

# The COVID-19 pandemic and organisational learning for disaster planning and management: A perspective of tourism businesses from a destination prone to consecutive disasters

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## ABSTRACT

Organisational learning is critical for building disaster-resilient tourism businesses. Limited research has examined the mechanisms of organisational learning in tourism enterprises operating in disaster-prone destinations. The COVID-19 pandemic provides an opportunity to investigate how past disasters have reinforced organisational resilience of tourism businesses. This paper evaluates the effect of past disasters on organisational learning of tourism businesses in Bali. It finds that limited human and social capital restricts their organisational learning, exposing vulnerability of the Balinese tourism industry to future disastrous events. Stakeholder capacity building exercises are required to enhance disaster resilience of tourism businesses and their host destination.

## 1. Introduction

The COVID-19 pandemic has imposed manifold negative effects on global tourism. Although the precise magnitude and the lasting legacy of these effects are yet to be established, experts predict some irreversible changes to occur within the industry in the foreseeable future (Gössling et al. 2020). Some argue that international tourism may have entered the era of a 'new normality' which requires all tourism businesses to re-consider their business models and subsequently modify their operational practices in line with new governmental requirements and consumer expectations (Hall et al. 2020).

The negative implications of the pandemic are particularly pronounced in popular destinations over-relying on foreign tourism (Brouder, 2020). Here, a sudden interruption of tourist flows has halted business revenues and prompted staff redundancies, thus outlining a bleak business future (Nicola et al. 2020). Although a possible rebound effect in consumer demand may help tourism businesses in popular destinations to recover, the prospects of such rebound are unclear and/or can be easily negated by the predicted future pandemic waves (Xu & Li, 2020).

As in the case of other disasters (Orchiston, 2013), the ability of tourism businesses to overcome COVID-19 will depend on the levels of their organisational resilience. The extent of collaboration of tourism

businesses with one another, their employees and other stakeholders, such as destination management organisations (DMOs) and disaster management professionals, will also play a role (Jiang et al. 2019). Importantly, aside from the manifold negative implications, past disasters and/or crises offer scope for organisational learning (Blackman & Ritchie, 2008a). Although the sudden occurrence of COVID-19 and its long-lasting, yet unknown, effects hinder any historical comparisons, it is argued that the levels of organisational resilience to the current pandemic and the extent of stakeholder collaboration of tourism businesses in popular destinations to withstand its detrimental impact should have emerged from the past lessons learnt.

From this perspective, tourism businesses operating in the destinations that had experienced multiple, consecutive, disasters and/or crises in the past may represent particularly interesting research objects. This is because, in theory, this previous experiences should have enabled organisational learning among tourism businesses and provided them with the required skillsets to withstand future disasters (Jiang & Ritchie, 2017), such as COVID-19 or, indeed, climate change. Further, past experiences mediated through organisational learning should have prompted tourism businesses to allocate the necessary resources in order to plan for the occurrence and overcome the implications of future disasters and/or crises (Cioccio & Michael, 2007). The 'right' combination of skills and resources reinforces organisational resilience (Faulkner,

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2001) and strengthens stakeholder collaboration (Nguyen et al. 2017) as any related gaps should have taught tourism businesses to seek the missing (social, physical or human) capital from other parties, thus enabling organisational learning (Filimonau & De Coteau, 2020).

Although research on the ‘lessons learnt’ by tourism businesses from past disasters and/or crises is rapidly growing, there remain gaps in an understanding of how/if these lessons have been considered in forward business planning for future disasters but, especially, how/if these lessons have proven to be useful in the case of future disasters and/or crises (Ghaderi et al. 2015). The COVID-19 pandemic represents a unique opportunity to conduct a ‘reality check’ for the disaster preparedness and recovery of tourism businesses, especially in the destinations that underwent multiple, consecutive, disasters in the past. Whilst not being purely longitudinal (Gurtner, 2016), such research can aid in evaluating how much, if at all, tourism businesses had learnt from past disastrous events and what measures, if any, they had put in place to withstand future disasters and crises, such as the current pandemic.

To this end, this study explores the impact of COVID-19 on tourism businesses in Bali, a popular destination in South East Asia, which over-relies on foreign tourism. Bali has been impacted by numerous, consecutive, disasters in the past, such as the acts of terrorism (Hitchcock & Putra, 2005) but, in particular, numerous natural hazards (Beirman, 2017). It, therefore, represents an interesting setting to examine the implications of the pandemic for organisational resilience and stakeholder collaboration of Balinese tourism businesses, especially from the viewpoint of the lessons learnt from past disastrous experiences. This is because organisational resilience implies organisational learning which, in the context of disasters and crises, enables businesses to improve its performance when future disastrous events strike (Matyas & Pelling, 2015).

The findings of this study can, thus, contribute to theory by providing a better explanation of how tourism businesses should prepare for and recover from disasters in a destination which is vulnerable to their repeat occurrences. This will enrich theory of organisational knowledge management (Blackman et al. 2011) which seeks to explain how businesses can take advantage of past experiences in order to enhance their business performance, especially in light of future disastrous events (Ghaderi et al. 2012). The study will, therefore, examine how the experience of past consecutive disasters in Bali has changed, if at all, the way how local tourism businesses respond to the on-going effects of COVID-19.

The study can further enrich policy-making and management practices in Bali, and beyond, by revealing the determinants of organisational resilience among tourism businesses in a popular destination which has suffered from numerous, consecutive, historical disastrous events and outlining the scope for its reinforcement. Lastly, the study can reveal examples of effective practices in organisational learning and organisational resilience among tourism businesses. This will showcase the opportunities for the adoption of these practices in light of the possible future waves of the COVID-19 pandemic but also other disastrous events, most notably climate change.

It is important to emphasise that COVID-19 is characterised by an exceptional novelty in terms of the (geographical and sectoral) scope of its effect and the excessive magnitude of damage inflicted (Filimonau et al. 2020). This may prompt thinking that tourism businesses could not adequately prepare for the pandemic given its limited resemblance to past disasters and crises. However, theories of organisational resilience and organisational learning posit that businesses should respond productively to significant disruptions (Horne & Orr, 1998) and that this response should be situation-specific (Linnenluecke et al. 2012). These theories further claim that businesses should effectively absorb what they have experienced in the past in order to transform/evolve into new entities holding the (larger) potential to withstand future, possibly totally different in what they will entail, disasters and crises (Lengnick-Hall et al. 2011). This paper is grounded on these exact premises and argues that tourism businesses operating in Bali, a destination prone

to consecutive disasters and crises, can use COVID-19 as an opportunity to reflect on what they have learnt, if anything at all, from past disastrous events. This is to ensure they can become more resilient towards future disasters and crises whose impacts on business operations are yet insufficiently understood, such as the unfolding climate change. Using the metaphor, the pandemic is considered in this paper as a ‘mirror’ which Balinese tourism businesses can look at in order to assess the level of their preparedness for the future on the basis of what they may have learnt from their past experiences.

## 2. Literature review

### 2.1. Consecutive disasters

Consecutive disasters are understood as disastrous events that occur in succession in a single locality, and whose direct impacts overlap spatially before the recovery from a previous disastrous event is considered complete (De Ruiter et al. 2020). It is important to note that there is always an element of subjectivity in such consideration. For example, whilst a locality can be entirely restored post-disaster, the psychological impacts of the destructions incurred and the damage inflicted may well over-last the period of reconstruction and rebuild (Genat & Derivois, 2014).

Consecutive disasters can be fuelled by identical hazards, such as periodic bushfires and floods (Cioccio & Michael, 2007). They can also consist of a combination of hazards that are linked to different processes occurring across multiple spatial and temporal scales, so-called compound disastrous events (Zscheischler et al. 2018). For example, climatic changes can prompt various types of extreme weather events, such as heavy rains, droughts and tornados, or an active volcano can cause tsunamis, earthquakes and/or eruptions. In either case, the lasting legacy and the geographical impacts of such compound events can be substantially different.

Consecutive disasters can be connected to the cascading effects whereby one hazard or disastrous event triggers the other (Pescaroli & Alexander, 2016). The unique feature of the latter category of consecutive disasters is in that the trigger is usually natural (for instance, an earthquake) whilst the consequence is normally related to a human factor (for example, lost communication infrastructure in a locality affected by an earthquake with a subsequent inability of emergency services to provide first aid to people in need). In the case of hazards triggering consecutive disasters, these can be categorised as independent and dependent (De Ruiter et al. 2020). Examples of the independent hazards are represented by the largely unrelated to one another disastrous events, such as an earthquake in year 1 and a cyclone in year 2. In contrast, the dependent hazards are closely linked to each other: for example, heavy rains cause flash floods whilst these accelerate landslides with subsequent damage to infrastructure. It is fair to suggest that consecutive disasters, being triggered by both independent and dependent hazards, will increasingly affect the tourism industry in the future given that the problem of climate change is steadily unfolding whilst many popular destinations are located in vulnerable coastal areas and/or active seismicity zones (Rossello et al. 2020).

The literature emphasises the need to recognise the type of hazard which prompts consecutive disasters and the disaster cycle when developing measures on disaster preparedness and response (Hall & Prayag, 2020). For example, hurricanes are often cyclic in nature as they tend to occur in certain destinations periodically (Seraphin, 2018). This should, in theory, enable organisations operating in such destinations to learn about their occurrence and put appropriate measures in place to (more) effectively prepare and recover. However, empirical evidence shows that this learning does not always happen (Filimonau & De Coteau, 2020). There are also consecutive disasters that are more difficult to predict. These are represented, for example, by earthquakes that often occur in sequence, albeit less periodically, thus representing an on-going hazard (Hall et al. 2016). Although organisations operating in

destinations prone to such sequential disasters should, in theory, learn about how to prepare for them and respond to their effects, there is evidence proving the opposite (Subadra, 2020). This emphasises the importance of identifying the determinants of organisational learning in consecutive disaster preparedness and recovery as a means of reducing business vulnerability and improving organisational resilience. There is also a need to better understand correlation, if any, between the frequencies of (consecutive) disastrous events, their driving hazards and major consequences and how learning occurs in affected organisations and for how long this organisational learning lasts.

Drawing on the above, it is argued that the COVID-19 pandemic may represent an example of a consecutive disastrous event. This is attributed to the predicted multiple waves of its occurrence that can be driven by multiple factors, such as seasonality of the infection spread, the under-developed national systems of public health, and international travel, among others (Xu & Li, 2020). This is also associated with the detrimental impacts imposed by the pandemic on human/economic activity (=the cascading effect). For example, it is estimated that COVID-19 will reduce inbound tourism to the UK in 2020 by at least 59%, with the largest impact imposed on such popular destinations as London and Edinburgh (VisitBritain, 2020). The over-reliance of these destinations on foreign tourists implies consecutive disastrous implications for local residents in 2020 and 2021 in the form of lost income and unemployment. The cascading effects of the pandemic should, therefore, represent a major point of concern for tourism businesses and destination management professionals.

## 2.2. Organisational learning

Organisational learning theory explains how knowledge is created, retained and shared within an organisation (Popova-Nowak & Cseh, 2015). The theory is underpinned by the principle that, as an organisation evolves over time, it gains experience and this experience can lay the foundation of knowledge creation which, in turn, shapes organisational competencies (Drejer, 2000). Organisational learning theory assumes that organisations learn at various levels (Popper & Lipshitz, 2000), namely: (1) individual learning happens among specific employees; (2) group learning takes place across employee groups and/or clusters; (3) organisational/business learning occurs at an aggregate level of company's leadership; and (4) inter-organisational learning arises from knowledge co-creation and exchange between different businesses normally operating in the same sector of economic activity.

Organisational learning represents an established object in tourism research as a means for tourism organisations of coping with uncertain business conditions and/or economic crises and adapting to changing political and economic environments (see, for example, seminal studies by Anderson, 2006; Bayraktaroglu & Kutanis, 2003; Lugosi & Bray, 2008). Organisational learning as a prerequisite of the effective transition of tourism destinations and the tourism businesses within towards sustainability goals has also been studied (Schianetz et al. 2007). Organisational learning in the context of disaster management and tourism has been examined less rigorously (Blackman & Ritchie, 2008b; Faulkner & Vikulov, 2001; Ritchie, 2009). One of the reasons for this may rest in a highly diverse nature of disastrous events. This diversity may impede effective organisational learning as, for example, the preventative and protective measures needed to respond to and recover from a localised flood can be dramatically different from those required in the case of a large-scale hurricane. In turn, this hampers the design of comprehensive, step-by-step, managerial guidelines aiming to aid tourism businesses in disaster planning, preparation and recovery, thus encouraging organisational learning. Although a number of disaster management frameworks have been proposed to-date (Becken et al. 2014; Faulkner, 2001; Ritchie, 2004), these cannot be considered all-inclusive and require modifications accounting for the local context prior to their application 'on the ground'. Another reason for why organisational learning has been less rigorously studied in the context of

disaster management in tourism may be attributed to the fairly infrequent occurrence of disastrous events coupled with their significant spatial distribution (Seraphin, 2018). This provides limited 'windows of opportunity' for research and, as businesses prioritise prompt recovery in the immediate disaster's aftermath, they often fail to engage with scholars as study informants, thus preventing an analysis of the main mechanisms of organisational learning.

It is argued that the destinations that are prone to multiple, consecutive, disastrous events represent interesting contexts to expand an academic understanding of how organisational learning happens in tourism businesses in light of disaster management. The regular, almost sequential, occurrences of disasters should prompt tourism businesses to use past disastrous experiences in order to prepare and adapt to the future. Poor organisational learning in such destinations may imply business extinction whilst 'good practices' can aid tourism businesses in developing the necessary levels of organisational resilience to withstand future disasters.

## 2.3. Organisational resilience

Unlike organisational learning, the topic of organisational resilience has been well studied in the context of disaster management and tourism (for seminal contributions, see Hall et al. 2018; Orchiston et al. 2016; Sydnor-Bousso et al. 2011). In simple terms, organisational resilience can be defined as an organisation's ability to manage uncertainty (Lee et al. 2013) which, when applied to tourism, is attributed to the socio-economic and environmental ambiguity emerging from disastrous events, such as natural hazards and/or man-made crises (Brown et al. 2017). Importantly, the concept of organisational resilience suggests that organisations should consider disasters as learning opportunities (Prayag et al. 2018), thus highlighting the scope for examining organisational resilience in tourism through the prism of organisational learning theory.

By measuring the extent of organisational resilience in the context of disaster management, Sawalha (2015) distinguishes between the three main types of organisations. Type 1 is represented by organisations that adopt a reactive approach to managing disastrous events in that they do the very minimum to prepare for their possible future occurrences. Type 2 is comprised of organisations that go beyond the 'bare minimum' by attempting to invest into 'good practices' in disaster prevention and mitigation, subject to budget and resource availability. Type 3 organisations demonstrate a pro-active, integrated vision towards disaster management by embracing 'best practices' and engaging in continuous learning for disaster preparedness and recovery. Within the tourism sector, Type 1 organisations dominate (Hall et al. 2018) which can be explained by at least two factors. First, the majority of tourism businesses are represented by small-to-medium sized enterprises. These have limited resources and have to, therefore, allocate these with care. The relative infrequency and/or unpredictability of disastrous events often prevent such organisations from allocating more-than-deemed-necessary resources to disaster management (Sullivan-Taylor & Branicki, 2011). Second, traditional conservatism of many tourism organisations hinders the industry's uptake of novel business models. This is well demonstrated, for example, by the lack of involvement of tourism businesses in the practices of environmental innovation (Filimonau & Magklarpoulou, 2020). This is further exemplified by the damaging impact imposed by the early-adopters of novel business solutions, so-called market disruptors, such as the sharing economy's companies, on the tourism sector's performance (Dolnicar & Zare, 2020). This underlines the importance of effective organisational learning for the longevity of tourism businesses, especially in the case of organisations operating in disaster-prone destinations.

## 2.4. Stakeholder collaboration

A review paper by Filimonau and De Coteau (2020) has looked at

what past research on disaster management and tourism identifies as necessary attributes of building organisational resilience among tourism businesses. It finds that adaptability, collaboration, innovation and human resources represent the key factors in building resilient organisations. Interestingly, all these factors are closely related to organisational learning theory. Adaptability, understood as an organisation's willingness to adjust its operations to suit different and/or changing (environmental) conditions, is normally a product of organisational learning (Lee et al. 2013). Indeed, businesses implement changes in response to either external or internal challenges, such as an envisaged alteration in consumer preferences and/or a recognised shift in customer demand. Learning about these challenges is a cornerstone of the (re-) design of appropriate business strategies (Anderson, 2006). Next, collaboration involves learning by definition as it implies exchanges of knowledge and skills (Hystad & Keller, 2008). For effective disaster management, inter-organisational (company-to-company) and intra-organisational (employee-to-employee) collaboration is necessary (Filimonau & De Coteau, 2020), which is in line with organisational learning theory as discussed earlier. Further, innovation is underpinned by novel ideas and creativity that are indispensable attributes of organisational learning (Mafabi et al. 2015). This is of particular relevance to the tourism context whereby novel ideas can become conventional very quickly given that copying services is generally easy. Lastly, human resources are a cornerstone of organisational learning given the importance of information flows and knowledge exchange among staff and managers of tourism businesses (Sydnor-Bouso et al. 2011).

The above emphasises the critical value of stakeholders and their collaboration for effective management of disasters in the tourism context. Again, in line with organisational learning theory, the way how different stakeholders within an organisation, but also beyond it, work together in pursuit of a common goal is paramount for the adoption of viable approaches to disaster prevention and mitigation among tourism businesses. All in all, this showcases the importance of allocating adequate skillsets and securing sufficient resources for disaster management by tourism businesses, especially in the destinations that experience multiple, consecutive, disastrous events.

## 2.5. The Balinese context

The Indonesian island of Bali is vulnerable to multiple types of natural hazards as it is located in a seismically-active geological zone prone to volcano eruptions, earthquakes and tsunamis (Rindrasih, 2018). The

island itself is home to an active volcano, Mount Agung, whose multiple eruptions had since 2017 repeatedly, albeit shortly, interrupted the local tourism activity (Benge & Neef, 2018). Although the number of international tourist arrivals did not decline significantly in the result of eruptions (Fig. 1), their consecutive nature affects the intentions of tourists to visit Bali (Gurtner, 2016). The neighboring island of Lombok is home to another active volcano, Rinjani, whose eruptions disrupted the Balinese tourism in the past, albeit to a small degree (The Guardian, 2016). According to the National Disaster Mitigation Agency of Indonesia, on an annual basis, the country is hit by at least 2500 natural disasters of varying types and severities with Bali representing one of the hotspots due to a persistent threat of volcanic eruptions in this locality (Merdeka, 2018).

In addition to natural hazards, Bali is vulnerable to man-made disasters. The 2002 and 2005 bombings did not only bring about a significant decrease in tourist numbers (Fig. 1), but also created the bad publicity of the island as a tourist destination (Henderson, 2003). After the 2002 incident, Bali's international tourist arrivals returned to a pre-crisis level by the end of 2004, only due to significant marketing and discounting efforts applied by Indonesian authorities with support from international tourism and disaster relief organisations (Putra & Hitchcock, 2006). Full recovery was arguably never achieved as tourists started spending less in Bali after the bombing due to their shortened duration of stay on the island (Gurtner, 2016). The 2005 incident, albeit generating fewer casualties, arguably had a long-lasting impact on tourist arrivals given that consumer confidence in the destination had substantially deteriorated and become difficult to predict (Putra & Hitchcock, 2009). To date, the threat of terrorism has remained an important focal point for Balinese tourism policy-making and management as it represents a major off-putting factor for tourists to visit the island, especially in light of the on-going volcano eruptions, as described above, but also due to growing competition from other destinations in South-East Asia (Gurtner, 2016).

## 2.6. Research gap

Organisational learning in light of natural disasters represents an under-studied topic in tourism management research. COVID-19 provides an opportunity to critically evaluate the extent to which tourism businesses in popular destinations prone to disasters have learnt lessons from the past, if at all. This is referred to in the literature as examining the absorptive capacity of an organisation which is a necessary element

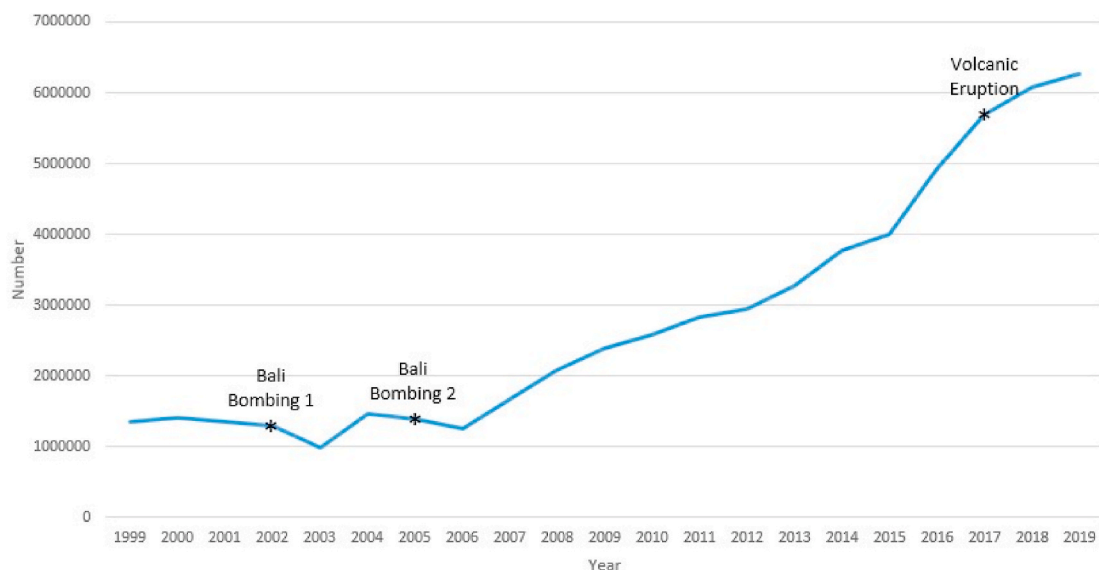


Fig. 1. Foreign visitors to Bali, 1999–2019. Source: Bali Statistics Center Bureau (2020).



of organisational learning and a critical prerequisite of organisational resilience to future disastrous events (Linnenluecke et al., 2012), such as the current pandemic. This study has set to undertake such an evaluation in the context of Bali, a disaster-prone destination in South-East Asia, which over-relies on foreign tourism as a prime economic activity.

### 3. Research design

The method of qualitative research was adopted for primary data collection and analysis in this study. This is due to the ability of this method to provide more in-depth and rich(er) descriptions, such as the “how” and “why” (Ospina, 2004). Answering these questions was deemed important in this study given they can shed light on such important topics of interest as organisational learning, organisational resilience and stakeholder collaboration in light of the COVID-19 pandemic and other multiple, consecutive, disasters in Bali. The method of qualitative paradigm is appropriate for examining complex and/or sensitive topics (Veal, 2011), such as management decisions in relation to (past, current and future) disastrous events. The method is best suited to reach for the populations of study informants that are limited in number and/or demonstrate limited willingness to collaborate with researchers, such as senior managers of tourism and hospitality enterprises (Filimonau & Krivcova, 2017), especially in light of disasters and crises. Within a portfolio of the qualitative research methods, semi-structured interviews were used given the analytical power and design flexibility they offered (Silverman, 2000).

#### 3.1. Interview schedule design

An interview schedule consisting of three sections was developed (Appendix 1) following a set of preliminary themes derived from the literature review. Section 1 aimed to explore the experience of the study informants' organisations in managing past disasters, most notably the historical bombing incidents and the recent, continuous, volcano eruptions. Section 2 examined the immediate and lasting effect of the COVID-19 pandemic from the viewpoint of the lessons learnt from past disastrous events, paying special attention to such topics as organisational competencies acquired from the past disasters, organisational resilience and stakeholder collaboration. Section 3 investigated the future of disaster management in the study informants' organisations from the perspective of business recovery from the current pandemic, but also considering organisational preparedness for future, consecutive disastrous events, such as the subsequent waves of COVID-19, future volcano eruptions and climate change. Within this section, a particular significance was assigned to studying the meaning of such important attribute of organisational learning and organisational resilience as stakeholder collaboration. The interview schedule was originally designed in English but subsequently translated to Indonesian using a back-translation technique (Werner & Campbell, 1973). Modifications for content, textual and semantic equivalence were discussed by the bilingual members of the research team (Chapman & Carter, 1979). For integrity and validity, the interview schedule was piloted with a handful of willing tourism businesses in Bali prior to its field administration.

#### 3.2. Study informants

The subjects for this study were represented by senior managers of tourism enterprises in Bali who were considered capable of providing in-depth information about the research topic from the perspective of their respective organisations (Lincoln & Guba, 1985). To understand the views of tourism businesses, senior managers of tourism and hospitality enterprises operating in Bali were interviewed. The condition for their participation was in the (1) managerial seniority (i.e. General/Executive Manager, Owner and/or Head of Operations), which is to ensure the adequate decision-making authority; and (2) pro-longed work experience in the business they represented (i.e. at least 5 years), which is to

warrant this person's involvement into the design of the (past, current and future) organisation's disaster management plans and procedures (if any).

Purposive sampling (Cresswell, 2007) was used for recruitment. To this end, professional contacts established by the research team with the tourism industry in Bali were first utilised to reach for willing participants. The snowball sampling technique (Biernacki & Waldorf, 1981) was subsequently applied to target tourism businesses meeting conditions for this study's participation as set above. Both purposive and snowball sampling represent popular recruitment tools in research on disaster and crisis management in tourism (see, for example, Filimonau & De Coteau, 2020; Ghaderi et al. 2015; Jiang & Ritchie, 2017). Their adoption was, thus, deemed suitable to achieve the goal of the current study.

Further, a policy-making insight into the topic in focus was also sought given that policy-makers have been identified as critical stakeholders in disaster-prone destinations (Filimonau & De Coteau, 2020). To this end, senior representatives of the National Tourism Office in Bali and National Disaster Management Agency were interviewed. Lastly, since international disaster relief organisations aided significantly in the recovery of Bali after the bombing incidents (Putra & Hitchcock, 2006), a top representative of an international non-governmental organisation active in the field of humanitarian assistance was interviewed. The interview schedule was modified to better reflect the nature of policy-making and disaster relief provision work. In total, 18 interviews were conducted and this number was determined by the data saturation effect (Marshall et al. 2013). Out of 18 study participants, 10 represented tourism businesses that had first-hand experience of the Bali bombings. All study participants had experienced volcano eruptions in Bali or Lombok in the past (Table 1).

The final sample consisted of 15 tourism businesses, two representatives of policy-making and one representative of the non-for-profit sector. Out of 15 tourism businesses, 11 (or 73%) were tourist accommodation providers, two (13%) tour operators and two (13%) transportation providers. This is sufficiently close to the structure of tourism businesses registered in Bali. In 2019, there were 6617 tourism businesses in Bali (Bali Tourism Government Office 2020, personal communication) represented by various categories of tourist accommodation providers (5382 or 81% of the total), 616 operators of transport and tourist activities (9% of the total), 448 travel agents (8% of the total) and 171 tourism villages (3% of the total). The sample was, thus, broadly representative of Balinese tourism businesses in terms of the relative proportions they occupied in the destination's tourism market.

#### 3.3. Interview administration

Interviews were conducted within the 26th April to May 25, 2020 period. They were administered online, via Zoom video telephony service, following the governmental requirement to reduce the number of face-to-face contacts during the pandemic in Indonesia. Rather than being a disadvantage, video interviewing was deemed beneficial for this study in a number of aspects. The study informants were able to choose the most suitable time for the interview and undertook it in a (more) comfortable environment (=home settings) with no external disturbances (Gruber et al. 2008) which is often the case for busy tourism and hospitality occupations.

The disadvantages of interviewing online included issues with connectivity, battery depletion (in the case of mobile devices) and background noise. The issue of connectivity was overcome by making an advance request to study participants to have a back-up option in place. For example, if a study participant intended to use Wi-Fi for the interview, it was requested to have mobile data available in the case of suddenly dropped connection. The issue of battery depletion was resolved by asking study participants to have their mobile device fully charged prior to commencing the interview. The issue of background noise was addressed by requesting study participants to find a quiet

**Table 1**  
Interview participants (n = 18).

Participant ID	Sector	Organisation's profile	Year of foundation	Experience of the Bali bombings?	Experience of past volcano eruptions?	Interview length
P1	Transport	A full-service airline operating more than 40 domestic and international routes	2000	Yes	Yes	50:01
P2	Transport	A supplier of hospitality services to leading international cruise ship companies	2007	No	Yes	40:24
P3	Policy-making	A representative of the National Disaster Management Agency	1945	Yes	Yes	21:41
P4	Accommodation	A 4-star international chain-affiliated hotel (capacity 199 rooms)	2000	Yes	Yes	44:06
P5	Accommodation	A 4-star independently-owned hotel (capacity 150 rooms)	1980	Yes	Yes	41:16
P6	Accommodation	A 5-star international tourist villa operator (capacity 74 villas)	1975	Yes	Yes	47:29
P7	Accommodation	A 4-star independently-owned hotel (capacity 112 rooms)	2010	No	Yes	41:27
P8	Policy-making	Head of Tourism Office of Bali	1984	Yes	Yes	41:00
P9	Accommodation	Head of Homestay Association of Bali	1997	Yes	Yes	55:38
P10	Accommodation	A 4-star independently-owned hotel (capacity 26 rooms)	1995	Yes	Yes	37:08
P11	Accommodation	A 4-star international chain-affiliated hotel (capacity 306 rooms)	2014	No	Yes	50:17
P12	Tour Operator	A regional representative of one of the largest tour operators in Indonesia	1995	Yes	Yes	54:23
P13	Accommodation	A 4-star independently-owned hotel (capacity 121 rooms)	2016	No	Yes	58:50
P14	Not-for-profit	A regional representative of the Red Cross Indonesia	1945	Yes	Yes	30:06
P15	Accommodation	A large provider of hospitality training services	2012	No	Yes	50:11
P16	Accommodation	A 4-star international chain-affiliated hotel (capacity 368 rooms)	2004	No	Yes	1:07:09
P17	Accommodation	A 4-star independently-owned hotel (capacity 121 rooms)	2016	No	Yes	46:08
P18	Tour Operator	The largest incoming tourism agency in Bali	2012	No	Yes	41:13

place for the interview and use a noise cancelling headset.

Before the interview, in order to build trust and minimise the effect of possible social desirability biases, complete confidentiality and anonymity of the study informants was guaranteed. Purposive and snowball sampling techniques used for recruitment aided in trust building. This is because the study participants either had some previous knowledge of the research team or were referred to the research team by their business contacts.

The subjects were interviewed individually, with interviews ranging in length from 21 min to 41 s to 1 h, 7 min and 9 s. No incentives were offered. The interviews were conducted in Indonesian; their recordings were professionally translated in English and subsequently fully transcribed verbatim.

### 3.4. Data analysis

The data were analysed thematically. To this end, the transcripts were first carefully read by each member of the research team in order to become familiar with the raw data and build core patterns of meanings (Berg, 2009). Following the intra-team discussions, the interview material was labeled, coded and assigned to the common themes following the guidelines of Braun and Clarke (2006). NVIVO 12, qualitative data analysis computer software, was employed to visualize the main codes, establish their significance and identify how they inter-link. Table 2 presents the coding structure generated by this study.

## 4. Results

Before the formal interviews commenced, the study participants representing tourism businesses were asked to elaborate on the disaster management plans and procedures adopted in-house by their respective businesses. There was a clear split in responses obtained in that all chain-affiliated enterprises claimed to have a number of bespoke and/or

formalised disaster management instructions to follow in the event of disaster, whilst most independent businesses tended to rely on rather ad-hoc and/or informal guidelines. This is understandable given that the former have to comply with the requirements of the parent, usually international, organisation which aims to minimise the risks of disastrous events by implementing a range of standardised preventative and adaptive measures.

### 4.1. Past experience of disaster management

From among past disastrous events, the volcano eruptions were actively discussed by the majority of study participants (Table 2). This is self-explanatory given their (more) recent and repetitive nature. The bombing incidents were only briefly mentioned given the significant temporal distance of these events and an alleged low probability of their re-occurrence in Bali. When probed on how/if the bombing incidents informed the (current) disaster management plans and procedures of the study participants' businesses, thus contributing to organisational learning and organisational resilience, the response was that they did not because of the significant difference in the nature of the disastrous events. Further, whilst the bombing incidents led to a lasting business disruption, prompting many to seek alternative sources of revenues and even places of employment, the volcano eruptions were seen as smaller-scale, temporary, less dangerous hazards imposing no long-term detrimental effect on tourism businesses in Bali.

In the case of volcano eruptions, the challenges of managing a tourism business during the eruption and the damage inflicted on business were the most discussed topics (Table 2). These largely concerned the need to look after the stranded guests whose flights were cancelled and, to a much lesser degree, after the organisations' workforce. The work of competitors during the eruptions was also spoken about (Table 2) but mostly in light of assessing the impact of the eruptions on their business performance and comparing this impact against

**Table 2**  
Coding structure with themes and codes showing the significance of each code.

	Theme	Code	Sub-code	N of people talking about it	Frequency of mentioning (N of quotes)	
PASTrowhead	Past disastrous events – BALI BOMBINGS	Challenges of managing business DURING the bombing events	Reduced cash flows	2	2	
			Reduced visitation	2	2	
	Past disastrous events – VOLCANO ERUPTIONS	Challenges of managing business DURING the eruptions	Damage to business	Financial damage	1	1
			Interrupted demand	Interrupted demand	17	69
				Reduced cash flows	14	45
				Reduced profitability	12	38
			Limited support	Limited support	8	9
				Financial	12	23
			Performance of competitors DURING the eruptions	Doing the same thing	8	9
				Doing things differently	2	3
			Stakeholder collaboration DURING the eruptions	Insufficient or non-existent	4	9
				Poorly designed	4	6
	PRESENTrowhead	COVID-19	Challenges of managing business DURING the pandemic	Sudden closure	12	55
				No compensation	10	48
Reduced cash flows				10	45	
Interrupted demand				9	36	
Staff no longer required				8	24	
Sudden disruption				Completely unexpected	12	22
				Financial	12	22
Damage to business				Over-staffed	10	20
				Need to employ staff no longer in need	6	12
Business strategy DURING the pandemic				Coping	3	9
				Preparation for the pandemic at its initial stage	–	2
Business BEFORE the pandemic				No anticipation of interruption	3	4
				The rebound effect in consumer demand	–	1
Competitors				Competitors doing things differently DURING the pandemic	Making staff redundant	7
	Closing down	2	2			
	Competitors doing same things DURING the pandemic	–	3		5	
FUTURErowhead	Future disasters	Re-thinking business strategy AFTER the pandemic	Seek extra sources of income	12	33	
			Save money	10	27	
			Delay investment	7	14	
			Opportunity to learn as a positive impact of the pandemic	Hygiene standards	13	19
				Improved staff relationships	8	10
			Re-think how to use money	Re-think how to use money	5	8
				Re-think where to invest	3	3
			Speed of business recovery	Slow	11	16
				It depends	7	10
				Rapid	1	1
			Challenges of managing business AFTER the pandemic	Re-instate profitability	9	16
				Work with suppliers	6	8
			Optimise the business spend	Optimise the business spend	4	5
				Slow	8	14
Speed of destination recovery	Quick	1	1			
	Need to re-think the future	7	8			
Going back to normal AFTER the pandemic	Little will change	2	4			
	Poor forecast	7	7			
Business pessimism: what if the pandemic never ends?	Help from the government	3	6			
	Long-term uncertainty	–	3	7		

Notes: Red colour indicates most popular codes (i.e. mentioned by over 50% of study participants). The frequency of mentioning column describes how many times each specific code has been called for in the interviews. This included separate, clearly different from each other, occasions on which the code was mentioned. This excluded the instances of simple repetition or referencing to the code as a means, of for example, clarifying interview questions.

the one inflicted on the study participants' businesses. Although stakeholder collaboration was discussed by a few study informants (Table 2), this primarily concerned their work with tour operators, travel agencies and parent companies (in the case of chain-affiliated businesses) located in the overseas from the viewpoint of supplying future tourists to the island. Collaboration with local stakeholders, such as tourism and disaster management policy-makers, local communities and other tourism businesses, as a means of withstanding the impact of the eruptions and preparing to their future occurrences was barely spoken about.

In a few strategies of business re-opening/recovery discussed, these local stakeholders were not featured at all. Instead, the focus was put on how the eruption time could be utilised to update/renovate the business infrastructure and re-train employees:

*'[During the eruption] we closed the hotel, all employees were laid off. To spend this time with use, we did the renovations and, expecting multiple eruptions, we stayed closed for 10 months. All of our partners in the Netherlands and in Germany were notified by us as well as all our online travel agents were told that we decided to renovate during this uncertain*

*time. The idea was to ensure that, when guests return, there are positive changes that they can see, so they come back again and again ...* (P11).

Employees are important stakeholders during disastrous events in tourism destinations. The above quote shows that, in some cases, tourism businesses in Bali sacrificed their workforce by making them redundant during the eruptions. This was largely dictated by the affordable tourism labour market with a large share of the migrant workforce from other, poorer regions of Indonesia. Staff redundancies were not deemed critical for local tourism businesses and many study informants expressed confidence in easy replacement of the laid-off staff after the disastrous events were over. Concurrently, some tourism businesses were more sympathetic towards their staff and, whilst not paying their wages during the eruptions, they provided them with food to aid in surviving during temporary business closures. Another good practice was in re-skilling the redundant staff with employees being assigned to other work tasks in absence of their normal job duties. For example, the (temporary redundant) receptionists and house-keeping staff could be provided with the (remaining) gardening and security jobs during business closures.

In terms of disaster management plans and procedures, most study participants stated their preparedness to withstand the consecutive eruptions by adopting appropriate measures to protect their guests and employees. It turned out, however, that this only concerned the immediate effects of the disastrous events. As the quote below shows, all tourism businesses in Bali are equipped with the first-aid kits and these can be distributed when/if the volcano erupts. Some also have sufficient food stocks to ensure these can be used during the disasters. However, in the case of pro-longed eruptions, the related disaster management plans and procedures were significantly less established and most study participants claimed they did not foresee so far ahead being confident a single eruption would only last for a short period of time. This demonstrates a lack of long-term forward planning and suggests that tourism businesses in Bali only adopt the bare minimum of basic preparatory measures whilst, concurrently, failing to apply a more strategic vision to disaster management. Interestingly, whilst in the case of many destinations this is likely to be attributed to a highly uncertain, even ambiguous, nature of future disasters, the prime reason behind insufficient organisational preparedness in Bali seems to rest in the stated lack of financial resources:

*'When the first eruption occurred, we first released the necessary equipment, such as face masks and first-aid kits, which we always had in stock for our guests and employees. Our staff then went to the beach calling our clients back to the hotel. Staff from the engineering department prepared the filters for our air-con units in the case the dust reached us this time around. We have stocks of rice in the case we couldn't go out to buy food. The stock is enough for 1 month taking into consideration the guest capacity of our hotel and the number of our employees. This is all prescribed in our standard operational procedures, so when a disaster strikes, we pull these out and follow'* (P4).

#### 4.2. The effect of the pandemic

When discussing the effect of COVID-19, most study informants focused, again, on the immediate damage imposed by the pandemic on their businesses and the challenge of managing businesses during this disastrous event, paying particular attention to the issues of lost revenues and staffing (Table 2). In the latter case, similar to volcano eruptions, during the outbreak most employees were either made redundant or provided with substantially restricted job opportunities. Limited regret was shown as to how the tourism labour would survive on reduced and/or no income during temporary business closures. Although some businesses provided employees with ad-hoc financial support to aid in covering their basic living expenses, their number was, however, small.

When probed on the lessons learnt from past volcano eruptions, most study participants agreed that these were primarily concerned with the immediate/short-term adaptation strategies. For example, many tourism businesses started renovating their properties (in the case of hotels) or fleets (in the case of transport operators), thus using the pandemic as an opportunity to add value to future operations. This was also seen as a means of supporting financially a small number of employees during the period of business disruption. However, in terms of long(er)-term recovery strategies, most study participants agreed that the volcano eruptions provided little scope for learning given a dramatically different nature of COVID-19 as a disastrous event.

From among the challenges of managing tourism businesses in Bali during COVID-19, the need to cease some critical business operations (for example, by closing hotel properties) and/or by adjusting them significantly (for instance, by providing food for take-way rather than as a sit-in service) were mostly discussed. The necessity to pay rent and utilities whilst generating no revenues was a recurring topic in all interviews. The sudden disruption imposed by the governmental lockdown orders and the lack of an initial understanding of the danger of the virus was blamed for insufficient preparedness and the need to 'improvise' when generating new sources of income. In light of this, competitors were frequently mentioned (Table 2) as the sources of business creativity and income generation inspiration. Some large, chain-affiliated, hotels were in a better position at the beginning of the outbreak as they received warning messages from their sister properties in China. This notwithstanding, even such businesses did little to prepare as they did not believe the pandemic would spread so quickly:

*'When the outbreak in China happened we had a large cancellation of 2478 bookings by a Chinese tour operator. They also told us to stay vigilant and add hand sanitizers to our properties in Bali. But this is all we did, really. Social media were spreading a rumour that the corona virus would die alone in hot weather. So, we in Bali were confident because we're a tropical destination that it'd die. Plus the government told us nothing about how the pandemic would infect Bali. Therefore we didn't prepare anything at that time. From January to February we did nothing'* (P16).

The above quote suggests that the Indonesian government, as a critical disaster management stakeholder in tourism destinations, did not realise the potential detrimental impact of the pandemic and, therefore, failed to collaborate with tourism businesses by communicating the danger of the disaster at the initial stage of the COVID-19 outbreak. The government was further blamed for the lack of collaboration in the following phases of the pandemic. For example, unlike many developed countries, it provided no dedicated furlough scheme designed to offer temporary maintenance funds to the laid off employees of tourism businesses. The lack of clarity in communicating how the island could re-open to international tourism after the first wave of COVID-19 was also frequently mentioned.

The uniqueness of COVID-19 is in that it has, arguably, for the first time lead to complete border closures. This suggests that the recovery of tourism in Bali is almost entirely driven by the Indonesian government and the governments of the key source tourist markets for Bali, such as Australia. Travel corridors can be negotiated by these governments to facilitate the tourism industry recovery in Bali. If establishing travel corridors proves difficult, domestic tourism should be promoted by the Indonesian government. Domestic demand, albeit not bringing extensive profits, can sustain Balinese tourism businesses in the time of crisis and provide them with an opportunity to keep staff. Regardless of the actual actions undertaken, the national government of Indonesia should communicate explicitly what they do to aid in recovery to the businesses concerned. This is to enhance business confidence in the industry's future.



### 4.3. Future disaster management plans and procedures

When discussing the future, most study participants focused on the need to re-think their business strategies in order to survive in a post-pandemic world (Table 2). However, this primarily concerned outlining new business opportunities and sources of revenue generation (for example, opening a food take-away business), rather than preparing for future disastrous events, be it another wave of the pandemic or a volcano eruption, and investing into the design of (more) effective disaster management plans and procedures. COVID-19 as an opportunity to learn was also discussed (Table 2) but, again, in light of how to improve future business profitability and compensate for the financial losses experienced during temporary business closure rather than how to enhance future disaster preparedness. Likewise, the speed of business recovery and the challenges of managing tourism businesses in Bali after the pandemic were elaborated upon (Table 2), but mostly from the economic perspective. Despite the numerous probes made, the learning potential of COVID-19 for enhancing future disaster management plans and procedures in tourism businesses was not considered significant. This was attributed to the perceived temporary nature of the pandemic, with limited consideration given to its potential re-occurrence in the form of the future wave(s), but also to its significant dissimilarity to volcano eruptions. A rare quote which calls for the need to re-consider the current approach of Balinese tourism businesses to planning and preparing for future disasters is below:

*'We don't deny that what we've done for the last five years [in terms of preparing for future disasters] is purely economic, i.e. we've only considered how can we improve our business, how to make it more profitable, without paying enough attention to the value or benefits provided by our past. There is a connection with our culture as we had so many disasters in the past, what value we share is the value of how Bali can survive. Past experiences is something we should probably be looking into more closely in the future to prepare for future disasters to come' (P12).*

The only learning opportunity provided by the pandemic for forward business planning which was repeatedly discussed by many study participants concerned improved standards of hygiene in their respective businesses. A number of businesses also spoke about the reinforced bonds between members of their teams, bringing about compassion and sympathy, and the opportunity to (better) comprehend the value of other employees' jobs. Lastly, a number of study participants discussed the need to have a 'safety net' in the form of extra savings in order to withstand the detrimental effect of future disastrous events. Whilst being linked to organisational learning and organisational resilience, it is argued that all these points, except improved staff relationships, are primarily concerned with the short-term, financial aspect of future business operations rather than with its long(er)-term disaster management plan and procedures. Improved staff relationships are an exception here as they can potentially strengthen the human and social capital of tourism businesses in Bali, thus improving their resilience towards future disastrous events:

*'One of the very few positive things about the corona, in terms of what we've learnt from it, is that we need to be proactive in cleaning lockers, washing hands, using hand sanitizers, in other words, to invest in better hygiene. Also, we as a team during this terrible time became closer and learnt how to take care of each other, so the one who previously ignored other employees and only talked when they needed something, now is more attentive to their fellow employees' (P2).*

*'Personally, I learnt new things [during COVID-19]. For example, the spa staff taught me about how their system worked. Situations like now make me and other managers better understand how different sections of our business work, so there is new knowledge for us, which is great. Another important thing I learnt is from the financial side is that hotels must have*

*savings, not only hotels, every company must have significant savings at hand. So, when something like this happens, to start running the hotel again in the future in a way that it doesn't overburden the company, so that's a major lesson I took from COVID' (P5).*

## 5. Discussion

### 5.1. Organisational learning

Although Bali is prone to multiple, consecutive, disastrous events that have repeatedly disrupted its tourism industry in the past, organisational learning of Balinese tourism businesses in terms of disaster management remains insufficient. Whilst past disasters and the COVID-19 pandemic have triggered certain organisational learning at the level of individual employees, employee clusters and leadership teams, this primarily concerns future business operations rather than organisational preparedness and recovery for future disasters. This learning serves the goal of short-term revenue generation only and has little to do with long-term disaster preparedness and recovery.

Blackman and Ritchie (2008b) refer to this phenomenon as single-loop learning which, as opposed to double-loop learning, is only concerned with responding to a problem in a simplistic, superficial manner. This is instead of looking at the prerequisites and consequences of the problem's occurrence with a view of critically reflecting upon how this information can be used for future preparedness and recovery. Similar, single-loop, learning business observations are reported by Corbacioglu and Kapucu (2006) in the context of consecutive disasters in Turkey. Although not focusing on tourism businesses, the latter study demonstrates that increased damage of disastrous events and their more frequent occurrences can gradually enhance organisational learning of Turkish businesses. It further shows the importance of local and national policy-makers in facilitating organisational learning by providing detailed and timely information about the disasters and sharing 'best practices' in how businesses can most effectively adapt to their occurrence. This is in line with Blackman et al. (2011) who highlight the importance of DMOs in supporting organisational learning of local tourism businesses, but who, concurrently, identify the complexity of the tourism industry, its diversity and managerial conservatism as critical impediments of organisational learning.

This study provides further evidence to how a lack of organisational learning inhibits disaster preparedness and recovery of tourism businesses and brings about a 'reactive' rather than 'preventative' or even 'pro-active' approach to disaster management in Bali. As Melian-Alzola et al. (2020) argue, organisational learning is paramount in building organisational capabilities that can aid in preparing for future disasters and crises. Organisational learning represents a dynamic capability (Jiang et al., 2019) in that it should incorporate organisation's and individuals' experiences of past disastrous events such as, in the case of Bali, the bombings and volcano eruptions. This current study demonstrates limited dynamism in how Balinese tourism businesses have considered past disasters and crises. The only dynamic learning which persists herewith is attributed to the financial aspect of business operations whereby savings are made by tourism businesses in Bali to aid in coping in the time of future disastrous events. Limited organisational learning hampers disaster recovery and, more importantly, hinders organisational preparedness for future disastrous events, thus disadvantaging organisational resilience (Matyas & Pelling, 2015).

Importantly, numerous staff redundancies made by tourism businesses in Bali exacerbated the problem of organisational learning. This is because departing staff might have taken significant experience and knowledge on how to withstand disasters and crises with them, thus destructing this knowledge completely or hampering its transfer across an organisation (Popova-Nowak & Cseh, 2015). The challenge can be particularly pronounced in managerial and supervisory positions as the pandemic has demonstrated the fragility of tourism jobs, thus prompting

experienced staff to seek employment in other economic sectors (Filimonau et al. 2020). This suggests that measures are required to diminish the negative impact of staff redundancies on organisational learning of tourism businesses, in Bali and beyond. Such measures can be represented by the dedicated furlough schemes purposefully designed by the national government to support businesses in the time of crisis (Nicola et al. 2020).

### 5.2. Organisational resilience

Organisational resilience of tourism businesses in Bali towards disastrous events can be described as acceptable but its level varies across the board. Chain-affiliated enterprises have well-established, standardised plans and procedures for disaster planning and management. In contrast, independent businesses employ rather ad-hoc approaches and rely on past managerial experiences in dealing with disasters as often the only means of withstanding their detrimental consequences.

According to the categorisation by Sawalha (2015) this positions tourism businesses in Bali within the Type 1 and Type 2 organisations that adopt the bare minimum measures (mostly applies to independent tourism businesses) or, in the best case scenario, apply a small number of ‘best practices’ in disaster planning and management (largely applies to chain-affiliated tourism enterprises). The Type 3 organisations relying on comprehensive, integrated disaster management plans and procedures and employing past disaster experiences for organisational learning and forward business/disaster planning do not seem to exist in Bali.

The lack of finance represents one of the reasons for why Balinese tourism businesses fail to invest in disaster planning and management, which is in line with the findings reported in the case of Grenada (Filimonau & De Coteau, 2020). The infrequent nature of past disastrous events and their limited impact on business profitability (in the case of volcano eruptions) alongside the perceived low probability of re-occurrence (in the case of terrorist acts) provide another explanation towards the ‘passiveness’ of Balinese tourism businesses in adopting a (more) pro-active approach to disaster planning and management. This finds confirmation in other tourism markets and/or destinations (Biggs et al. 2012; Hall et al. 2018; Méheux & Parker, 2006), thus implying that the problem is truly universal and, therefore, systemic.

To aid in its rectification, a unified effort of multiple stakeholders is required. In the foremost, the leadership of tourism businesses in Bali should comprehend the potential negative implications of multiple, consecutive, disasters and invest in disaster preparedness and recovery. This study has shown that COVID-19, due to its significant disruptive effect and a lasting legacy, may prompt some tourism businesses to more pro-actively engage in disaster planning and management. This is attributed to the lasting lessons of the on-going pandemic that can enhance organisational learning of Balinese tourism businesses, thus aiding in their organisational resilience (Matyas & Pelling, 2015). This potential change in business perceptions should be captured and reinforced by local and national policy-makers as well as DMO professionals whose critical role in encouraging disaster planning and management in popular tourist destinations has been repeatedly emphasised (Pyke et al. 2018).

### 5.3. Stakeholder collaboration

Stakeholder collaboration as a cornerstone of effective disaster planning and management in disaster-prone destinations has been found to be insufficient in Bali. The well-being of employees is not considered a business priority by Balinese tourism businesses although workforce, as human capital, represents a critical element of organisational learning in tourism and beyond (Nilakant et al. 2013). This is attributed to the nature of the local tourism labour market where replacements can be easily found whilst investing into the professional growth of employees is not considered a viable business strategy. The lack of engagement with

policy-makers and DMO professionals is another important shortcoming given that these can encourage organisational learning and facilitate organisational resilience of tourism businesses (Ruiz-Ballesteros 2011). This primarily relates to the problem of restricted communication, but increasingly limited knowledge exchange. Lastly, competitors are only considered as a source of inspiration for how to improve business profitability, rather than enhance disaster preparedness and recovery. This is attributed to a high degree of competition in Bali given its over-reliance on tourism as a key source of revenues. The lack of stakeholder collaboration suggests that the human and social capital of Balinese tourism businesses is limited. This is a major weakness in light of multiple, consecutive, disasters as the (different types of) capital represents a critical element of organisational resilience in tourism and hospitality enterprises (Brown et al. 2018). Limited capital implies restricted access to resources and skills which suggests inadequate opportunities for organisational learning and, as result, decreased organisational resilience. This has to change should tourism businesses in Bali aim at achieving (better) organisational preparedness and recovery to future disasters.

## 6. Concluding remarks

The study evaluated the extent to which the lessons learnt from past disastrous events had contributed to building organisational resilience of tourism businesses operating in a disaster-prone destination, the island of Bali, to the COVID-19 pandemic, but also future disasters. The findings showed that past experiences provided limited learning opportunities to local tourism businesses, thus exposing their vulnerability to current and future disastrous events. From the theoretical viewpoint, the study demonstrated the value of organisational knowledge management which advocates that businesses should take advantage of past experiences in order to prepare for the future. The case of tourism businesses in Bali provided empirical evidence of how poor organisational learning of past disasters and crises restricted their preparedness to and might delay recovery from COVID-19.

The study highlighted a number of directions for policy-making and management interventions required to enhance disaster preparedness and recovery of Balinese tourism businesses in light of consecutive disastrous events. The interventions should aim at facilitating organisational learning of local tourism businesses given the potential it holds to enhance organisational resilience. The importance of managing intra- (i.e. from employees and managers within a business) and inter- (i.e. from one business to another) organisational knowledge on disasters and crises should be explained to Balinese tourism businesses to enable organisational learning. The interventions should also be concerned with the provision of tailor-made training on business preparedness and recovery in light of multiple, consecutive, disasters. This training should be jointly designed and delivered by the Indonesian/Balinese DMO and National Disaster Management Agency with an input from (inter)national academics specializing in disaster and tourism business management. The training can take the form of a series of regular industry engagement workshops, facilitated and promoted by the Balinese tourism and hospitality industry associations. These should provide an opportunity for knowledge exchange and learning from ‘best practices’ adopted in disaster planning and management by local tourism businesses, but also by tourism businesses located in the overseas, especially in destinations prone to similar disastrous events, such as Japan and/or the Philippines. The trainings will enable organisational learning of tourism businesses in Bali and, by connecting them to each other, improve their social capital, thus ultimately contributing to organisational resilience.

The policy-making and management interventions are also necessary in the form of dedicated financial support. A specialised ‘safety net’ fund can be created by Balinese authorities with proportional, mandatory, contributions made to this fund by each tourism business, depending on their size, with the money collected to be used as an aid in the

preparation for and recovery from future disastrous events. Given the importance of experienced staff in organisational learning, this fund can, for example, be utilised to support employee furlough. This is to ensure that staff with knowledge of past disasters and crises can contribute this knowledge to facilitate the recovery from future disastrous events. Match-funding can be provided by the local/national government to encourage business contributions and boards of trustees consisting of renowned/respected industry players can be established to decide and monitor on the money spend. Further, as past experience shows (Nguyen et al. 2017), public-private partnerships (PPPs) can be set up to manage the consequences of disasters and support the most affected tourism businesses with interest-free/low-interest loans designed for speedy recovery (De Ruyter et al., 2020).

Given that stakeholder collaboration is insufficient in Bali, stakeholder capacity building exercises should be developed and run by Balinese tourism policy-makers and DMO professionals. These can take the form of industry engagement events, as described above, but also regular (for example, annual) industry conferences and/or fairs that provide a forum for knowledge exchange on effective business practices in disaster planning and management. Further, tourism businesses in Bali should be encouraged to invest in talent management, thus building their human capital, by emphasizing the importance of tourism workforce in building disaster-resilient and competent organisations. Lastly, the scope for facilitating business cooperation should be stimulated so that local tourism enterprises could start working together towards a common goal of disaster preparedness and recovery. Evidence from outside tourism indicates the value of such competitive work in light of the unfolding climate change (Wang et al. 2020).

Future research should be concerned with providing empirical support to the above policy-making and management interventions. For example, as this study only interviewed a limited number of non-business stakeholders, research is warranted to examine in more depth their perspective on disaster planning and management in Bali. Likewise, the scope for business cooperation and set-up of PPPs needs a detailed scholarly investigation in order to identify the determinants of their successful deployment. Lastly, a perspective of employees of tourism businesses in Bali should be examined given they are not prioritized in current business strategies for disaster planning and management despite representing a crucial stakeholder in building more disaster-resilience organisations through improved organisational learning and enhanced human capital.

## Declaration of competing interest

The authors hereby declare no conflict of interest.

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## Appendix A. Supplementary data

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