure in a period of time) is localized and may have little effect nationally. At the regional level impacts can be felt in regions and may lead to impacts for the nation. For instance, foreign visitors substitute their initial choice for other destinations, such as the case of the 2004 Florida Typhoons. At a national level, crises, such as the 2002 Bali can have profound impacts on inbound tourism to Bali and Indonesia. Apart from considering the '*vertical scale*' of crisis/disaster geographically, the '*horizontal scale*' or connections across sectors cannot be ignored tourism comprises a set of industries. A crisis in one industry sector can ripple into other sectors (Cohen & Neal, 2010). Huang, Tseng, and Petrick (2008) study of the Taiwan Earthquake and Novelli et al. (2018) study of The Gambia and Ebola show that both a lack of planning and negative media coverage can cause a crisis for the tourism industry to spread geographically. Research on how this escalation happens under different conditions is scare. Few studies examine strategies to prevent or resolve 'secondary damage' to tourism from incidents outside of their control.

In summary, it is necessary to understand the nature of crises and disasters in future research, which included the nature of a crisis/disaster, category/typology, and vertical and horizontal scales of impact. However, these fundamental concepts are poorly integrated into most case studies. We argue that this results in weak theoretical foundations limiting the development and generalization of knowledge in the field. Most studies discuss strategies without considering the unique situation and characteristics of specific crisis/disasters or the case study context. This severely limits the usefulness of the research and its generalisability.

Future research could compare management strategies by analysing the nature, typology, and scale of crises and disasters. Based on the research approaches employed we argue that future studies should clearly describe the context and how this influences management strategies. Although case study research is the dominant method used in the field, the nature of the cases and how these characteristics influence response strategies needs to be embedded in empirical articles. Researchers should consider using multiple case studies to improve generalisability. Understanding linked crisis events and escalation is also important. We suggest complexity or chaos theory as a lens to explore the complex nature of tourism crises and disasters at different scales (local, regional, national and even transnational).

Lack of framework testing

Because crisis management is considered as a process, rather than a one-shot operation (Cioccio & Michael, 2007), a number of prescriptive management models and frameworks can provide directions and guidelines for effective tourism crisis and disaster management. However, little empirical research has been conducted to test and modify models. Therefore progress to test and refine theories and concepts, and contribute to knowledge generation, have been limited.

Huang et al. (2008) summarized 11 *crisis management models* into 4 main approach categories: (1) life cycle approach, (2) strategic management approach, (3) action-orientation management approach, and (4) integrated approach. In the early stage of crisis management, simple guidelines were proposed to help encourage effective crisis management, such as incorporating crisis planning, building task force and partnerships (Sönmez et al., 1999). Later, more specific frameworks were put forward with detail on each management stage and corresponding management strategies. The integrated approach was developed from both a crisis/disaster life-cycle approach and a strategic management approach. It includes both proactive (*mitigation, preparedness* and *warning*) and reactive strategies (*impact assessment*) in responding to a disasters before, during and after (Moe & Pathranarakul, 2006; Ritchie, 2004). Faulkner's (2001, p.144) tourism disaster management framework is an important model for analysing tourism disaster management strategies. Six phases have been identified along, with each phase comprising key elements or ingredients for effective disaster management response and recovery. Ritchie (2004) included the concepts from strategic planning and management to develop a strategic tourism crisis/disaster management framework.

Although there has been some testing of Faulkner's (2001) model across multiple studies from 2001 to 2008 this testing is not been conducted recently. Henderson (2003a, 2003b) applied the model to a terrorist attack (Bali Bombing) and industry crisis (a flight fatal crash of Singapore Airline). It was acknowledged that the attempts to pre-identify threats for terrorist attacks are difficult; therefore, disaster management starts at the emergency stage, quickly progressing to the intermediate phase and long-term recovery. Resolution is not evident in this case. Similarly, because an airline crash can quickly unfold and precipitate an immediate crisis with no time for avoidance, Henderson (2003b) compresses the first three steps (pre-event, prodromal, emergency) in Faulkner's (2001) framework into a single component of event phase of crash. Miller and Ritchie (2003) apply Faulkner's model to the case of Food and Mouth disease in the UK. They argue that the prodromal stage may be very short and give little opportunity for preparing for external incidents (e.g. natural disaster, terrorist attack), while crises which are internal in nature may led to a period of denial that a problem exists. Yet they argue that in the resolution and feedback stage, crises may better enable reflection of mistakes that caused the problems creating double-loop learning.

Inspired to modify frameworks, some researchers have attempted to develop disaster management models based on specific crisis/disaster context. The most prominent being Stafford, Yu, and Armoo (2002) suggest a response and recovery model for mal-evolence-based crisis (e.g. terrorism). Four steps for fast recovery were discussed as (1) coordinating activities of all tourism stakeholders, (2) external reassurance to the local community, (3) external reassurance to clients – open for business, and (4) market products and marketing plan. Paraskevas and Arendell (2007) argue that the existing proposed crisis management framework provide little help in prevention and mitigation of terrorist attacks for tourism authorities, thus they outline a specific anti-terrorism strategy framework based on a strategic crisis management approach (Ritchie, 2004). This model highlighted the importance of destination stakeholders in the planning and implementation of the anti-terrorism strategy and the pivotal role of the Destination Marketing Organisation in coordinating the efforts. However, the empirical application and testing of this model in the context of terrorism is scant.

In a similar way, Scott et al.'s (2008) conceptual study challenges the standard perspective that recovering from a crisis requires only a series of remedial steps to return to the previous normality. They elaborate on recovery stage of Faulkner's model by indicating that longer term recovery consists of three sub-phases: (1) recovery of infrastructure, (2) marketing response by individual firms and tourism/marketing organizations, and (3) adaptation to the system. Pennington-Gray (2014) argue that none of the past models captures the majority of variables in a tourism context relating to disasters, thus propose a framework for understanding the impacts of disasters within a destination context. Three main components were discussed as: (1) phase of disaster (pre-disaster, response and recovery), (2) impacts to destination/citizen/tourist, and (3) actors or stakeholders involved with the impacts both pre- and post-disaster. A recent destination crisis resilience framework was discussed using the Sustainable Livelihood Approach (SLA) (Cahyanto & Pennington-Gray, 2017). However, limited empirical research has been conducted to verify these more recent models and frameworks.

In summary, although prescriptive tourism crisis and disaster management frameworks have been developed they have had little testing and modification to date. Researchers tend not to use their case studies to modify and develop new knowledge. More recent approaches to modify frameworks for specific crises or disasters have also not been used empirically. This begs the question why they have not been used or modified? This may be in part due to issues in applying macro-level frameworks to micro-level case studies. It also highlights the lack of theory used in tourism crisis and disaster management research generally (Jiang et al., 2017).

Future research could focus on conceptual and theoretical model building, testing and refinement through empirical studies. Studies can use or adopt models from other disciplines to explore parts of macro-level frameworks. Bridging of the broader macro to micro focus of research may be helped by 'meso-level' theories. These could help provide more focus on particular concepts which have applications across parts of the tourism crisis and disaster lifecycle. For instance, resilience frameworks can be used to better understand vulnerability to crises and disasters at the planning and prevention phase, but can also help us to better understand response strategies and future planning (building future resilience).

Unbalanced research themes

Current crisis and disaster management are studied mainly from the perspective of different phases which can be divided into 'prevention and planning', 'response and recovery', and 'resolution and reflection'. According to Fig. 1, more than 50% of the reviewed papers position in response and recovery stage, 13% in 'prevention and planning', and only 5% in 'resolution and reflection'. Furthermore, most studies in 'response and recovery' are case studies with limited contribution to theory development. It is

Table 3
Stages studied and years publishing.

Stage studied	Total	1985–1989	1990–1994	1995–1999	2000–2004	2005–2009	2010–2014	2015–2018
Prevention and planning	19		1	1	2	6	9	
Response and recovery	79	1	4	10	14	22	11	17
Resolution and reflection	7					2		5
Prevention and recovery	8			1	3	2	1	1
All stages	21			1	7	10	2	1
N/A	8				1	3	3	1
Total	142	1	5	13	27	45	26	25

argued that current research on tourism crisis and disaster management are unbalanced in research themes/branches.

Although studies on 'prevention and planning' have increased since 2005 (see Table 3), the number of studies are still considerably fewer than response and recovery studies. This review summarizes literature on each stage and call for future research under each branch. It also argues for rebalancing branches to focus on prevention and planning, alongside resolution and feedback which have been underrepresented in the past.

Branch 1: prevention & planning

Advanced planning forms the basic foundation of crisis management (Santana, 2004). It is argued that although it is impossible to predict a future tourism crisis, organizations are prone to these uncertainties and it is feasible to expect an occurrence at some time (Ghaderi et al., 2014; Pike, 2008). The importance of proactive crisis management planning has been justified in past research, helping businesses to return to normal operations quickly (Barton, 1994). For example in the case of the 1999 avalanche disaster in Peters and Pikkemaat (2005) note that (1) a competent core contingency team and (2) a well-established management framework in the prodromal phase, are the main success factors for crisis management. In contrast, without proactive management plans, management activities may have limited value and can lead to a further critical situation due to the 'ripple effect' (Davies & Walters, 1998; Heath, 1998). The proactive approach is needed not only at the company level, but also at the regional and country levels (Okumus & Karamustafa, 2005), with Destination Marketing Organisations having the responsibility to prepare for discontinuous change (Pike, 2008).

Despite the importance of proactive planning, the lack of crisis management plans and strategies is apparent at all levels of organizations and industry sectors (Anderson, 2006; Ghaderi et al., 2014; Henderson, 1999b; Okumus et al., 2005; Williams & Ferguson, 2005). The only precaution methods taken by business operators are commercial insurance and broadly adherence to general local disaster plans such as the fire control strategies (Cioccio & Michael, 2007). Some preparations are not actively conducted but work as a response to regulatory requirements or lease agreements with local governments (Cioccio & Michael, 2007; Ritchie, 2008). This lack of planning has resulted in negative outcomes such as staff lay-offs, the abandonment of planned refurbishment and marketing campaigns (Williams & Ferguson, 2005). A well-developed plan could enable organization to react to a crisis more quickly and effectively (Tew et al., 2008).

Many studies have focused on forecasting tools and detection techniques to help improve the effectiveness of planning. The rationale for forecasting is based on the assumption that past relationships will carry on into the future and a standard trend analysis can be used to manage future events (Prideaux, Laws, & Faulkner, 2003). Scenario planning is popular in forecasting tourism crises/disasters, is advocated by de Sausmarez (2007) to help examine how responses to future negative events might unfold. It has been widely used in different disaster situations. For example in the case of Scotland, the NTO (VisitScotland) used a scenario planning process to untangle the complexity of a forthcoming war in Iraq and to help organization develop policies and actions (Yeoman et al., 2005). Page et al. (2006) carry out a scenario-planning workshop in line with the process used in Yeoman et al. (2005) based on fictitious influenza pandemic. This is considered important for NTOs and other organizations as it enables them to plan with confidence and to exercise leadership in times of crisis (Page et al., 2006). Scenario planning was also used in natural disaster emergency planning. Orchiston (2012) use an "isoseismal modelling methodology" to describe vulnerabilities in the tourism sector. This work helps to highlight the tourism-related physical outcomes that are likely to result from a future earthquake.

Paraskevas and Altinay (2013) develop a crisis signal detection process to become an organization's "first line of defence" because many crises do emit warning signals before they manifest themselves. Effectiveness of crisis signal detection (for crises and disasters that have same *signal source* – 'noise') depends primarily on the organization's ability to *scan* its environments and identify the signals. This ability includes the learning capability and knowledge management skills as a pre-condition for successful *signal detection and capture*. More importantly, the *transmission of signals* from the detectors to the decision makers should be relatively straightforward without many 'hubs' in between, with only some effective and available communication platforms. Some potential challenges were also outlined regarding the financial/technology limitation and uncertainty of the signal source.

However, leaders and business operators tend to react to events as they occur rather than anticipate and plan for them (Beeton, 2001; Henderson, 1999b), reasons behind the lack of planning should be better understood. First, preparedness refers to physical interventions necessary for avoiding disasters within the capacity of income and savings (Cioccio & Michael, 2007). Such planning would have been viewed luxury rather than necessity for many business owners because their limited capability in both resources and accountability (Coles, 2004; de Sausmarez, 2004). Williams and Ferguson (2005) indicate that lager organizations are more able to invest and prepare for a crisis. It is therefore not surprisingly that smaller size firms have fewer resources dedicated to crisis planning (Ghaderi et al., 2014). Second, because of the infrequency of disaster/crisis, knowledge and experience may be lacking for current operators (Henderson, 1999b; Ritchie, 2008). In the case of Turkey's economic crisis the majority of managers and owners lacked knowledge and formal education on crisis management perhaps because they are small family run businesses (Okumus et al., 2005). Furthermore, it is undeniable that crisis management is not a priority for most tourism organizations and businesses. The priority for small- and medium-sized businesses are immediate returns on investments (Coles, 2004), daily affairs of businesses (Cioccio & Michael, 2007), leaving them with neither the time nor the resources to formalise their contingency planning. Some believe it is the responsibility of emergency organizations and tourism organizations to prepare and respond to such incidents (Ritchie, 2008). This highlights the importance of understanding individual psychological approaches and how they influence business planning and preparedness. As Wang and Ritchie (2012) found, "attitude, subjective norm, and past crisis experience" were the key factors that influenced crisis planning behaviour in the accommodation industry.

Becken and Hughey (2013) argue for closer cooperation between tourism and Civil Defence agencies to enhance disaster risk reduction activities in tourism. The need for greater integration between tourism and emergency management agencies has also been

recongised in the context of a health crisis in USA, where limited communication and collaboration between the Centre for Disease Control and the tourism sector was highlighted (Donohoe et al., 2015).

Future research could focus on crisis preparation and planning with some authors already calling for a shift from reactive to proactive management. Tourism needs to be better integrated into emergency management, as the industry often has a role to play in evacuation during natural disasters. Research is needed on relationships and networks between the tourism industry and emergency management agencies. A better understanding of information sharing and knowledge building between tourism and emergency management agencies may also help encourage increased crisis and disaster planning in tourism. It may also help tourism organizations to better detect signals of potential incidents. Network analysis and techniques to understand the flow and adoption of information would be useful. Factors that influence low levels of crisis and disaster planning in tourism, including signal detection, should also be explored in future research.

Branch 2: response & recovery

More than half of the current studies on tourism crisis/disaster management focus on response and recovery phases and most of them are case studies introducing different impacts and effective/ineffective strategies. *Crisis communication*, *recovery marketing*, and *stakeholder collaboration* have been discussed as three key strategies for effective tourism recovery (Campiranon & Scott, 2014; Durocher, 1994; Mansfeld, 1999). Campiranon and Scott (2014) summarize five critical success factors for crisis recovery which support the importance of recovery marketing and collaboration: *crisis management and recovery plan*, *market segmentation*, *recovery promotion*, *recovery collaboration*, and *personnel management*.

As government possess more power and resources they are often the focus of research attention. Three main categories of government policy response after crisis are (1) infrastructure and reconstruction, (2) provision of financial assistance and human resources for tourism enterprises, (3) development of communication and marketing campaigns to promote tourism in existing and new markets (Cooper, 2005; Leslie & Black, 2005; Pizam, 1999; Sharpley & Craven, 2001).

First, government works closely with national bodies from other public sectors (e.g. Ministry of Agriculture, Fisheries and Food, national park authorities, local authorities) to increase the accessibility to the affected areas (Sharpley & Craven, 2001). Tourism reconstruction after a disaster takes government priority only after the reconstruction of public facilities, roads and airports (Casado, 1998; Huang & Min, 2002). Then appropriate capital investment in tourism infrastructure can be considered which can help generate future income and employment (Yang, Wang, & Chen, 2011).

Second, direct financial support can be provided to local businesses affected by the crisis (Sharpley & Craven, 2001; Stafford et al., 2002) for business continuity purposes. Government can implement new economic, financial and administrative measures or programs directed at the tourism industry to alleviate negative impacts. These can include waiving taxes, providing low-interest loans and subsidies, and returning quality performance deposits (Blake & Sinclair, 2003; Gu & Wall, 2006; Huang & Min, 2002). In addition, they can change policies to help attract more inbound tourism (Henderson, 1999a).

Third, it is important to provide up-to-date information on the crisis to various stakeholders (Cooper, 2005). Governments need to keep direct contact with the travel trade and media representatives to ensure correct information is sent out, and negotiate with scheduled and charter airlines to maintain service and rebuild confidence of tourists (Carlsen & Hughes, 2008). Government organizations are also responsible for supporting destination marketing after a disaster (Carlsen & Hughes, 2008). Governments can build cooperative relationships with overseas embassies, large tourism companies and commercial sectors to enhance recovery marketing (Henderson, 1999a; Ostrowski, 1985). Gu and Wall (2006) also indicate that the national and local governments work closely with tourism organizations to develop communication and promotion activities, such as the use of travel intermediaries, large-scale promotional activities, and strengthen advertising in the main target markets. Some successful examples are introduced as Taiwan's international promotion on 'Tour Taiwan at Ease', familiarization tours with overseas media and foreign tour wholesalers, and holding special events after the 1999 earthquake (Huang & Min, 2002).

Crisis management at a sectoral level has a faster investment return (de Sausmarez, 2004). After a disaster, the first priority is to maintain basic services to minimise the short-term economic loss (Chien & Law, 2003). The tourism industry usually works with governments and other parties by establishing a coordinated group. Three major collaborative recovery initiatives are identified in the literature and include (1) coordinated response to the public and the media, (2) campaigns to reopen major tourist attractions, and (3) building a marketing plan to promote the destination (Stafford et al., 2002). It is argued that Destination Marketing Organisations should take the responsibility to lead the cooperative management to response to and recover from the crisis/disaster, together with local tourism organizations (LTOs) and tourism enterprises (Leslie & Black, 2005; Jiang & Ritchie, 2017). Due to scant resources, tourism stakeholders should cooperate to help the tourism sector recovery rather than rely on price to attract tourists back (Leslie & Black, 2005). For example, a 'megasaver' ticket can allow access to different attractions (Henderson, 1999b). while the industry can work together in recovery marketing (Yu et al., 2006). Social media can also provide a cost effective vehicle for communication yet is under used by the industry (Möller et al., 2018). Studies also fail to consider the negative effects of social media (Luo & Zhai, 2017), which can create negative sentiment and led to further image problems and crises.

Small and medium-sized businesses are more vulnerable to crisis impacts due to their limited capacities to reduce risk (Zeng et al., 2005). However, crisis management in the tourism sector tends to focus on large hotels, airlines, and tour companies (Cushnahan, 2004), and current crisis/disaster management strategies in tourism development do not consider small businesses (Cioccio & Michael, 2007). Most tourism businesses (72%) do not take any action in response to the disaster (Hystad & Keller, 2008) and the most common rationale for not implementing a recovery strategy are "lack of resources", "business too small", and "nothing can be done to counter the negative impacts resulting from such a large event" (p.156). Cushnahan (2004) also note small businesses' are unable to analyse potential threats, to assemble crisis teams and produce crisis plans due to their small size, resources and knowledge.

For these small individual businesses, Destination Marketing Organisations are expected to take actions on behalf of the local tourism industry (Hystad & Keller, 2008).

For a single enterprise or business, most studies examine the hospitality industry by focusing on the strategies for hotels or restaurants. In the response stage, internal information updating/sharing and communication with external agencies (e.g. emergency departments, industry association, and media) are required to gain direction and ensure the flow of correct information (Stafford et al., 2002). Cioccio and Michael (2007) also indicate that communication with media is of great importance to tourism enterprise, because misleading information and sensationalism could bring negative impacts on the visitors' image perception. In the recovery stage, tourism income is of great importance for small- or medium-scale tourism businesses but suffer heavily during a crisis/disaster. Upscale hotels rely on marketing strategies (need more cash flow) to attract new customers while budget hotels offer rate discount to increase occupancy (Taylor & Enz, 2002). Mid-sized and large enterprises also develop cooperative approaches with other tourism marketing organizations to help restore the basis of visitation (Cioccio & Michael, 2007; Yu et al., 2006). In addition, operating expense on human resources and property management could be cut such as reducing working hours, instituting layoffs, closing guest-rooms, deferring or cancelling major capital improvement projects (Dahles & Susilowati, 2015; Taylor & Enz, 2002). However, Anderson (2006) questions the staff retrenchment strategy with a consideration of future shortage of staff once the industry has recovered from its decline. Alonso-Almeida and Bremser (2013) also demonstrate that companies that focus on cost-cutting perform worse during a crisis because cost-cutting measures (e.g. reduce service offers, implement staff layoffs) can damage a company's competitive position in the long term.

Future research could move focus away from larger hospitality businesses (such as hotels and restaurants) to other sectors such as tour operators and travel agencies which are underrepresented. A focus on micro and small businesses should also be encouraged. The majority of studies have focused on developed countries and ignore developing countries which often have an informal tourism sector. The impact on informal sectors should be explored. As human resources are a major cost for companies a much better understanding of human resource management strategies in times of crisis are needed. Anecdotal evidence also suggests that often temporary workers can be displaced after a crisis or disaster, resulting in long run impacts on the community. The nature of this migration or displacement is unknown.

Studies on the use of social media as a crisis communication tool are also warranted. The literature has been slow to catch up with technology trends. The credibility and trustworthiness of social media compared to mass media in recovery marketing could be explored through experiments. Finally, studies are needed to explore the effectiveness and efficiency of government policies. Economic impact studies using cost-benefit analysis or modelling using agent based or systems dynamic modelling could examine a range of policy options before they are implemented. Although recovery marketing approaches are common, alternative policy measures may help build resilience and reduce future government investment after a crisis or disaster.

Branch 3: resolution & feedback

The resolution and feedback stage, also understood as long-term disaster preparedness, was first noted in Faulkner's (2001) tourism disaster management framework. It highlights the needs of individual and communities to be better equipped to respond to similar disaster in the future through gaining better knowledge from past experience. The concepts of organizational learning (Blackman & Ritchie, 2008) and knowledge management (Orchiston & Higham, 2016; Paraskevas, Altinay, McLean, & Cooper, 2013) have recently been applied to studies of tourism crises.

Organizational learning is mainly discussed during the resolution phase. Blackman and Ritchie (2008) argue the important role of organizational learning in enhancing the potential effectiveness of crisis management strategies, especially at the resolution phase of tourism crises for Destination Marketing Organisations. Ghaderi et al. (2014) argue that organizational learning will better position organizations to learn from crises and disasters, and importantly, to apply this new knowledge to improve future practices. This does not happen automatically and organizations need to take time to thoroughly evaluate all resources and gain feedback on the effectiveness of their strategies and responses (Blackman & Ritchie, 2008). Single and double loop learning are fundamental part of this process and should engage internal as well is external stakeholders. Richardson (1994) distinguishes single and double loop learning taking into consideration learning approaches in relation to crisis management. Double loop learning goes beyond single loop learning by questioning not only the effectiveness of actions but also the values, assumptions and beliefs underpinning decision making. Thus double loop learning provides a more rigorous and wide ranging basis for future strategic changes and needs to be into crisis management to ensure a positive change and better foresight in management policies and practices (Blackman & Ritchie, 2008; Pforr & Hosie, 2008). However, Ghaderi et al. (2014) argue that due to the higher turnover rate in tourism organizations, little organization learning has been conducted in managing crises/disasters. Organizations may still use strategies that are widely known, perhaps because they have not questioned the assumptions and beliefs that underpin action. This remains an issue and needs to be further investigated.

Knowledge in the crisis management context is referred to 'listening to the history and experience to prepare' and is regarded as the key to survival in the changeable environment (Cioccio & Michael, 2007). Because the probability of particular crisis events is found to be relatively high in some tourism regions, it is possible to generate knowledge and learn from the past to develop more effective procedures in the future (Laws & Prideaux, 2005). More importantly, this experience could become part of the long-term 'corporate memory' (Anderson, 2006) which can not only guide future actions, but also can turn intangible knowledge resources into explicit knowledge allowing it to be shared among different destinations (Laws & Prideaux, 2005).

Although organizational learning is referred to in some models (Faulkner, 2001; Henderson, 2003a; Ritchie, 2004), more attention on knowledge management could improve crisis and disaster plans and responses. Blackman et al. (2011) note the importance of crisis knowledge management and argue that strategies need to be implemented by Destination Marketing Organisations and

tourism stakeholders to transfer (channel), translate (understanding) and transform (application) relevant knowledge. Paraskevas et al. (2013) develop a comprehensive framework for crisis knowledge governance. They identify *four types of crisis knowledge* that tourism organizations could employ in managing strategies and processes in the advance of crises, *two distinct flows of crisis knowledge* in organizations (institutionalised and emergent), and *four internal factors* that could influence the organizations' ability to manage crisis knowledge (leadership, culture, structure and communication systems).

An increasing number of studies are now focusing on organizational resilience in tourism (Dahles & Susilowati, 2015; Orchiston, 2013; Orchiston et al., 2016) as this can help organizations to adapt and build resilience to future incidents. Social capital has been shown in recent studies to help build adaptive tourism resilience to disasters and improve performance (Chowdhury et al., 2018). Times of crisis may provide an opportunity for businesses to develop dynamic capabilities than in good financial times (Alonso-Almeida, Bremser, & Llach, 2015). A better understanding of the concept of dynamic capabilities could also help organizations build future resilience to tourism crises and disasters (Jiang, Ritchie, & Verreynne, 2019).

Future research could focus on knowledge management within and between tourism organizations. The role of the Destination Marketing Organisation as a knowledge broker is an important topic for future study. Studies should also seek to develop performance measurement tools to measure crisis knowledge levels. Exploring the barriers to both generate and use knowledge from past incidents to build resilience are also encouraged. Better understanding resilience, and levels of resilience (individual, organizational) and factors that influence resilience (such as social or financial capital) are also welcomed. Understanding if, and how dynamic capabilities emerge from crises and disasters are also needed to move research under this theme forward.

Conclusion

This paper had provided a narrative review of 142 papers in tourism crisis and disaster management field. This paper compliments previous work that looked at the citation network and structure of the field at a macro level (Jiang et al., 2017). We provide an overview of the key findings and methodological approaches to research in the field. Past studies are reliant on qualitative case study research, and have a lack of conceptual and theoretical based papers. The paper provided three key critiques based on gaps identified, and posed future research topics under each of the themes. From these gaps we outlined potential future research directions. The paper argues that existing tourism crisis and disaster frameworks have not been suitably tested despite their long existence – limiting knowledge development. The use of theory in empirical research have also been limited, partly due to a focus on single case study research focusing mostly on the response and recovery phases. This provides weak foundations for empirical research. We argue for more empirical research in the planning and preparedness phase alongside the resolution and feedback stage. This lack of balance can lead to an unbalanced development of the field and so requires urgent attention. The paper provides a platform for future research directions and methodological approaches to the study of tourism crisis and disaster management.

Although not outlined in the review above, there is a need to forecast and plan for future disruption and crises which are unforeseen at this point in time. First, we need to better understand the impact of, and risks associated with global environmental change, including transitioning (or not) to a low carbon tourism economy. Second, a predicted increase in the use of autonomous vehicles will provide risks to traditional transport providers, which need to be planned and responded to (see Cohen & Hopkins, 2019 for a review).

Finally, despite the growth of academic literature in the field, there is a need to translate knowledge and insights into practical outcomes for industry and government. As outlined in the Introduction section a number of agencies, industry and sector associations have produced books, guidelines and templates for industry to use. Although some of these refer to and use academic work, it is recommended that academics work more closely with government and industry in converting knowledge into practical outputs and outcomes. Beirman and Van Walbeek (2011) provide a good example of what can be achieved with PATA. But more deliberate mechanisms for engagement are needed so that academic research can have an impact beyond academia for the benefit of an industry which is often in crisis.

Declaration of competing interest

None.

Supplementary Material

Supplementary material to this article can be found online at https://doi.org/10.1016/j.annals.2019.102812.

References

Alonso-Almeida, M. M., & Bremser, K. (2013). Strategic responses of the Spanish hospitality sector to the financial crisis. *International Journal of Hospitality Management, 32*(1), 141–148. https://doi.org/10.1016/j.ijhm.2012.05.004.

Alonso-Almeida, M. D. M., Bremser, K., & Llach, J. (2015). Proactive and reactive strategies deployed by restaurants in times of crisis: Effects on capabilities, organization and competitive advantage. *International Journal of Contemporary Hospitality Management, 27*(7), 1641–1661.

Anderson, B. A. (2006). Crisis management in the Australian tourism industry: Preparedness, personnel and postscript. *Tourism Management, 27*(6), 1290–1297. https://doi.org/10.1016/j.tourman.2005.06.007.

Avraham, E., & Ketter, E. (2017). Destination image repair while combatting crises: Tourism marketing in Africa. *Tourism Geographies, 19*(5), 780–800.

Backer, E., & Ritchie, B. W. (2017). VFR travel: A viable market for tourism crisis and disaster recovery? *International Journal of Tourism Research, 19*(4), 400–411.

Barton, L. (1994). Crisis management: Preparing for and managing disasters. *Cornell Hotel and Restaurant Administration Quarterly, 35*(2), 59–65.

Bauer, R. A. (1960). Consumer behaviour as a risk taking. In R. S. Hancock (Ed.). *Dynamic marketing for a changing world* (pp. 389–398). Chicago: American Marketing Association.

Becken, S., & Hughey, K. F. D. (2013). Linking tourism into emergency management structures to enhance disaster risk reduction. *Tourism Management, 36*, 77–85.

Beeton, S. (2001). Horseback tourism in Victoria, Australia: Cooperative, proactive crisis management. *Current Issues in Tourism, 4*(5), 422–439. https://doi.org/10.1080/13683500108667897.

Beirman, D., & Van Walbeek, B. (2011). *Bounce back: Tourism risk, crisis and recovery management guide.* Bangkok: Pacific Asia Travel Association.

Benckendorff, P., & Zehrer, A. (2013). A network analysis of tourism research. *Annals of Tourism Research, 43*, 121–149.

Blackman, D., Kennedy, M., & Ritchie, B. (2011). Knowledge management: The missing link in DMO crisis management? *Current Issues in Tourism, 14*(4), 337–354. https://doi.org/10.1080/13683500.2010.489637.

Blackman, D., & Ritchie, B. W. (2008). Tourism crisis management and organizational learning: The role of reflection in developing effective DMO crisis strategies. *Journal of Travel & Tourism Marketing, 23*(2–4), 45–57.

Blake, A., & Sinclair, M. (2003). Tourism crisis management - US response to September 11. *Annals of Tourism Research, 30*(4), 813–832. https://doi.org/10.1016/S0160-7383(03)00056-2.

Boukas, N., & Ziakas, V. (2012). Impacts of the global economic crisis on Cyprus tourism and policy responses: Impacts of the global economic crisis. *International Journal of Tourism Research, 15*(4), 329–345. https://doi.org/10.1002/jtr.1878.

Cahyanto, I., & Pennington-Gray, L. (2017). Toward a comprehensive destination crisis resilience framework. *2017 TTRA conference*.

Çakar, K. (2018). Critical success factors for tourist destination governance in times of crisis: A case study of Antalya, Turkey. *Journal of Travel & Tourism Marketing, 35*(6), 786–802.

Campiranon, K., & Scott, N. (2014). Critical success factors for crisis recovery management: A case study of Phuket hotels. *Journal of Travel & Tourism Marketing, 31*(3), 313–326.

Carlsen, J. C., & Hughes, M. (2008). Tourism market recovery in the Maldives after the 2004 Indian Ocean tsunami. *Journal of Travel & Tourism Marketing, 23*(2–4), 139–149.

Carlsen, J. C., & Liburd, J. J. (2008). Developing a research agenda for tourism crisis management, market recovery and communications. *Journal of Travel & Tourism Marketing, 23*(2–4), 265–276.

Casado, M. A. (1998). Peru's tourism industry: Growth, setbacks, threats. *Cornell Hospitality Quarterly, 39*(1), 68.

Chen, C. (2004). Searching for intellectual turning points: Progressive knowledge domain visualization. *Proceedings of the National Academy of Sciences, 101*(suppl.1), 5303–5310.

Chien, G. C., & Law, R. (2003). The impact of the severe acute respiratory syndrome on hotels: A case study of Hong Kong. *International Journal of Hospitality Management, 22*(3), 327–332.

Chien, M. P., Sharifpour, R., Ritchie, B. W., & Watson, B. (2017). Travelers' health risk perceptions and protective behaviour: A psychological approach. *Journal of Travel Research, 56*(6), 744–759.

Chowdhury, M., Prayag, G., Orchiston, C., & Spector, S. (2018). Postdisaster social capital, adaptive resilience and business performance of tourism organizations in Christchurch, New Zealand. *Journal of Travel Research, 58*(7), 1209–1226 (0047287518794319).

Cioccio, L., & Michael, E. J. (2007). Hazard or disaster: Tourism management for the inevitable in Northeast Victoria. *Tourism Management, 28*(1), 1–11.

Cohen, E., & Neal, M. (2010). Coinciding crises and tourism in contemporary Thailand. *Current Issues in Tourism, 13*(5), 455–475.

Cohen, S., & Hopkins, D. (2019). Autonomous vehicles and the future of urban tourism. *Annals of Tourism Research*, 33–42.

Coles, T. (2004). A local reading of a global disaster: Some lessons on tourism management from an Annus Horribilis in South West England. *Journal of Travel & Tourism Marketing, 15*(2–3), 173–197.

Cooper, M. (2005). Japanese tourism and the SARS epidemic of 2003. *Journal of Travel & Tourism Marketing, 19*(2–3), 117–131.

CRED, & UNISDR (2019). 2018 review of disaster events. Retrieved from https://www.cred.be/2018-review-disaster-events.

Cró, S., & Martins, A. M. (2017). Structural breaks in international tourism demand: Are they caused by crises or disasters? *Tourism Management, 63*, 3–9.

Cushnahan, G. (2004). Crisis management in small-scale tourism. *Journal of Travel & Tourism Marketing, 15*(4), 323–338.

Dahles, H., & Susilowati, T. P. (2015). Business resilience in times of growth and crisis. *Annals of Tourism Research, 51*, 34–50.

Davies, H., & Walters, M. (1998). Do all crises have to become disasters? Risk and risk mitigation. *Property Management, 16*(1), 5–9. https://doi.org/10.1108/02637479810202883.

de Sausmarez, N. (2004). Malaysia's response to the Asian financial crisis: Implications for tourism and sectoral crisis management. *Journal of Travel & Tourism Marketing, 15*(4), 217–231.

de Sausmarez, N. (2007). Crisis management, tourism and sustainability: The role of indicators. *Journal of Sustainable Tourism, 15*(6), 700–714.

Donohoe, H., Pennington-Gray, L., & Omodior, O. (2015). Lyme disease: Current issues, implications, and recommendations for tourism management. *Tourism Management, 46*, 408–418.

Durocher, J. (1994). Recovery marketing what to do after a natural disaster. *Cornell Hotel and Restaurant Administration Quarterly, 35*(2), 66–70.

Elsevier (2017). Scopus content coverage guide. Retrieved from https://www.elsevier.com/solutions/scopus/content.

Faulkner, B. (2001). Towards a framework for tourism disaster management. *Tourism Management, 22*(2), 135–147.

Faulkner, B., & Russell, R. (2001). Turbulence, chaos and complexity in tourism systems: A research direction for the new millennium. *Tourism in the twenty-first century: Reflections on experience* (pp. 328–349). .

Ghaderi, Z., Mat Som, A. P., & Wang, J. (2014). Organizational learning in tourism crisis management: An experience from Malaysia. *Journal of Travel & Tourism Marketing, 31*(5), 627–648.

Gu, H., & Wall, G. (2006). SARS in China: Tourism impacts and market rejuvenation. *Tourism Analysis, 11*(6), 367–379.

Hajibaba, H., Karlsson, L., & Dolnicar, S. (2017). Residents open their homes to tourists when disaster strikes. *Journal of Travel Research, 56*(8), 1065–1078.

Heath, R. (1998). *Crisis management for managers and executives.* London: Financial Times Management.

Henderson, J. C. (1999a). Asian tourism and the financial Indonesia and Thailand compared. *Current Issues in Tourism, 2*(4), 294–303.

Henderson, J. C. (1999b). Managing the Asian financial crisis: Tourist attractions in Singapore. *Journal of Travel Research, 38*(2), 177–181.

Henderson, J. C. (2003a). Communicating in a crisis: Flight SQ 006. *Tourism Management, 24*, 279–287.

Henderson, J. C. (2003b). Terrorism and tourism: Managing the consequences of the Bali bombings. *Journal of Travel & Tourism Marketing, 15*(1), 41–58.

Huang, J.-H., & Min, J. C. H. (2002). Earthquake devastation and recovery in tourism: The Taiwan case. *Tourism Management, 23*, 145–154.

Huang, Y. C., Tseng, Y. P., & Petrick, J. F. (2008). Crisis management planning to restore tourism after disasters: A case study from Taiwan. *Journal of Travel & Tourism Marketing, 23*(2–4), 203–221.

Hystad, P. W., & Keller, P. C. (2008). Towards a destination tourism disaster management framework: Long-term lessons from a forest fire disaster. *Tourism Management, 29*(1), 151–162.

Ioannides, D., & Apostolopoulos, Y. (1999). Political instability, war, and tourism in Cyprus: Effects, management, and prospects for recovery. *Journal of Travel Research, 38*(1), 51–56.

Ivanov, S., Idzhylova, K., & Webster, C. (2016). Impacts of the entry of the Autonomous Republic of Crimea into the Russian Federation on its tourism industry: An exploratory study. *Tourism Management, 54*, 162–169. https://doi.org/10.1016/j.tourman.2015.10.016.

Jiang, Y., & Ritchie, B. W. (2017). Disaster collaboration in tourism: Motives, impediments and success factors. *Journal of Hospitality and Tourism Management, 31*, 70–82.

Jiang, Y., Ritchie, B. W., & Benckendorff, P. (2017). Bibliometric visualisation: An application in tourism crisis and disaster management research. *Current Issues in Tourism*, 1–33.

Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building tourism organizational resilience to crises and disasters: A dynamic capabilities view. *International Journal*

of Tourism Research, 1–19.

Laws, E., & Prideaux, B. (2005). Crisis management: A suggested typology. *Journal of Travel & Tourism Marketing, 19*(2–3), 1–8.

Leslie, D., & Black, L. (2005). Tourism and the impact of the foot and mouth epidemic in the UK: Reactions, responses and realities with particular reference to Scotland. *Journal of Travel & Tourism Marketing, 19*(2–3), 35–46.

Luo, Q., & Zhai, X. (2017). "I will never go to Hong Kong again!" How the secondary crisis communication of "occupy central" on Weibo shifted to a tourism boycott. *Tourism Management, 62*, 159–172.

Mair, J., Ritchie, B. W., & Walters, G. (2016). Towards a research agenda for post-disaster and post-crisis recovery strategies for tourist destinations: A narrative review. *Current Issues in Tourism, 19*(1), 1–26.

Mansfeld, Y. (1999). Cycles of war, terror, and peace: Determinants and management of crisis and recovery of the Israeli tourism industry. *Journal of Travel Research, 38*(1), 30–36.

Mckercher, B., Law, R., & Lam, T. (2006). Rating tourism and hospitality journals. *Tourism Management, 27*(6), 1235–1252.

McKercher, B., & Tung, V. (2015). Publishing in tourism and hospitality journals: Is the past a prelude to the future? *Tourism Management, 50*, 306–315.

Miller, G. A., & Ritchie, B. W. (2003). A farming crisis or a tourism disaster? An analysis of the foot and mouth disease in the UK. *Current Issues in Tourism, 6*(2), 150–171.

Moe, T. L., & Pathranarakul, P. (2006). An integrated approach to natural disaster management: Public project management and its critical success factors. *Disaster Prevention and Management, 15*(3), 396–413.

Möller, C., Wang, J., & Nguyen, H. T. (2018). #Strongerthanwinston: Tourism and crisis communication through Facebook following tropical cyclones in Fiji. *Tourism Management, 69*, 272–284.

Morakabati, Y., Page, S. J., & Fletcher, J. (2017). Emergency management and tourism stakeholder responses to crises: A global survey. *Journal of Travel Research, 56*(3), 299–316.

Novelli, M., Burgess, L. G., Jones, A., & Ritchie, B. W. (2018). "No Ebola… still doomed"–The Ebola-induced tourism crisis. *Annals of Tourism Pauchant Research, 70*, 76–87.

Okumus, F., Altinay, M., & Arasli, H. (2005). The impact of Turkey's economic crisis of February 2001 on the tourism industry in Northern Cyprus. *Tourism Management, 26*(1), 95–104.

Okumus, F., & Karamustafa, K. (2005). Impact of an economic crisis evidence from Turkey. *Annals of Tourism Research, 32*(4), 942–961.

Okuyama, T. (2018). Analysis of optimal timing of tourism demand recovery policies from natural disaster using the contingent behavior method. *Tourism Management, 64*, 37–54.

Orchiston, C. (2012). Seismic risk scenario planning and sustainable tourism management: Christchurch and the Alpine Fault zone, South Island, New Zealand. *Journal of Sustainable Tourism, 20*(1), 59–79.

Orchiston, C. (2013). Tourism business preparedness, resilience and disaster planning in a region of high seismic risk: The case of the Southern Alps, New Zealand. *Current Issues in Tourism, 16*(5), 477–494.

Orchiston, C., & Higham, J. E. S. (2016). Knowledge management and tourism recovery (de) marketing: The Christchurch earthquakes 2010–2011. *Current Issues in Tourism, 19*(1), 64–84.

Orchiston, C., Prayag, G., & Brown, C. (2016). Organizational resilience in the tourism sector. *Annals of Tourism Research, 56*, 145–148.

Ostrowski, S. (1985). Poland's international tourism. *Tourism Management, 6*(4), 288–294.

Pacific Asia Travel Association (PATA) (2003). *Crisis-It won't happen to us.* Bangkok: PATA.

Page, S., Yeoman, I., Munro, C., Connell, J., & Walker, L. (2006). A case study of best practice—Visit Scotland's prepared response to an influenza pandemic. *Tourism Management, 27*(3), 361–393.

Paraskevas, A., & Altinay, L. (2013). Signal detection as the first line of defence in tourism crisis management. *Tourism Management, 34*, 158–171.

Paraskevas, A., Altinay, L., McLean, J., & Cooper, C. (2013). Crisis knowledge in tourism: Types, flows and governance. *Annals of Tourism Research, 41*(0), 130–152. https://doi.org/10.1016/j.annals.2012.12.005.

Paraskevas, A., & Arendell, B. (2007). A strategic framework for terrorism prevention and mitigation in tourism destinations. *Tourism Management, 28*(6), 1560–1573.

Pauchant, T. C., & Mitroff, I. I. (1992). *Transforming the crisis-prone organization: Preventing individual, organizational, and environmental tragedies.* Jossey-Bass.

Pennington-Gray, L. (2014). Developing a destination disaster impact framework. *Tourism Analysis, 19*(1), 105–110.

Pennington-Gray, L., Thapa, B., Kaplanidou, K., Cahyanto, I., & McLaughlin, E. (2011). Crisis planning and preparedness in the United States tourism industry. *Cornell Hospitality Quarterly, 52*(3), 312–320.

Peters, M., & Pikkemaat, B. (2005). Crisis management in Alpine winter sports resorts—The 1999 avalanche disaster in Tyrol. *Journal of Travel & Tourism Marketing, 19*(2–3), 9–20.

Pforr, C., & Hosie, P. J. (2008). Crisis management in tourism: Preparing for recovery. *Journal of Travel & Tourism Marketing, 23*(2–4), 249–264.

Pike, S. (2008). A cautionary tale of a resort destination's self-inflicted crisis. *Journal of Travel & Tourism Marketing, 23*(2–4), 73–82.

Pizam, A. (1999). A comprehensive approach to classifying acts of crime and violence at tourism destinations. *Journal of Travel Research, 38*(1), 5–12.

Pottorff, S. M., & Neal, D. D. M. (1994). Marketing implications for post-disaster tourism destinations. *Journal of Travel & Tourism Marketing, 3*(1), 115–122.

Prayag, G., Chowdhury, M., Spector, S., & Orchiston, C. (2018). Organizational resilience and financial performance. *Annals of Tourism Research, 73*(C), 193–196.

Prideaux, B. (1999). Tourism perspectives of the Asian financial crisis: Lessons for the future. *Current Issues in Tourism, 2*(4), 279–293.

Prideaux, B., Laws, E., & Faulkner, B. (2003). Events in Indonesia: Exploring the limits to formal tourism trends forecasting methods in complex crisis situations. *Tourism Management, 24*(4), 475–487.

Prideaux, B., & McNamara, K. E. (2013). Turning a global crisis into a tourism opportunity: The perspective from Tuvalu. *International Journal of Tourism Research, 15*(6), 583–594. https://doi.org/10.1002/jtr.1883.

Racherla, P., & Hu, C. (2009). A framework for knowledge-based crisis management in the hospitality and tourism industry. *Cornell Hospitality Quarterly, 50*(4), 561–577.

Reichel, A., Fuchs, G., & Uriely, N. (2007). Perceived risk and the non-institutionalized tourist role: The case of Israeli student ex-backpackers. *Journal of Travel Research, 46*(2), 217–226.

Richardson, B. (1994). Crisis management and management strategy - Time to "loop the loop?". *Disaster Prevention and Management, 3*(3), 59–80.

Ritchie, B. (2004). Chaos, crises and disasters: A strategic approach to crisis management in the tourism industry. *Tourism Management, 25*(5), 669–683.

Ritchie, B. (2008). Tourism disaster planning and management: From response and recovery to reduction and readiness. *Current Issues in Tourism, 11*(4), 315–348.

Ritchie, B. (2009). *Crisis and disaster management for tourism: Aspects of tourism no. 38 (aspects of tourism no. 38).* Channel View Books.

Santana, G. (2004). Crisis management and tourism: Beyond the rhetoric. *Journal of Travel & Tourism Marketing, 15*(4), 299–321.

Scott, N., Laws, E., & Prideaux, B. (2008). Tourism crises and marketing recovery strategies. *Journal of Travel & Tourism Marketing, 23*(2–4), 1–13.

Sharpley, R., & Craven, B. (2001). The 2001 foot and mouth crisis–rural economy and tourism policy implications: A comment. *Current Issues in Tourism, 4*(6), 527–537.

Slovic, P. (1987). Perception of risk. *Science, 236*(4799), 280–285.

Sönmez, S. F., Apostolopoulos, Y., & Tarlow, P. (1999). Tourism in crisis: Managing the effects of terrorism. *Journal of Travel Research, 38*(1), 13–18.

Sönmez, S. F., Backman, S. J., & Allen, L. (1994). *Managing tourism crises: A guidebook.* Department of Parks, Recreation and Tourism Management, Clemson University.

Stafford, G., Yu, L., & Armoo, A. K. (2002). Crisis management and recovery: How Washington, DC, hotels responded to terrorism. *Cornell Hospitality Quarterly, 43*(5), 27.

Taylor, M. S., & Enz, C. A. (2002). GM's responses to the events of September 11, 2001. *Cornell Hotel and Restaurant Administration Quarterly, 43*(1), 7–20. https://doi.org/10.1016/S0010-8804(02)80004-0.

Tew, P. J., Lu, Z., Tolomiczenko, G., & Gellatly, J. (2008). SARS: Lessons in strategic planning for hoteliers and destination marketers. *International Journal of Contemporary Hospitality Management, 20*(3), 332–346. https://doi.org/10.1108/09596110810866145.

Tsai, C. H., & Chen, C. W. (2010). An earthquake disaster management mechanism based on risk assessment information for the tourism industry-A case study from the island of Taiwan. *Tourism Management, 31*(4), 470–481.

Tsai, C. H., & Chen, C. W. (2011). The establishment of a rapid natural disaster risk assessment model for the tourism industry. *Tourism Management, 32*(1), 158–171.

Tsai, C. H., & LinLiu, S. C. (2017). Slopeland disaster risk management in tourism. *Current Issues in Tourism, 20*(7), 759–786.

UNDDR, PATA, & GIRDM (2015). *Developing strategies to strengthen the resilience of hotels to disasters: A scoping study to guide the development of the hotel resilient initiative.* Bangkok: UNDRR.

UNWTO (2011). *Toolbox for crisis communications in tourism: Checklist and best practices.* Madrid: UNWTO.

Walters, G., & Mair, J. (2012). The effectiveness of post-disaster recovery marketing messages—The case of the 2009 Australian bushfires. *Journal of Travel & Tourism Marketing, 29*(1), 87–103.

Wang, J., & Ritchie, B. W. (2012). Understanding accommodation managers' crisis planning intention: An application of the theory of planned behaviour. *Tourism Management, 33*(5), 1057–1067. https://doi.org/10.1016/j.tourman.2011.12.006.

Williams, A. M., & Baláž, V. (2015). Tourism risk and uncertainty: Theoretical reflections. *Journal of Travel Research, 54*(3), 271–287.

Williams, C., & Ferguson, M. (2005). Biting the hand that feeds: The marginalisation of tourism and leisure industry providers in times of agricultural crisis. *Current Issues in Tourism, 8*(2), 155–164. https://doi.org/10.1080/13683500508668211.

Yang, W., Wang, D., & Chen, G. (2011). Reconstruction strategies after the Wenchuan earthquake in Sichuan, China. *Tourism Management, 32*(4), 949–956. https://doi.org/10.1016/j.tourman.2010.07.007.

Yeoman, I., Galt, M., & Mcmahon-Beattie, U. (2005). A case study of how VisitScotland prepared for war. *Journal of Travel Research, 44*(1), 6–20.

Yu, L., Stafford, G., & Armoo, A. (2006). A study of crisis management strategies of hotel managers in the Washington, D.C. metro area. *Journal of Travel and Tourism Marketing, 19*(2–3), 91–105. https://doi.org/10.1300/J073v19n02_08.

Zeng, B., Carter, R. W., & De Lacy, T. (2005). Short-term perturbations and tourism effects: The case of SARS in China. *Current Issues in Tourism, 8*(4), 306–322. https://doi.org/10.1080/13683500508668220.

Further Reading

Agarwal, S. (1999). Restructuring and local economic development: Implications for seaside resort regeneration in Southwest Britain. *Tourism Management, 20*(4), 511–522. https://doi.org/10.1016/S0261-5177(99)00004-7.

Armstrong, E. K., & Ritchie, B. W. (2008). The heart recovery marketing campaign: Destination recovery after a major bushfire in Australia's national capital. *Journal of Travel & Tourism Marketing, 23*(2), 175–189. https://doi.org/10.1300/J073v23n02_14.

Avraham, E. (2015). Destination image repair during crisis: Attracting tourism during the Arab spring uprisings. *Tourism Management, 47*, 224–232. https://doi.org/10.1016/j.tourman.2014.10.003.

Baxter, E., & Bowen, D. (2004). Anatomy of tourism crisis: Explaining the effects on tourism of the UK foot and mouth disease epidemics of 1967–68 and 2001 with special reference to media portrayal. *International Journal of Tourism Research, 6*(4), 263–273.

Bec, A., McLennan, C. L., & Moyle, B. D. (2016). Community resilience to long-term tourism decline and rejuvenation: A literature review and conceptual model. *Current Issues in Tourism, 19*(5), 431–457.

Biggs, D., Hall, C. M., & Stoeckl, N. (2012). The resilience of formal and informal tourism enterprises to disasters: Reef tourism in Phuket, Thailand. *Journal of Sustainable Tourism, 20*(5), 645–665.

Bonn, I., & Rundle-Thiele, S. (2007). Do or die—Strategic decision-making following a shock event. *Tourism Management, 28*(2), 615–620.

Buultjens, J. W., Ratnayake, I., & Gnanapala, W. A. C. (2016). Post-conflict tourism development in Sri Lanka: Implications for building resilience. *Current Issues in Tourism, 19*(4), 355–372.

Campiranon, K., & Arcodia, C. (2008). Market segmentation in time of crisis: A case study of the MICE sector in Thailand. *Journal of Travel & Tourism Marketing, 23*(2–4), 151–161.

Cavlek, N. (2002). Tour operators and destination safety. *Annals of Tourism Research, 29*(2), 478–496.

Chacko, H. E., & Marcell, M. H. (2008). Repositioning a tourism destination: The case of New Orleans after hurricane Katrina. *Journal of Travel & Tourism Marketing, 23*(2–4), 223–235.

Clements, M. (1998). Planning to tourism capacity in a crisis. *Journal of Travel Research, 37*(1), 56–62.

Cohen, E. (2008). The tsunami waves and the paradisiac cycle: The changing image of the Andaman coastal region of Thailand. *Tourism Analysis, 13*(3), 221–232.

Davidson, R. (1993). European business tourism—Changes and prospects. *Tourism Management, 14*(3), 167–172.

de Sausmarez, N. (2013). Challenges to Kenyan tourism since 2008: Crisis management from the Kenyan tour operator perspective. *Current Issues in Tourism, 16*(7–8), 792–809.

Espiner, S., Orchiston, C., & Higham, J. (2017). Resilience and sustainability: A complementary relationship? Towards a practical conceptual model for the sustainability–resilience nexus in tourism. *Journal of Sustainable Tourism, 25*(10), 1385–1400.

Evans, N., & Elphick, S. (2005). Models of crisis management: An evaluation of their value for strategic planning in the international travel industry. *International Journal of Tourism Research, 7*(3), 135–150.

Fall, L. T., & Massey, J. E. (2005). The significance of crisis communication in the aftermath of 9/11: A national investigation of how tourism managers have re-tooled their promotional campaigns. *Journal of Travel and Tourism Marketing, 19*(2–3), 77–90. https://doi.org/10.1300/J073v19n02_07.

Faulkner, B., & Vikulov, L. (2001). Katherine, washed out one day, back on track the next: A post-mortem of a tourism disaster. *Tourism Management, 22*(4), 331–344.

García-Cabrera, A. M., & Durán-Herrera, J. J. (2014). Does the tourism industry co-evolve? *Annals of Tourism Research, 47*, 81–83.

Green, C. G., Bartholomew, P., & Murrmann, S. (2004). New York restaurant industry: Strategic responses to September 11, 2001. *Journal of Travel & Tourism Marketing, 15*(2–3), 63–79.

Hall, C. M. (2002). Travel safety, terrorism and the media: The significance of the issue-attention cycle. *Current Issues in Tourism, 5*(5), 458–466.

Hall, C. M. (2010). Crisis events in tourism: Subjects of crisis in tourism. *Current Issues in Tourism, 13*(5), 401–417.

Henderson, J. C. (2007). Corporate social responsibility and tourism: Hotel companies in Phuket, Thailand, after the Indian Ocean tsunami. *International Journal of Hospitality Management, 26*(1), 228–239.

Henderson, J. C., & Ng, A. (2004). Responding to crisis: Severe acute respiratory syndrome (SARS) and hotels in Singapore. *International Journal of Tourism Research, 6*(6), 411–419.

Hitchcock, M., & Darma Putra, I. N. (2005). The Bali bombings: Tourism crisis management and conflict avoidance. *Current Issues in Tourism, 8*(1), 62–76.

Hollier, R. (1991). Conflict in the Gulf: Response of the tourism industry. *Tourism Management, 12*(1), 2–4.

Israeli, A. A., Mohsin, A., & Kumar, B. (2011). Hospitality crisis management practices: The case of Indian luxury hotels. *International Journal of Hospitality Management, 30*(2), 367–374.

Israeli, A. A., & Reichel, A. (2003). Hospitality crisis management practices: The Israeli case. *International Journal of Hospitality Management, 22*(4), 353–372.

Ladkin, A., Fyall, A., Fletcher, J., & Shipway, R. (2008). London tourism: A "post-disaster" marketing response. *Journal of Travel & Tourism Marketing, 23*(2–4), 95–111.

Liu, B., Pennington-Gray, L., & Krieger, J. (2016). Tourism crisis management: Can the extended parallel process model be used to understand crisis responses in the cruise industry? *Tourism Management, 55*, 310–321.

Loperena, C. A. (2017). Honduras is open for business: Extractivist tourism as sustainable development in the wake of disaster? *Journal of Sustainable Tourism, 25*(5), 618–633.

Lovelock, B. (2004). New Zealand travel agent practice in the provision of advice for travel to risky destinations. *Journal of Travel & Tourism Marketing, 15*(4), 259–279.

Martín-Consuegra, D., Esteban, Á., & Molina, A. (2008). The role of market orientation in managing crises during the post-crisis phase. *Journal of Travel & Tourism Marketing, 23*(2–4), 59–71.

Marvel, W. M., & Johnson, C. B. (1997). A crisis of currency or creativity? Problems and prospects for the Swiss hotel industry. *International Journal of Hospitality Management, 16*(3), 279–288.

Meheux, K., & Parker, E. (2006). Tourist sector perceptions of natural hazards in Vanuatu and the implications for a small island developing state. *Tourism Management, 27*(1), 69–85.

Niininen, O., & Gatsou, M. (2008). Crisis management—A case study from the Greek passenger shipping industry. *Journal of Travel & Tourism Marketing, 23*(2–4), 191–202.

O'Brien, A. (2012). Wasting a good crisis: Developmental failure and Irish tourism since 2008. *Annals of Tourism Research, 39*(2), 1138–1155.

Prideaux, B. (2004). The need to use disaster planning frameworks to respond to major tourism disasters: Analysis of Australia's response to tourism disasters in 2001. *Journal of Travel & Tourism Marketing, 15*(4), 281–298.

Richter, L. K. (1999). After political turmoil: The lessons of rebuilding tourism in three Asian countries. *Journal of Travel Research, 38*(1), 41–45.

Sheldon, P., & Dwyer, L. (2010). The global financial crisis and tourism: Perspectives of the academy. *Journal of Travel Research, 49*(1), 3–4.

Sönmez, S. F. (1998). Tourism, terrorism, and political instability. *Annals of Tourism Research, 25*(2), 416–456.

Stanbury, J., Pryer, M., & Roberts, A. (2005). Heroes and villains–tour operator and media response to crisis: An exploration of press handling strategies by UK adventure tour operators. *Current Issues in Tourism, 8*(5), 394–423.

Taylor, P. A. (2006). Getting them to forgive and forget: Cognitive based marketing responses to terrorist acts. *International Journal of Tourism Research, 8*(3), 171–183.

Tse, A. C. B., So, S., & Sin, L. (2006). Crisis management and recovery: How restaurants in Hong Kong responded to SARS. *International Journal of Hospitality Management, 25*(1), 3–11. https://doi.org/10.1016/j.ijhm.2004.12.001.

Volo, S. (2008). Communicating tourism crises through destination websites. *Journal of Travel & Tourism Marketing, 23*(2–4), 83–93.

Brent W. Ritchie studies risk management in tourism, with a specific interest in the planning, response and recovery from crises and disasters at an organizational and destination level. He also studies consumer risk perceptions and decision-making.

Yawei Jiang's research interests include strategic management, stakeholder collaboration and dynamic capabilities in tourism crisis and disaster management, organisational recovery and resilience in managing environmental uncertainties, and risk communication strategies for tourism destinations.