Annals of Tourism Research 79 (2019) 102808

Contents lists available at ScienceDirect

Annals of Tourism Research

journal homepage: www.elsevier.com/locate/annals

RESEARCH NOTE

TOURISM, CRISIS, DISASTER: AN INTERDISCIPLINARY APPROACH

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ARTICLE INFO

Associate editor: Ritchie Brent

KEYWORDS:
Crisis
Disaster
Tourism industry
Research agenda
Resource management
Preparedness

ABSTRACT

A large proportion of the global tourism industry is highly exposed and vulnerable to environmental hazards and has over the last years been highly affected by subsequent disasters and crises. Tourism involves the interactions of organizations, people, and events in a variety of subsystems. The complexity of this interconnected system and the relatively early-stage of tourism-related crisis and disaster studies suggests that a dialogue between the tourism and the disaster risk research communities could be beneficial in order to share knowledge and define gaps regarding crisis and disaster affecting the tourism industry. Our study aims at giving directions to fill this gap by reviewing key contributions on crisis and disaster risk management and adopting a systematic approach to review the tourism-oriented literature on the topic. Grounding on the analysis of 113 relevant publications, this note describes how the literature has developed to this point and where the field seems to be heading in the future. The findings point towards a research agenda for the future.

Over the last decades crises and disasters have caused significant loss and damage, also imposing a major burden on the tourism industry worldwide as it is often highly exposed and vulnerable to a range of natural and man-made hazards (Pforr & Hosie, 2008). It is therefore not surprising that the Sendai Framework for Disaster Risk Reduction 2015–2030 calls for the promotion and integration of disaster risk management (DRM) approaches throughout the sector (UNISDR, 2015, p.19). In turn, direct and indirect losses to the tourism sector resulting from crises or disasters not only have an impact on the tourism industry itself, but on entire economies in affected countries, particularly in countries where large proportions of the GDP are directly or indirectly generated through tourism. Tourism activities involve the interactions of organizations, people and events in a variety of subsystems (Scott & Laws, 2005). Therefore, crisis and disaster in tourism have been analysed from several perspectives by different academic communities over the past years.

While there has been significant progress in terms of harmonizing the disaster risk reduction (DRR) and DRM dictionary within and across the DRR and climate change adaptation communities over the past years, tourism-related studies seem not yet arrived at a coherent usage of key terms of concepts in relation to disasters. This holds true especially for the use of the terms crisis vs. disaster (Cró & Martins, 2017), despite the fact that both are rooted in different conceptual debates and in many countries imply very distinct legal implications, e.g. for declaring a state of emergency and triggering disaster response funds.

We conducted a systematic literature research in order to analyse the current use of these two key terms in the tourism-related

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https://doi.org/10.1016/j.annals.2019.102808
Received 14 September 2018; Received in revised form 30 December 2018; Accepted 3 October 2019
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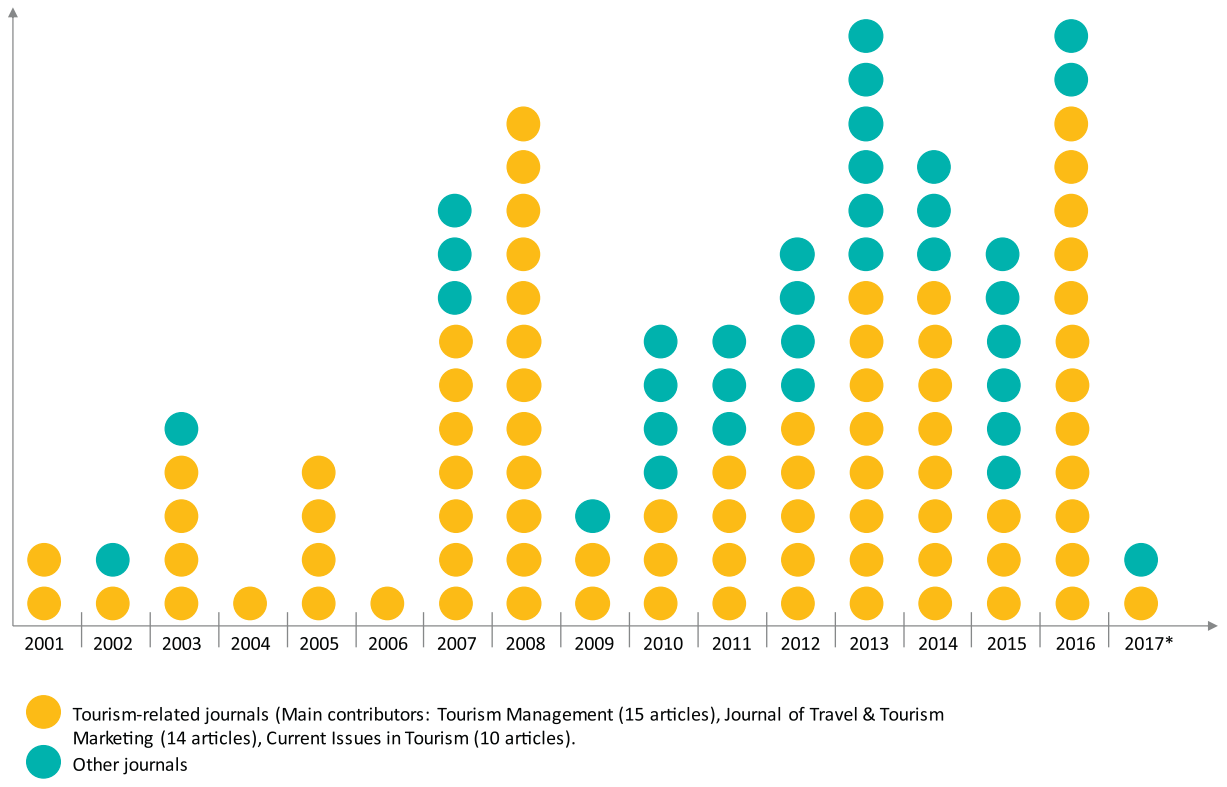

Fig. 1. Journal publishing articles in this review.

literature. In doing so, we examine where the literature currently stands, which conceptual frameworks it draws on, how attention but also blind spots might be distributed in terms of different world regions, tourism sectors and natural hazards. Through this analysis we aim to formulate recommendations towards a future agenda for tourism-related research.

We based our sample on a strategic search using the search terms 'tourism AND disaster AND crisis' to compare the use of the terms disaster and crisis within the same study. We used the EBSCO host research database (Business Source Complete - BSC) as the main source to identify articles (as done by Mair, Ritchie, & Walters, 2014), and we also considered contributions published in Scopus and Web of Knowledge. The systematic review comprises papers published between January 2001 and May 2017. 2001 was chosen as initial boundary for the review as crisis and disaster research mainly started to emerge in the tourism field following the Faulkner's (2001) contribution. A total of 88 contributions emerged from Scopus, 52 from EBSCO-Business Source Complete, 19 from Web of Knowledge. After excluding overlaps, 113 publications were identified and analysed.

The systematic literature review mainly comprises articles that have been published in tourism-oriented journals; however, it also includes journals that consider only occasionally tourism as main topic of investigation to cover the maximum of publications (Fig. 1).

All data were coded, reviewed, and refined by all researchers (see Mair et al., 2014). Results confirm the increasing number of studies focused on tourism crises and disasters (Mair et al., 2014), many of them in highly respected journals (Jiang, Ritchie, & Benckendorff, 2017) such as Tourism Management (15 articles), Journal of Travel & Tourism Marketing (14 articles), and Current Issues in Tourism (10 articles).

The following themes and opportunities for further research derived from the coded data (Mair et al., 2014):

a) Geographical spread

Most of the studies has been conducted by researchers affiliated to Universities based in Australia (30.1%), USA (22.1%), UK (15.9%), and Taiwan/New Zealand (8% each). Focusing on the destinations that have been selected as case studies, South East Asia leads (15.9%), followed by USA (12.4%), Australia (8%), and Taiwan (7.1%). Overall, the selection of case studies seems to be mainly influenced by the location of the research centres (e.g. see the case of Taiwan) except for those located in the UK. In this case, the 83.3% of the analysed case studies are in areas such as Asia, North/Central America and other European countries except UK.

This result suggests that the presence of a research centre in a territory tends to influence the number of investigations on the territory itself. Hazard-exposed communities should take in consideration this trend facilitating the development of tourism- and disaster/crisis-oriented research centres. In the meanwhile, further international collaboration should be promoted by the currently more active Universities.

b) Research techniques

The comparison between the research techniques adopted in the contributions from crisis and DRM literature and those from the tourism-literature does not show relevant differences. Notably, within crisis and DRM studies, there are several literature reviews (Brown, Rovins, Feldmann-Jensen, Orchiston, & Johnston, 2017; Mäntyniemi, 2012; Marrero et al., 2013; Mohammad, Mojtahedi, & Lan Oo, 2014). It is worth noting that the larger share of empirical investigations uses questionnaires and semi-structured interviews (Hanna Salman Sawalha, Eid Jraisat, & Al-Qudah, 2013; Peter, Poulston, & Losekoot, 2014) and tends to include in the analysis only references and models from crisis and DRM literature (see Kim & Marcouiller, 2015; Marrero et al., 2013), showing low connection with the tourism literature. The same trend is confirmed within the tourism literature. Further studies may adopt a more inter-disciplinary approach to facilitate a dialogue between the two academic communities and promote more comprehensive investigations.

c) Crisis/disaster management lifecycle model

Mair et al. (2014) and Ritchie (2008) previously highlighted that the majority of the contributions published by tourism-oriented journals are concerned on the recovery stage. It is interesting to note that only few authors investigate how the tourism industry manages preparedness to disasters (see, for some examples, Biggs, Hall, & Stoeckl, 2012; de Sausmarez, 2007; Lew, 2013; Pennington-Gray, Thapa, Kaplanidou, Cahyanto, & McLaughlin, 2011; Ritchie, Bentley, Koruth, & Wang, 2011; Rittichainuwat, 2013). The lack of studies on preparedness could stem from the frequent adoption of Faulkner's (2001) definition of disaster as a phenomenon over which the managers have little control and that is therefore potentially less tempting to investigate. On the contrary, our review highlights that the preparedness perspective has been mainly investigated by tourism-related articles published in non-tourism specific journals (see Brown et al., 2017; Hanna Salman Sawalha et al., 2013; Kim & Marcouiller, 2015; Mäntyniemi, 2012; Marrero et al., 2013; Martínez-Ibarra, 2015; Mohammad et al., 2014; Peter et al., 2014).

An opportunity to fill this gap is given by tourist behaviour and risk analyses. Even if tourism-oriented risk communication has been strongly analysed (Mair et al., 2014), the tourists' risk-information seeking process has been under-investigated (Cahyanto & Pennington-Gray, 2015) and this typology of information may contribute to increase disaster preparedness towards providing interdisciplinary suggestions to create tailor-made risk-communication.

In addition, a comparison between the crisis/disaster management lifecycle models currently adopted within the tourism community (e.g. Faulkner, 2001; Muskat, Nakanishi, & Blackman, 2015; Ritchie, 2004) and those adopted by DRM/DRR community (e.g. Birkmann et al., 2010) may help identifying the current investigations on each stage of the models, highlighting opportunities for interdisciplinary collaboration, and harmonizing the language.

d) Resource management

Both disasters and crises seem to be linked to a resource management path: “correctly managing resources in order to face the challenges (“crisis” based on Faulkner, 2001; pag.136) and avoid exceeding the capacity to cope using its own resources (“disaster” based on UNISDR, 2009; pag.09)”. The evolution of crisis- and disaster-focused studies among the years suggests that the process leading to crisis and disaster needs to be constantly monitored (Ritchie, 2004) with the aim to identify actions to be adopted during each stage (Hanna Salman Sawalha et al., 2013). Our review also reveals how inept-management processes are able to drive to disaster occurrence (see Beeton, 2001; Weaver & Lawton, 2007). This refers to the progression of vulnerability explained by the PAR and Access models (Wisner, Blaikie, Cannon, & Davis, 2004), widely reported in disaster risk reduction related studies. During the event occurrence, the ability to control the challenges tends to be weaker. The ability to control the negative effects usually decreases due to the scarcity of resources. As consequence, the vulnerability of the society increases, impacting the susceptibility and the fragility of the communities (Wisner et al., 2004).

Further studies should pay particular attention to the coordination of resources among different sectors to increase the capacity of the tourism industry to manage crisis and disaster using all the available resources. This approach is in line with the suggestion provided by Nakagawa and Shaw (2004) (introduced in the tourism literature by Jones (2016)) to incorporate stakeholder networks into the disaster planning and response strategies.

e) Terminology

85 out of 113 papers (75.2%) include the highly debatable expression ‘natural disaster’, which highlight the necessity for a constant dialogue and exchange across disciplines, given that the concept of natural disasters has been criticized by the disaster risk reduction community since the 1970s (Hewitt, 1983; O'Keefe, Westgate, & Wisner, 1976). The expression “natural disaster” has long been considered a misnomer as main causes of disasters are related to human actions (Schipper & Pelling, 2006). In addition, according to our results, the current difficulty in defining crisis and disaster is linked to the presence of four main perspectives that are constantly interchangeably used in the tourism literature. Two of them can be considered external to the tourism dynamics. “External-disaster” is a shock event (e.g. earthquake, tsunami, etc.) affecting the tourism industry in primary and/or secondary stage. “External-crisis” is a crisis affecting other industries and indirectly impacting on tourism industry. The other two are directly linked to the tourism industry. “Tourism-disaster” is caused by a shock event directly impacting on or happening within and disrupting the tourism industry. The effects can be measured by tourists' fatalities, cultural heritages damages, etc. These events are facilitated by

Table 1
Take-home messages and suggestions for further research.

Take-home messages	Suggestions for further research
✓ Currently, most of the studies on tourism crisis/disaster are developed in just 5 countries; ✓ The presence of a research centre in a territory tends to influence the number of investigations on the territory itself; ✓ Hazard-exposed communities should take in consideration this trend facilitating the development of tourism- and disaster/crisis-oriented research centres; ✓ Additional international research collaboration should be promoted; ✓ Research techniques adopted in the contributions from crisis and DRM literature and those from the tourism-literature does not highlight relevant differences; ✓ Both communities tend to include in the analysis only references and models from their literature; ✓ Tourism literature mainly focuses on recovery while crisis/DRM studies tend to contribute to disaster preparedness; ✓ Inept management processes are able to drive to tourism-disaster; ✓ Both disaster and crises seem to be linked to a resource management path: "*correctly managing resources in order to face challenges and avoid exceeding the capacity to cope using its own resources*"(based on Faulkner, 2001 and UNISDR, 2009); ✓ Terminology adopted by the tourism literature needs to consider other discipline achievements (e.g. misnomer: natural disaster); Scholars need to carefully explain the adopted perspective (e.g. tourism crisis and disaster; external crisis and disaster) to avoid blurring terminology.	✓ Further studies may adopt a more interdisciplinary approach (references from other disciplines) to facilitate a dialogue between the two academic communities and promote more comprehensive investigations; ✓ Further studies may provide in-depth analysis of the contributions provided for each stage of tourism crisis/disaster management lifecycle models; ✓ In particular, tourism literature needs to further contribute to disaster preparedness. Investigation on tourists' risk-information seeking and processing represents a research opportunity in that sense; ✓ Further studies may compare crisis/disaster management lifecycle models currently adopted within the tourism community and those adopted by DRM/DRR community to highlight opportunities for interdisciplinary collaboration and harmonizing the language; ✓ Further studies should pay particular attention to the coordination of resources among different sectors to increase the capacity of the tourism industry to manage crisis and disaster using all the available resources (stakeholder networks); ✓ The process from "external-crisis" to "tourism-disaster" (e.g. role of inept management; role of resource management) is under-investigated; ✓ Tourism literature needs to provide additional studies on "Natech" and industrial accidents.

inept management structures and practices. In addition, "tourism-disaster" is also considered as an aggravation of "tourism-crisis" intended as the effects generated by a shock event on the tourism industry in terms of reservation trend, hotel's occupancy trend, economic losses of the tourism industry, etc. Scholars should carefully use the terms crisis and disaster highlighting the adopted perspective.

Additional suggestions for future research emerge taking in consideration these four dimensions. The process from "external-crisis" to "tourism-disaster" is under-investigated. There is the need for further research on the process leading to inept management taking in consideration the above-mentioned resource management issue.

f) Hazards

From a "tourism-disaster" perspective, suggestions for additional research emerge from the analysis of the hazard that have been investigated. Our analysis highlights that the effects generated by natural hazards are more investigated than those generated by "Natech" (natural-technological) accidents (e.g. Handler, 2016) or industrial accidents (e.g. Ritchie, Crotts, Zehrer, & Volsky, 2014), which require additional industry-specific skills and competences. We argue that there is a substantially unexplored area of inter-disciplinary collaboration aimed at identifying proactive and reactive strategies to be adopted in case of "Natech" and industrial accidents. Additional studies thus need to be developed taking in consideration the increasing number of disasters purely linked to human activity or related to hybrid hazards.

In sum, until today, tourism literature mainly focuses on recovery while crisis/DRM studies tend to contribute to disaster preparedness. A dialogue between different disciplines seems to be highly beneficial in order to share knowledge, terminology, identify research gaps and propose ways forward regarding crisis and DRM in tourism. Table 1 summarizes the suggestions for further research.

Suggestions for further research include a broader geographical spread of the studies on the topic, adding Natech to the analysed hazards, and agreeing on joint crisis/disaster management lifecycle models to be used by the different academic communities.

The study presents some limitations. As every literature review, our findings are based on the results of the articles included in the analysis. In order to assure the robustness of the synthesis provided (Mair et al., 2014), only papers published in peer-reviewed journals are included in the review, potentially leaving out interesting works, directly related to the subject and published in prestigious editorials.

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