CRISIS READINESS

ARE YOU PREPARED AND RESILIENT TO SAFEGUARD YOUR PEOPLE & DESTINATIONS?
Risks today are complex. With news telling us every day of the latest shock, it is essential that the sector be crisis-ready to be able to continue to safeguard its people and its destinations.

Over the past few decades, the economic impact of natural disasters has increased, as well as the diversity of health risks. Yet, the reality is that travellers are much more likely to confront small-scale risks like petty theft or traffic accidents than those they see broadcast in news bulletins on the small screen.

Still, identifying and understanding the threats is only the first part of the equation. The Travel & Tourism sector must continue building an all-hazards approach to resilience to navigate through and operate within this diverse, dynamic, and distributed global risk landscape. Its ability to prepare and remain resilient in the face of crises - both small and large - is critical for economic growth and sustainability, not only for the sector but for the destinations that rely heavily on Travel & Tourism.

To ensure the sector’s resilience, Travel & Tourism must have a seat at the table in crisis preparedness, management and recovery.

While the Travel & Tourism sector is already a very resilient sector, building resilience is a continuous process rather than an end-state, and we as a sector must constantly strive towards developing policies and building the tools and processes necessary to respond to the crises of tomorrow. On the basis of consultations with public and private sector leaders, this report provides high-level recommendations on how to improve preparedness to mitigate the impact of crisis and enhance responsiveness to ensure a speedy recovery.

While we may not always be able to predict the nature of the next crises - let’s be ready, together.
HIGHLIGHTS

• The global landscape is complex giving rise to new potential risks with intensifying stakes for the Travel & Tourism sector. The economic impact of natural disasters has increased at a cost of $335 billion in 2017 and the reach of epidemics has risen, draining $570 billion from the global economy.

• Contributing 10.4% of global GDP, supporting one in ten jobs on the planet and having experienced a 5.50% growth in international arrivals between 1950 and 2018, the Travel & Tourism sector has a vested interest in securing travel and mitigating the impact of crises.

• The perceived level of safety and security is a key decision-making factor for travellers in selecting their destinations, with low-probability-high impact events causing travellers the most apprehension. Still, the vast majority of incidents involving travellers are high-probability low impact, such as petty theft and minor illnesses. Emerging risks such as digital security and resource scarcity will likely become increasingly important for the sector in the coming years.

• In this new research, WTTC analyses the impact at the national and city level of 90 crises between 2001 and 2018; examining the time to recovery, the lost arrivals as well as the lost visitor spending. WTTC noted measurable impact occurred in 92% of case studies, with data suggesting that recovery duration has fallen significantly within the time frame of our analysis (2001-2018) from 26 months to 10 months.

• Terrorism could be an issue many international travellers consider regardless of their destination, despite the fact that the odds of becoming victim are miniscule. Travellers are seemingly becoming more resilient, with terrorist attacks having the shortest recovery time at 11.5 months on average, with a range of 2 to 42 months.

• Our data shows that political instability or civil unrest is far more damaging to a country's Travel & Tourism sector than one-off terror attacks. Political instability and civil unrest cases had the longest recovery time on average at 22.2 months, with recovery ranging from 10 months to 44.9 months.

• Natural disasters have dramatically increased in both frequency and magnitude, with the number of disasters quadrupling between 1970 and 2016. The recovery from natural disasters took 16.2 months on average, though this category of crisis had the greatest range in our study, from just one month to 93 months.

• Epidemics and outbreaks have become the new normal, with outbreaks such as H1N1 estimated to have had a global economic impact between $45-$55 billion. The recovery time from disease cases took 19.4 months on average, with a range in recovery from 10 months to 34.9 months.

• The implications of crises increasingly require governments to engage with the private sector to improve crisis preparedness, management and recovery plans.

• Crisis preparedness must focus on building trust-based coalitions, assessing readiness & developing emergency action plans as well as enhancing education.

• The effective management of a crisis requires the rapid activation of emergency plans as well as quick, accurate and transparent communication.

• Finally, responsiveness to ensure a speedy recovery should emphasise transparency, readiness and confidence; inviting the world back when ready, enticing travellers to return, building on one's travel segments and rebuilding infrastructure strategically and smartly post crisis.

INTRODUCTION

The world is facing increasingly complex and interconnected events and challenges. While globalisation has enabled an unprecedented reduction in poverty and connectivity, global transformations have simultaneously given rise to a new set of tests. Given the high stakes, new solutions will be required at the local, national and international levels, bringing together all relevant stakeholders to jointly respond to today’s risks and to prepare for the crises of tomorrow.

From geopolitical & geo-economic tensions to terrorism, shifting health threats and rising environmental threats, the risk landscape is transforming, with new risks continuously reshaping the global ecosystem. While the intricacy of the risks landscape has increased, the connectivity enabled by globalisation, together with the rise of the middle class and the increased accessibility of travel, has brought about a remarkable growth of international travel; with international arrivals rising 5.50% between 1950 and 2018. Travel & Tourism has brought tremendous economic and social benefits to destinations over this time, creating millions of jobs, protecting natural and cultural treasures, enhancing prosperity, reducing poverty, and bettering education. While travellers continue to discover the world, it is essential for society to better prepare itself to respond to potential crises, which may cause infrastructural damage as well as reputational costs stemming from traveller perceptions.

In this context, the World Travel & Tourism Council (WTTC) is collaborating with Global Rescue on this report which aims to equip the Travel & Tourism sector with a better understanding of the risks landscape through the quantification of the impact of crises on the sector, and provide recommendations of how the sector can better prepare, respond and enhance its resilience. This first milestone will set the stage for further collaboration to develop self-assessment toolkits as well as “basics” plans for emergency action for both the public and private sector.

WORLD TRAVEL & TOURISM COUNCIL AND GLOBAL RESCUE
SECTION 01
UNDERSTANDING THE RISKS OF LANDSCAPE

OVERVIEW

Risk is inherently a function of probability and impact; with each type of risk presenting unique challenges to sectors and governments alike in terms of preparation, management and recovery. Risk within the context of the Travel & Tourism sector is no different. In fact, the first decision that travellers make is the selection of a destination; and the perceived level of safety and security at that destination is a key element in the decision-making process.

The risks which tend to cause travellers and organisations the most apprehension are low probability-high impact events, whether intentional or non-intentional, given their potential for system-wide impacts, including the loss of lives, cross-industry economic damage, harm to a destination’s image and long periods of recovery in terms of physical infrastructure. This is particularly pertinent for destinations with a high economic dependence on Travel & Tourism.

Unlike low probability-high impact events, high probability-low impact events occur every day, including marginal travel disruptions due to strikes or protests, moderate crime, traffic accidents, minor health issues, etc. While these events may be considered high impact for the individuals directly affected, they do not put pressure on the entire system. Nevertheless, their economic impact varies widely and in some instances, can be as costly as high impact events.

Building on the results from the World Economic Forum’s 2019 Global Risks Perception Survey 2018-2019 (see Figure 1), which surveyed over 900 experts; this section delves into a sub-set of risks on the basis of their quantifiable impact for the Travel & Tourism sector in the context of crisis management, preparedness and recovery.

In this context, this section focuses on environmental disasters (extreme weather events, natural disasters and man-made environmental disasters), geopolitical risks (state collapse or crisis), terrorism (terrorist attacks) and epidemics (the spread of infectious diseases). This section also highlights, but does not quantify, a number of emerging risks for the Travel & Tourism sector, such as digital security (cyber-attacks and data fraud) and resource scarcity (biodiversity loss & ecosystem collapse and water crisis), which are rising on the agenda for the sector.
TERRORISM

By any metric, the odds of becoming a victim of a terrorist attack are incredibly low; however, high-profile attacks over the past few years have inflated the perception of the terrorism risk. Although tourists are not the primary target of terrorist attacks, terrorism can still impact the Travel & Tourism sector due to the perception of risk at a destination. This increased perception of risk is also linked to relatively recent terrorist attacks which targeted areas popular among tourists. The fear has only been amplified by the fact that some of these attacks have taken place in countries historically perceived as “safe” destinations.

NATURAL DISASTERS

Natural disasters have been on the rise around the world over the past 50 years, with the number of natural disasters more than quadrupling from 81 in 1970 to 349 in 2016.5 Beyond the significant destruction of tangible assets, natural disasters take a tremendous economic toll on the affected destinations; with the total economic damage of these disasters increasing by 684% from $19 billion in 1970 to $149 billion in 2016.6 Hurricanes and cyclones are becoming increasingly common natural disasters, whose severity is only projected to increase.7

The rise in population density in large urban centres and enhanced international mobility and travel, have led to both higher exposure to novel diseases as well as increased potential for transmission.8 Outbreaks from Ebola and MERS to the pandemic influenza and Zika have demonstrated the public health risks at the human level and their impact on the economic health of destinations. In fact, the economic impact of H1N1 worldwide was estimated between $45 and $55 billion,9 with the loss to the Mexican tourism industry valued at $5 billion following the outbreak in 2009.10 Similarly, in 2003, the impact of SARS on China, Hong Kong, Singapore and Canada was estimated between $30 to $50 billion,11 with tourism to Singapore falling by 70%, while the impact of Zika was valued between $7 and $18 billion following the outbreak in 2016.12

Margaret Chan, Former Director General of the WHO, stated that “rumours and panic are spreading faster than the virus”,13 citing a World Bank estimate that 90% of economic losses during any outbreaks arise from the uncoordinated and irrational efforts of the public to avoid infection. While the consequences of an outbreak or epidemic are extremely serious, they are not the most important ones. Rather, the most significant impact is on the affected economy as well as its social fabric.14 In this context, it is essential to enhance coordination and cooperation to make sure people are safe, both from a health perspective but also an economic one. Following the MERS outbreak in 2015, for instance, the South Korean government integrated the leavings in their emergency planning, enhanced coordination and reformed their healthcare system.

Figure 3: US Citizen Deaths Overseas (2002-2018)
(US Department of State)
OTHER EMERGING RISKS

While natural disasters and outbreaks are likely to remain at the forefront of discussions relating to travel security for the foreseeable future; it is critical to plan for the threats of tomorrow. Destinations, private sector organisations and travellers alike are beginning to confront emerging risks which are likely to become increasingly important in the next five to ten years, including but not limited to:

**Digital Security**

Governments, major corporations and travellers alike have fallen victim to cyber-attacks, hacking and data breaches, with cybercrime costing the global economy almost $600 billion and nearly two-thirds of people using online services having had their personal data compromised. This is supported by the World Economic Forum’s 2019 Global Risks Report which found that “cyber-attacks” were the fourth and fifth most important global risks in terms of economic impact. While a final study on the impact of the water crisis on tourism is forthcoming, it has been estimated the Travel & Tourism sector lost approximately $71.3 million due to a decline in arrivals and spending.

Another example is that of Nigeria and its ongoing conflict between herdsmen and farmers over land use disputes. In 2017, more people were killed in this conflict than were killed by Boko Haram terrorist attacks. This has become arguably the country’s greatest security challenge. Though the conflict has religious and ethnic components, the foundational conflict is over the reduced availability of grazing land amidst a growing population.

**Climate Change & Resource Scarcity**

Exacerbated by effects of climate change and demographic shifts, some destinations may confront shortages of critical natural resources. For instance, Cape Town, South Africa faced a dire water shortage in 2017, with projections forecasting that the city would run out of water by April 2018. Cape Town’s “Day Zero” campaign communicated to its 400,000 residents the severity of the drought and articulated the need to reduce and limit water consumption. Similarly, hotels were required to ask guests not to take baths and limit their showers to under two minutes, and restaurants switched to disposable cups and stopped using table linens.

Despite the success of the campaign, perceptions about the crisis lingered, resulting in reduced number of tourism arrivals. While a final study on the impact of the water crisis on tourism is forthcoming, it has been estimated the Travel & Tourism sector lost approximately $71.3 million due to a decline in arrivals and spending.

For travellers, compromised travel information could result in virtual kidnapping scenarios and extortion, among other criminal activity. Criminals can easily target unsuspecting travellers who connect their electronic device to free, unsecure Wi-Fi. Notwithstanding, cyber risks can vary greatly by country, and travellers should be aware of national laws and policies before travelling. For instance, in 2018 New Zealand implemented a law whereby travellers may be subject to a “digital search” upon entering the country if suspected of wrongdoing. This involves surrendering passwords, codes, and encryption keys to border agents.

**Conclusion**

Despite the dynamic and increasingly complex global risk landscape, there is no indication that global travel is slowing down. Travellers today have more information and resources available to them than ever before, in turn enabling them to better prepare and partly mitigate crises. Crisis preparedness is essential as the control of key stakeholders reduces in the midst of a crisis.

While predicting when the next crisis will hit and what form it will take is nearly impossible, preparing through an all-hazards approach to managing crises can foster resilience and ultimately protect a valuable sector of the economy from disruption. It is important for governments and the private sector to collaborate and plan for the safety of travellers, the local communities and the destinations themselves.

TO HAVE A SENSE OF URGENCY WITHOUT CREATING PANIC WE MUST UNDERSTAND THE CRISIS AND GIVE OBJECTIVE CONTEXT TO THE TRAVELLERS

ALEX ZOZAYA

APPLE LEISURE GROUP

SECTION 02

**QUANTIFYING THE IMPACT OF CRISSES**

The Travel & Tourism sector is a key economic driver and foreign exchange earner, contributing 10.4% of global GDP, supporting one in ten jobs on the planet and taking 1.4 billion travellers across international borders in 2018. The economic significance of the Travel & Tourism sector in recent years has often put the sector on the front line when a crisis occurs.

From epidemics and natural disasters to political instability and terrorism, various forms of intentional and non-intentional crises negatively impact tourism destinations at the human, infrastructural and economic level. It is important to differentiate between intentional or man-made crises, notably political instability, civil unrest and terrorism, which could be prevented; outbreaks which could be managed to an extent and natural disasters which are mostly out of our control. Understanding the social and economic impact of such crises, particularly on local communities is key to explore how to prevent them where possible. Minimising disruption to the sector can be critical to reducing the economic losses for a destination post-crisis and to ensuring a speedy recovery in other sectors.

In this section, WTTC assesses the immediate and long-term impact of different types of crisis events on the Travel & Tourism sector, examining the time between the initial disruption to international visitation and recovery as well as quantifying the scale of the economic losses that destinations experienced.

Quantifying the post-crisis impact on Travel & Tourism not only demonstrates the sector’s enormous economic contribution to destinations and the imperative for recovery, but also provides governments with an understanding of the scale of opportunities.
This research focuses solely on the economic impact of crises on Travel & Tourism. It does not account for the wider economic and societal impacts on the destinations such as loss of lives, damage to infrastructure and reputational harm. The analysis measures the duration of the drop in international visitor arrivals and spending from the start of the crisis until visitor arrivals recover to pre-event levels. This approach enables measurement of the volume of "lost" visitors during the period, based on previous arrivals figures and trends, and the spending that those "lost" visitors would have produced had the event not occurred.

The research covers 90 different crisis events and analyses the impact at the national and city level, with events dating as far back as February 2001 when the UK faced a devastating outbreak of Foot and Mouth Disease, to August 2018 with Typhoon Jebi, the strongest typhoon to hit Japan in 25 years. The research also comprises destinations such as Anguilla, where Travel & Tourism supported 61.9% of GDP when Hurricane Maria struck the island in September 2017, and Sierra Leone, where the sector only accounted for 3.9% of the economy when Ebola emerged in 2014. While all figures have been set to 2018 real US dollar values, the scale of the economic impacts are relative to the destination’s sector size.

The cases in no way represent a comprehensive list of all crisis events over the time period; rather, they have been selected on the basis of both data availability and relevance to Travel & Tourism. Recency of events is one element that affects data availability. Assessing impact is also difficult in the case of ongoing events, such as the civil war in Syria. Moreover, the case studies do not provide extensive detail to distinguish how one type differs from another or the extent to which the complexity of the variables associated with the crisis impacts recovery. This would be a valuable area for future research to learn lessons for the preparation, management and recovery of crises.

### OVERALL ECONOMIC IMPACTS

Different crisis events, unsurprisingly, have differing levels of economic impact. Of the four crisis categories studied, terrorism incidents had the lowest economic impact in terms of total lost arrivals and lost visitor spending, and the quickest recovery time, while civil unrest had the longest recovery period.

In certain destinations, disasters showed very little to no discernible economic impact for Travel & Tourism at the macro level. Some events, such as the New York blizzard in 2011 or the Delhi heat wave in 2015 may have either deferred visits to a different time of year, or the concurrent growth overcame the negative economic impact of the event; as New York did not experience negative growth and Delhi experienced positive growth. According to previous WTTC research, destinations that have institutions and structures designed to sustain peaceful societies, such as in the UK, are more resilient to terrorism. For example, the terror attacks on London’s Borough Market in 2017 did not affect international visitation to the city.

Measurable economic impact occurred in 92% of the selected Travel & Tourism related case studies. Among the cases with evident impact, terrorism cases had the lowest recovery time at 11.5 months on average, with the recovery time ranging from as little as 2 months to a maximum 42 months. Civil unrest and political instability cases had the highest recovery time at 22.2 months on average, with a range between 10 and 44.9 months. Disease cases had average recovery times of 19.4 months, with a range between 10 and 34.9 months. Recovery from natural disasters took 16.2 months on average. Natural disasters had the greatest range of recovery time, from just one month to 93 months. This is due to the wide variation in the severity of natural disaster events within our case examples.

A crisis may prevent tourists from visiting an affected destination for a number of reasons, including infrastructural damage, travel restrictions and fear travellers may have of visiting the destination.

Lower international visitor losses tend to be found where minimal structural damage occurred or when travellers are quickly reassured that a destination is safe and the situation is under control. For instance, although bookings did fall after the Las Vegas mass shooting, with a 4.2% fall in visitor numbers in the month following the shock, the decline was likely mitigated by the immediate response from city authorities. Within days, the “What is strength” ads aimed emphasising the destination’s resilience with people helping victims after the attack leading to a speedy recovery. On the other hand, in places where the numbers of ‘lost’ visitors reached the millions, losses often are due to governments’ travel advisories limiting travel to affected destinations.

### LOST ARRIVALS

Aside from wider societal costs, the impact of these shocks on the Travel & Tourism sector are strikingly significant. While the average lost spending due to the shocks assessed was US$1.3 billion, this average conceals a huge range, from the relative low loss of around US$2 million resulting from the 2001 hurricane in Belize to over US$6 billion from the 2011 Egyptian Arab Spring.
Epidemic Impact on International Arrivals

Outbreaks and epidemics can vary in terms of their economic impact on Travel & Tourism, often depending on the part of the world from which the virus or the vector carrying the virus originates. Our analysis examined the impact of diseases that infect people directly such as MERS, Zika and Ebola, as well as the 2001 Foot and Mouth disease outbreak in the UK, which is non-transferable to humans but forced the complete closure of swathes of countryside while global media shared shocking images of cows burning on pyres.

Figure 7 compares the recovery rates experienced by a selection of countries following an outbreak. It uses an index where 100 equals the level of international visitor arrivals in the quarter before the crisis occurred. In Brazil, for instance, authorities first confirmed the Zika virus in the northern-eastern states of Rio Grande do Norte and Bahia in May 2015. Doctors in the region began noticing an increase in new-borns with abnormally small heads (microcephaly) – until then, a rare condition. The number of cases increased and in December 2015, the Pan-American Health Organization issued an epidemiological alert. As the impact on Brazil in 2015 occurs in the shadow of inflamed arrivals due to the 2014 FIFA World Cup and the 2016 Summer Olympics, it uses an index where 100 equals the level of international visitor arrivals in the quarter before the crisis occurred. In Brazil, for instance, authorities first confirmed the Zika virus in the northern-eastern states of Rio Grande do Norte and Bahia in May 2015. Doctors in the region began noticing an increase in new-borns with abnormally small heads (microcephaly) – until then, a rare condition. The number of cases increased and in December 2015, the Pan-American Health Organization issued an epidemiological alert. As the impact on Brazil in 2015 occurs in the shadow of inflamed arrivals.

Natural disasters can often result in infrastructure and structural damage which exacerbate recovery times. As such, the impacts may be drawn out over a considerable period of time depending on the extent of the damage the disaster caused.

Disasters can cause significant devastation such as those in the autumn of 2017, when the strongest Atlantic hurricanes ever observed battered islands in the Caribbean. The 2017 hurricane season resulted in an estimated loss of 626,100 visitors to the Caribbean, compared to pre-hurricane forecasts. These visitors would have generated US$241 million and supported 11,005 jobs.

In the case of Puerto Rico, which was hit by both Hurricanes Irma and Maria in September 2017, the impact on hotels was particularly severe. The island, which had 13,709 hotel rooms in December 2017, witnessed a drop of 2,556 from August that year.

Within one year, Puerto Rico was able to recover to pre-crisis visitation levels (see Figure 9). Its visitation levels have since been on the rise.

Cape Town, on the other hand, experienced a crisis with a more protracted effect. In late 2017 and early 2018, a long-term drought resulted in credible fears that water would run out. The water shortage challenged the city and its citizens to think differently about their relationship with this finite resource and to look at alternative resource management strategies. While arrivals have now recovered, Travel & Tourism to the city suffered in 12 months, resulting in a loss of 140,000 international visitors and US$37 million in spending.

TERRORISM

Terrorism can disrupt the Travel & Tourism sector and create the perception that a destination is unsafe. The data suggests that the scale of a terrorist attack is less important in determining its overall impact than the context in which it occurs. For example, comparing the impact of two bombing attacks in Indonesia (2002 and 2005) to the Madrid train bombing in 2004, the two Indonesian attacks were quite different in scale (in terms of total death toll), yet the visitor impact was significant –891,000 international visitors that same year.

Based on our impact analysis, terrorist attacks in major European cities including London in 2017 and Brussels in 2016, have had relatively limited impact on overall tourism to the city or to the country. In the case of the London Bridge attacks in 2017 that left eight people dead and 48 injured, there was no notable impact on tourist arrivals to the UK at all. Following the 2015 bombings in Brussels, which killed 32 people and injured more than 300 others, recovery took six months with a loss of 263,000 international visitors, relative to the country’s 8.4 million international visitors that same year.

CRISIS READINESS
POLITICAL TURMOIL

Political turmoil and civil unrest can take many forms, including violence between domestic factions, massive protest movements, as well as coups d’état and uncertainty. Some salient examples of civil unrest include the Arab Spring, which began as a series of massive pro-democracy demonstrations in Tunisia in December 2010 and spread to other countries in the Middle East and North Africa.

Our data shows that political instability or civil unrest is far more damaging to a country’s Travel & Tourism sector than one-off terror attacks. Unlike single terrorist attacks, manifestations of civil unrest or political instability often occur over a prolonged period of time, extending the disruption to the economy and strengthening the perception of instability at the destination. For example, the coup d’état and ensuing curfew in Thailand in 2014 lasted just over three weeks but resulted in a loss of over 790,000 visitors and US$3.5 billion in spending.

The uncertainty linked to civil unrest or political instability can impact inbound and outbound travel, with people delaying their trips. While the impact of Brexit on UK tourism has not yet been wholly quantified, year-to-date figures indicate that visitor numbers are tracking 3% less than 2018, while spend is down 6%.

The corresponding figures for 2018 were also down 7% and 5% respectively over 2017 figures, indicating a marked downturn in inbound tourism over the last two years37.

The analysis suggests that civil unrest results in significant disruptions to international visitor arrivals to a destination, with an average duration of 22.2 months from the initial fall in international visitor arrivals to a return to pre-event levels.

CHANGES IN RECOVERY DURATION OVER TIME

Though crises are occurring with greater frequency, they also appear to be diminishingly disruptive. While our study includes limited data points and includes years with no analysed crises, the data suggests that recovery duration has fallen significantly within the time frame of our analysis (2001-2018). In effect, the trendline value in 2018 is approximately 10 months, compared to approximately 26 months in 2001.

This improvement in recovery time is supported by TripAdvisor research suggesting that people are becoming more resilient to shocks38, especially when they are familiar with a destination.
The increasing intricacy and interconnectedness of global events requires governments to work with the private sector so as to improve their preparedness to mitigate the impact of crises, their management to effectively address the crisis as well as enhance their responsiveness to ensure a speedy recovery.

The Travel & Tourism sector has proven its resilience. Still, destinations and the private sector alike can learn from the experiences of others to minimise the possible impact of crises; as it is not a matter of if, but when the next crisis will happen.

Often, the biggest risk is not the crisis itself, but rather the preparation, management and response. In this context, it is essential for the public and private sector to come together to ensure that smart policies and effective communication are in place to enable a more resilient Travel & Tourism sector. While the implementation of strategic recommendations and policies will improve the Travel & Tourism sector’s resilience, it is important for destinations to take a holistic approach to drive societal resilience more broadly, the building blocks of which are trust, collaboration, communication, openness, empathy, honesty and efficiency.

On the basis of the shifting risks landscape and the quantified impact of crises, the following steps are recommended to improve crisis preparedness, management and recovery.

**SECTION 03 RECOMMENDATIONS**

**IMPACT OF CRISES**

On the basis of the shifting risks landscape and the quantified impact of crises, the following steps are recommended to improve crisis preparedness, management and recovery.

**PREPAREDNESS TO MITIGATE THE IMPACT OF CRISIS**

1. **Build trust-based coalitions**

   Establishing and maintaining key relationships based on trust, shared values and common goals takes time. It is thus necessary to bring together and create these trust-based coalitions between key stakeholders ahead of crisis to respond in a coordinated and effective way when needed and ultimately improve resilience. What’s more, given the economic importance of Travel & Tourism, it is essential for the sector to play a role in these coalitions.

   Historically, there has sometimes been a lack of coordination between different ministries, agencies and the Travel & Tourism sector’s governments that have recognised that Travel & Tourism can be part of the solution are far more likely to develop coordinated policies and messages in support of the sector.

   The Mexican government, for instance, created an Action Network, which consists of state and local leaders, including media, to jointly identify and respond to shocks and address any issues relating to misinformation. Another example is Hawaii, which has very well-organized structures for disaster preparedness and response. In the event of a crisis, the State activates its emergency operation centre, during which time the Governor of Hawaii sits next to the head of Tourism in Hawaii to make joint and rapidly actionable decisions.

   Strong coalitions require commitment, energy and time. Such an approach requires key private sector stakeholders to be engaged in security discussions with government counterparts, so that critical intelligence can be shared. This relationship may require private sector partners to receive security clearances or non-disclosure agreements so that government agencies can more freely share threat information that can enable early action. It also involves maintaining relationships and dialogue during periods without a crisis and establishing credibility with audiences by identifying channels in advance. Okinawa in Japan, for instance, has developed a comprehensive preparedness plan for tourism through collaboration between the local government and tourism organisations to ensure they are prepared when the next crisis emerges.

   One example of successful coalition-building that enabled efficient and effective crisis response is that of Las Vegas. In the wake of the October 2017 shooting, Las Vegas was able to immediately activate its coalition and promptly begin enacting its crisis response plan through behind-the-scenes communication between key stakeholders. In this context, the Sheriff was fully aligned in terms of messaging with, among others, the Las Vegas Convention & Visitors Authority. This allowed for coherent and consistent messaging both to the visitors and the citizens of Las Vegas.

2. **Assess readiness & maintain Emergency Action Plans**

   Trust-based coalitions enable scenario-based planning while creating the environment for Travel & Tourism to be included in drills and in efforts to identify gaps in response capabilities. A planning process can begin by simply discussing how different stakeholders would respond in different scenarios. These discussions will develop, allowing for the identification of vulnerabilities, determining additional stakeholders that should be involved, and other gaps that should be filled.

   As part of the process, governments and private sector organizations alike should also individually assess their own level of preparedness and have an operational all-hazards emergency action plan in place. Beyond an all-hazards plan, destinations and businesses should have a sub-set of response plans for different types of crises. Learning from its experience, New York City has placed significant emphasis on crisis preparedness and planning in the past decade; investing in their own capabilities as well as creating intelligence departments.

   Destinations need to take stock of their capabilities and have a clear view of what will be expected of them during
THOUGH GOVERNMENTS HAVE MANY BUDGET PRIORITIES TO BALANCE, INVESTMENT IN BEING READY TO RESPOND TO CRISSES SHOULDN'T BE OVERLOOKED

MICHELLE O'BER
AMEX GLOBAL BUSINESS TRAVEL

A crisis, such as the provision of shelter. This should be a regular, sustained activity that rigorously assesses new and previously unidentified threats as they continue to emerge and sets out all the key information, contact details and procedures that need to be in place should an event take place.

As destinations invest in core capacity and resources, they should ensure that adequate emergency response personnel are in place, that there is a contingency plan for funding, and that they have regular drills and rehearse different scenarios to make certain there is “muscle memory”. People on the front line must be educated, trained and empowered, with roles and responsibilities of each staff member clearly outlined in the event of a crisis. Mexico City, for instance, conducts each year on September 19, an annual mandatory emergency disaster simulation, on the anniversary of an 8.0 magnitude earthquake which took place in 1985. Thanks to the drills, and resulting muscle memory, Mexicans knew what to do when the earthquake hit Mexico City on September 19th.

Crisis preparedness needs to be human-centric, focusing on how to safeguard local residents, tourists and employees alike. As such, identifying and engaging with these stakeholder groups is critical so as to enable dissemination of information, provide reassurances and share best-practice approaches.

For instance, in Australia, multiple and varied public/private sector actors regularly come together to consider future risks, discuss challenges, design business resilience frameworks and develop and rehearse response scenarios. Key stakeholders, including government security services, the Australian Federal Police (AFP), Department of Foreign Affairs & Trade (DFAT), emergency services, the national airline, Qantas, and others regularly meet to share information and conduct rehearsal exercises. In recent years, this has included a re-enactment of the disappearance of Malaysian Airlines MH370. The scale and seriousness of the disappearance of Malaysia Airlines, the group has made changes in work practices and obtained additional resources. This has allowed experts to distil lessons learned, conduct training, coordinate with international efforts, and evaluate secure digital measures in Sharm El Sheikh, Paris, Brussels and Orlando. In turn, the group briefs government ministers and advises on future policy and long-term capability development. What’s more, the UK established the Tourism Industry Emergency Response Group (TIER), which is a small group comprised of representatives from the Tourism industry, industry organisations and government. TIER develops plans for crisis scenarios as well as manages the tourism industry’s response to a specific crisis.

3. Educate to reduce fear

Access to information is the antidote to fear. In this context, developing a security culture, both at the level of each individual organisation and at the sectoral level, will help raise awareness and improve understanding of risk, promote capacity building and ultimately change attitudes and behaviours concerning security. Part of the creation of a proactive security environment is the implementation of a comprehensive training programme which engages stakeholders, including travellers, and communicates regularly to maintain momentum throughout organisations. One example is that of the US Department of Homeland Security’s national campaign “If you See Something, Say Something”, which aims to raise awareness of the indicators of terrorism and terrorism-related crime, as well as the importance of reporting suspicious activity to state and local law enforcement.

Having experienced a number of security threats, considerable progress has been made towards building evacuation plans and border security.

INFORMATION IS LIKE WATER TODAY. PEOPLE PANIC IF THEY DON’T HAVE IT AND CALM DOWN WHEN THEY DO

MASATO TAKAMATSU
JTB CORPORATION

including capacity building programmes, trainings, audits and inspections, as well as working groups to share lessons learned and develop best practices. For instance, the European Border & Coast Guard Agency, FRONTEX, has published multiple implementation guides, including advice on identifying risk indicators, deploying biometric systems and promoting the adoption of ethical principles to guide border officers’ work.

Destinations such as Hawaii, Okinawa in Japan and Iceland have, sometimes in collaboration with travel trade, also compiled information through websites, brochures and videos to help tourists stay safe. For instance, Visit Okinawa created a safety guide for visitors, including guidance on what to do if you are stung by a jellyfish, as well as simple communication sheets for Typhoon preparedness, while the Hawaii Tourism Authority shares safety information through videos with locals delivering the messages. Realising that language barriers can be an issue, which can result in panic, especially in times of crisis, Visit Okinawa created a simple communication tool in a number of languages to respond to questions people may have.

MANAGEMENT TO EFFECTIVELY ADDRESS THE CRISIS

1. Communicate first, right and transparently

Strategic communication and effective media engagement during the immediate aftermath of a crisis are critical to the Travel & Tourism sector’s timely recovery. Successful responses require proactive, honest, transparent and factually accurate communication to the extent of the crisis, with detailed information on ongoing health and safety issues. This honesty can foster trust.

It is important for authorities to take control of the story and respond quickly, giving instructions, being consistent, open and accessible and expressing empathy. Having a proportionate response is key. It is important to be honest about the information that is known and what is still unknown; and continuously communicate to the public. Beyond the message, having a credible spokesperson is key. Should there be multiple spokespersons aligning on the message is essential.

After the 2013 Boston bombing, the Boston Police Department used Twitter to provide live updates. The tweets started about 10 minutes after the detonations and continued the bombings within 1 hour, funneling information from one source. The @Bostonpolice account operated as a 24-hour voice. The information shared was retweeted more than 140,000 times, while the number of followers rose from 40,000 before the bombings to 300,000 once the bombing took place.

Misperceptions, particularly relating to geography, still occur often. For instance, one public misconception was that the entire Caribbean region was struck by hurricanes in 2017, with 91% of travellers believing the Caribbean was closed, leading to a decrease in regional arrivals. This was also an issue for California when the public believed that “California” was on fire during the wildfires of 2018 when it affected just 1% of the State’s geography. To address this misperception and mitigate the impact of the wildfire on the sector, Visit California leveraged media and consumer channels to share context, scale of the event and address factual errors. The use of geo-tagged and time-stamped pictures and videos can also support in destinations in showing the reality on the ground.

Similarly, despite the fact that the 2013-2016 Ebola epidemic was mostly limited to three African nations, notably, Liberia, Guinea and Sierra Leone, it was perceived as an Africa problem, leading to a reduction in international arrivals across the continent. For example, the Hotels Association of Tanzania noted in October 2014 that business had declined by 30-40% compared to the previous year, and that bookings for 2015 were down by 50% on average. On the other hand, Miami was able to through effective communication and by informing tourists that the Zika virus was only limited to a few blocks.
WE LEARN FROM OUR EXPERIENCES AND THOSE OF OTHERS - GOOD AND BAD. WE NEED TO CONTINUOUSLY LEARN & INTEGRATE INTO OUR PLANNING

DARREN WILLIAMS
DUBAI AIRPORTS

2. Activate the emergency plan
When a crisis emerges, the emergency action plan must be activated. This also involves ensuring there are dedicated resources to execute the plan, and that the coalition of trusted partners developed prior to the crisis is mobilised to respond.

Establishing a chain of command that is appropriate for the particular crisis is also critical. It is important for one person, in a high-level leadership position, to be in command, making the decisions and ensuring the plan is being followed and relevant milestones are being met. All key stakeholders must have a clear understanding of who is leading, but also what the roles are for each other organisation and individual involved in the crisis response.

Destinations and private sector organisations should go through their pre-developed response checklist, having a strong understanding of established processes and procedures, while remaining dynamic and agile. The crisis headquarters, a centralised location, needs to be defined in advance and phone bridges need to be put in place. Key stakeholders who are involved in the management of the crisis must be in place, with clarity on their roles and responsibilities. It is equally important to manage individuals who are not part of the crisis but would like to be.

During a crisis, business as usual does not apply. Destinations must pause their marketing campaigns and be prepared to change the message. Still, it is important not to lose sight of long-term business continuity. Such continuity requires having proper insurance and funding to finance infrastructural recovery if needed. In the Philippines, the Bangko Sentral ng Pilipinas (Central Bank of the Philippines) has put in place systems to ensure the continued provision of mission-critical financial services during and after a crisis.

As travellers have become more and more sophisticated, they increasingly expect 24/7 duty of care. In this context, Mexico created a 24/7 visitor assistance app called Guest Assist. The app facilitates tourists’ contact with local authorities and provides important information on emergency procedures and personalised assistance via trained staff in both English and Spanish. In effect, the management of crisis and treatment of tourists can have significant reputational implications. Net promoter scores can be greatly impacted, both positively and negatively, depending upon how a tourist is cared for in a time of crisis.

RESPONSIVENESS TO ENSURE A SPEEDY RECOVERY

1. Invite the world back when you are ready
As destinations recover and rebuild their confidence, they need to re-compete for lost ground. This requires transparency and ownership of the crisis; with a clear and honest articulation of what happened, what has been done in the wake of the crisis and the promise of what a destination will do in the future. Managing the perception of security is key. This involves informing tourists when the transition from crisis management to recovery has taken place, whether they can safely return and even the role that they can play in supporting the recovery. In this context, strong international cooperation can have a lot of value.

One example is South Korea and how it recovered from the MERS outbreak in 2015. While the outbreak had a significant impact on the Travel & Tourism sector, with over 54,000 travellers cancelling their trip to South Korea as a result of the 186 MERS cases and 38 fatalities, the South Korean government officially acknowledged and apologised for their shortcomings both in preparedness and management of the crisis, and highlighted how they integrated the learnings in their emergency planning and how they reformed the healthcare systems.

Another example is that of Thailand, where the Ministry of Tourism and the Tourism Authority of Thailand (TAT) already today work hand-in-hand both in the management of a crisis, but also in the recovery phase, by dispatching top level officials to their most important international source markets to let them know that Thailand is ready to welcome visitors. The officials do not have presentations and speeches, rather they use their own words and pictures to explain the situation and how they responded to it. Should certain areas of Thailand not be ready, the officials will focus on the safety and comfort of other destinations in Thailand.

Effective communication and marketing can also let travellers know when a destination is ready to welcome tourists & motivate travellers to come back. Such technologically-enabled communications include genuine traveller and local reviews, live-feeds, geo-tagged and time-stamped pictures, celebrity and local testimonials, influencers as well as messages focusing on community readiness both on social and mainstream media. In today’s hyper-visual era, pictures and videos to show that a destination or business is open and eager to welcome tourists can play an important role in illustrating the recovery. Miami for instance created a website with a live feed³, which is employed in the context of crisis, so that travellers can see for themselves what is happening on their beaches and boardwalks.

Brussels was also quite successful in its campaign #CallBrussels⁴ to convince foreign travellers, needs to come back to the European capital. This campaign was created following the November 2015 Paris attacks, when the city was placed on a four-day lockdown as authorities searched the city for several individuals connected to the attacks. The lockdown cost the city €350 million with tourist numbers falling 20% in December 2015 compared to December 2014. The idea of the campaign was to have the people of Brussels answer questions from tourists. From 7-11 January 2016, 12,688 people called the hotline from 154 different countries; with 74% of the callers being international and over 9 million seeing the hashtag.

Marketing a destination after a disaster should be supported by media stories that highlight the resilience and recovery of the community, the importance of the tourism to recovery as well as the ability of businesses and attractions to welcome tourists in this context, it is important for destinations to proactively address the potential physical and mental traumas of citizens and tourists present. In effect, the perception of the government’s competence in its ability to address the crisis and protect its citizens and travellers can impact the length of the recovery period.

Following a number of terror attacks in Kenya, in 2014, the Kenya Tourism Board, supported by the Ministry of Tourism of Kenya, launched its global online media campaign under the hashtag headline #WhyILoveKenya as part of its tourism recovery programme to help reassure tourists of Kenya’s safety. The campaign aimed to rally tourists, celebrities and the public and private sectors to share with the world that it’s safe to visit and that its tourism industry is flourishing. Collaborating with media professionals who have experience in the communication of security risks will be important in getting media to be viewed as an active participant, and not simply as messenger.

2. Entice travellers to return
Beyond communications, governments can put in place a variety of policies, ranging from travel facilitation to travel insurance, so as to persuade travellers to come back to the affected destination after a crisis event. Travellers may have data-driven or perceived concerns about
their own safety at the destination after a crisis, and destinations can shorten the road to recovery by providing incentives that can overcome such hesitations. Egypt’s Travel & Tourism sector, for instance, has demonstrated resilience, growing by 16.5% in 2018. This follows continued safety improvements across the country as well as in key destinations such as Sharm-El-Sheikh, which in turn have helped entice international tourists to return.

To facilitate travel after a crisis, the most frequently employed policy is to relax visa restrictions. Such policies were implemented for instance by South Korea in 2015 following the Middle East Respiratory Syndrome (MERS) outbreak, by Thailand following its civil unrest in 2014 and by Japan after the devastating earthquake and tsunami hit in 2011.

In the case of South Korea, the government announced that Chinese tourists holding group tourist visas issued by the Japanese government would be allowed to enter South Korea and remain in the country for a maximum of 15 days without a South Korean visa. Additionally, the South Korean government opted to waive the 10% tourist visa fee for visitors from China as well as Cambodia, Indonesia, the Philippines and Vietnam between July and September 2015. Finally, South Korea increased the period of validation for one-off visas issued between March and June to be automatically extended from three to six months.

Similarly, Thailand implemented visa facilitation policies, including visa-free travel for Chinese tourists and a 30-day extension of stay for visitors from 48 countries, to boost international arrivals following a downturn resulting from civil unrest in 2014. Further, to address the fact that most travel insurance policies had exemptions specifying that claims will not be paid should they be the result of martial law or civil unrest, Thailand launched special insurance policies known as the “Thailand Travel Shield.” This special insurance was set up by the Tourism Authority of Thailand (TAT) in partnership with well-known insurance companies, costing as little as $33 for a 1-7-day trip.

3. Know your travel segments

Following a crisis, destinations should develop a strategic marketing plan based on the new market situation. For instance, Sri Lanka views its recovery following the April 2019 terrorist bombings as a new opportunity in a different context. While certain market segments are very sensitive to crisis, others are not as risk averse; with different types of travellers having diverse risk thresholds.

Understanding the nuances of travellers and their motivations is critical in the recovery phase. Destinations should work to identify which market segments are likely to come back first after an incident and focus on those source markets first. For instance, following the earthquake in Nepal in 2015, the adventure travel segment recovered very quickly given this group’s higher tolerance to risk. In this context, the diversification of tourism segments by a destination can help mitigate the impact of the crisis.

Individuals, not just destinations, can communicate and share information on the state of a destination with the rest of the world. In fact, for highly risk-sensitive markets such as Japan, the testimonials of travellers are likely to resonate more than official marketing campaigns. Destinations should keep track of the total number of cancellations, which represent concerns and fears, and look at new bookings, which highlights new-found confidence and relief. Constant monitoring of data will enable destinations to track the turn of tides, namely, when new bookings overtake cancellations.

4. Rebuild stronger and better

The destruction caused by crises, may provide an opportunity to rebuild more robust, sustainable and efficient infrastructure. The recovery phase may also enable a destination to rebrand its product offering and its target audience. In effect, disasters may disrupt previous political and financial roadblocks, ultimately becoming a catalyst to change the tourism product, benefiting both citizens as well as tourists. Ultimately, the goal for destinations should be to bounce ahead post-crisis by designing and building a more resilient system. One example is San Francisco’s elevated embarcadero freeway, which barricaded the city’s financial district from its waterfront. While it was long seen as needing to be removed, there was a lack of political and financial will to enact this change. It was only after the 1989 Loma Prieta earthquake, when the structure was condemned, that the city decided not to rebuild. This resulted in the area transforming from an industrial corridor to a prized outdoor attraction.

Another example is that of Puerto Rico, which decided to adopt a new energy infrastructure after Hurricane Maria tore up the island’s power transmission and distribution network in 2017, which left the average citizen without electricity for an average of 84 days. Specifically, Puerto Rico is planning to build low carbon microgrids which incorporate renewable energy, in turn enabling increased energy resilience and mitigating utility failure.

While strategic infrastructure investments are critical, destinations should also take the opportunity to consider their hospitality mix. For instance, New Orleans focused not only on reconstruction post Hurricane Katrina in 2005, but also on attracting wealthier and more sophisticated visitors. Their approach was successful, with New Orleans welcoming 10.45 million visitors who spend $7.41 billion in 2016, compared to 101 million visitors who spent $4.9 billion in 2004.

TAKING THE CONVERSATION FORWARD

Given the complexity of the global risks landscape, the stakes intensify for the Travel & Tourism sector. Indeed, to ensure that the sector remains a driver of growth, an architect of job creation and an enabler of connectivity with tremendous social benefits and impact; it must enhance its resilience to the potential crises ahead.

The goal of our work is to provide destinations and the private sector with new insights on the effect of high-impact low-probability crises on the Travel & Tourism sector as well as a high-level framework to consider preparedness, management and recovery supported by best practices of destinations around the globe.

Still, the proactive and effective management of crises is critical to the speed of recovery, with accurate and transparent communication as a key tenet. Indeed, communication between the public and private sector, with local communities and tourists as well as with the local diplomatic authorities of important inbound markets is essential to successful crisis management and recovery.

This body of work is however just the first milestone, helping us to set the stage to engage key stakeholders more deeply as we collaborate to develop self-assessment preparedness tools as well as “basics” plans for emergency action for both the public and private sectors.

Together, we hope to build a more resilient future not just for destinations and businesses, but for the local communities who want to see their homes and livelihoods protected and the travellers who continue to dream of discovering the wonders of the world.
## Impact Ranges

### Impact Depth*

<table>
<thead>
<tr>
<th>Crisis Type</th>
<th>Minimum</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>1</td>
<td>24</td>
<td>70%</td>
</tr>
<tr>
<td>Environmental Disaster</td>
<td>1</td>
<td>18</td>
<td>57%</td>
</tr>
<tr>
<td>Political Turmoil</td>
<td>6</td>
<td>24</td>
<td>56%</td>
</tr>
<tr>
<td>Terrorism</td>
<td>0</td>
<td>9</td>
<td>34%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0</td>
<td>18</td>
<td>70%</td>
</tr>
</tbody>
</table>

### Months from Crisis Start to Recovery

<table>
<thead>
<tr>
<th>Crisis Type</th>
<th>Minimum</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>10.0</td>
<td>19.4</td>
<td>34.9</td>
</tr>
<tr>
<td>Environmental Disaster</td>
<td>1.0</td>
<td>16.2</td>
<td>92.8</td>
</tr>
<tr>
<td>Political Turmoil</td>
<td>10.0</td>
<td>22.2</td>
<td>44.9</td>
</tr>
<tr>
<td>Terrorism</td>
<td>2.0</td>
<td>18.5</td>
<td>42.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.0</td>
<td>17.7</td>
<td>92.8</td>
</tr>
</tbody>
</table>

### Lost Arrivals (Thousands)****

<table>
<thead>
<tr>
<th>Crisis Type</th>
<th>Minimum</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>78</td>
<td>2,377</td>
<td>5,599</td>
</tr>
<tr>
<td>Environmental Disaster</td>
<td>3</td>
<td>761</td>
<td>7,284</td>
</tr>
<tr>
<td>Political Turmoil</td>
<td>72</td>
<td>2,415</td>
<td>18,415</td>
</tr>
<tr>
<td>Terrorism</td>
<td>2</td>
<td>1,481</td>
<td>17,811</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2</td>
<td>1,350</td>
<td>18,415</td>
</tr>
</tbody>
</table>

### Lost Spending (Millions)

<table>
<thead>
<tr>
<th>Crisis Type</th>
<th>Minimum</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>567</td>
<td>5,447</td>
<td>54,481</td>
</tr>
<tr>
<td>Environmental Disaster</td>
<td>52</td>
<td>5,368</td>
<td>50,971</td>
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<tr>
<td>Political Turmoil</td>
<td>540</td>
<td>2,346</td>
<td>16,246</td>
</tr>
<tr>
<td>Terrorism</td>
<td>52</td>
<td>5,861</td>
<td>10,866</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52</td>
<td>5,335</td>
<td>56,436</td>
</tr>
</tbody>
</table>

## Crisis Impact by Type and Date

### Disease

<table>
<thead>
<tr>
<th>Crisis Description</th>
<th>Date</th>
<th>Impact Depth*</th>
<th>Months from Crisis Start to Recovery</th>
<th>Lost Arrivals (Thousands)****</th>
<th>Lost Spending (US$ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Foot and Mouth</td>
<td>FEB-01</td>
<td>10%</td>
<td>35</td>
<td>3,347</td>
<td>2,598.3</td>
</tr>
<tr>
<td>China SARS</td>
<td>FEB-03</td>
<td>13%</td>
<td>16</td>
<td>4,588</td>
<td>4,409.7</td>
</tr>
<tr>
<td>Singapore SARS</td>
<td>FEB-03</td>
<td>20%</td>
<td>17</td>
<td>4,722</td>
<td>1,572.7</td>
</tr>
<tr>
<td>Taiwan SARS</td>
<td>FEB-03</td>
<td>28%</td>
<td>25</td>
<td>871</td>
<td>1,564.3</td>
</tr>
<tr>
<td>HK SARS</td>
<td>MAR-03</td>
<td>15%</td>
<td>14</td>
<td>1,162</td>
<td>10,000.6</td>
</tr>
<tr>
<td>Saudi Arabia MERS</td>
<td>JUL-12</td>
<td>21%</td>
<td>14</td>
<td>5,599</td>
<td>2,444.1</td>
</tr>
<tr>
<td>Sierra Leone Ebola</td>
<td>MAY-14</td>
<td>70%</td>
<td>23</td>
<td>101</td>
<td>670</td>
</tr>
<tr>
<td>Guinea Ebola</td>
<td>MAY-14</td>
<td>41%</td>
<td>23</td>
<td>-</td>
<td>75.0</td>
</tr>
<tr>
<td>Miami Zika</td>
<td>FEB-16</td>
<td>1%</td>
<td>10</td>
<td>78</td>
<td>98.1</td>
</tr>
</tbody>
</table>

### Environmental Disaster

<table>
<thead>
<tr>
<th>Crisis Description</th>
<th>Date</th>
<th>Impact Depth*</th>
<th>Months from Crisis Start to Recovery</th>
<th>Lost Arrivals (Thousands)****</th>
<th>Lost Spending (US$ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belize Hurricane</td>
<td>OCT-01</td>
<td>3%</td>
<td>14</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Grenada Hurricane</td>
<td>SEP-04</td>
<td>34%</td>
<td>93</td>
<td>363</td>
<td>724.6</td>
</tr>
<tr>
<td>Cayman Hurricane</td>
<td>SEP-04</td>
<td>57%</td>
<td>3</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Sri Lanka Tsunami</td>
<td>DEC-04</td>
<td>3%</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Thailand Tsunami</td>
<td>DEC-04</td>
<td>3%</td>
<td>14</td>
<td>317</td>
<td>285.2</td>
</tr>
<tr>
<td>China Earthquake</td>
<td>MAY-08</td>
<td>9%</td>
<td>33</td>
<td>7,824</td>
<td>10,970.8</td>
</tr>
<tr>
<td>Haiti Earthquake</td>
<td>JAN-10</td>
<td>26%</td>
<td>22</td>
<td>74</td>
<td>111.7</td>
</tr>
<tr>
<td>Chile Earthquake</td>
<td>FEB-10</td>
<td>1%</td>
<td>4</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Brisbane, Australia Floods</td>
<td>DEC-10</td>
<td>9%</td>
<td>24</td>
<td>181</td>
<td>190.0</td>
</tr>
<tr>
<td>Rio de Janeiro, Brazil Floods</td>
<td>JAN-11</td>
<td>-</td>
<td>3</td>
<td>17</td>
<td>18.5</td>
</tr>
<tr>
<td>New Zealand Earthquake</td>
<td>FEB-11</td>
<td>2%</td>
<td>7</td>
<td>14</td>
<td>29.2</td>
</tr>
<tr>
<td>Japan Earthquake</td>
<td>MAR-11</td>
<td>27%</td>
<td>21</td>
<td>2,095</td>
<td>3,298.1</td>
</tr>
<tr>
<td>New York, NY, USA Blizzard</td>
<td>DEC-11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>India Heatwaves, Delhi Impact</td>
<td>MAY-15</td>
<td>-</td>
<td>SEASONAL</td>
<td>153</td>
<td>247.4</td>
</tr>
<tr>
<td>Cape Town, South Africa Drought</td>
<td>JUN-17</td>
<td>-</td>
<td>12</td>
<td>140</td>
<td>117.3</td>
</tr>
<tr>
<td>Houston, USA Hurricane Harvey***</td>
<td>AUG-17</td>
<td>-</td>
<td>23</td>
<td>84</td>
<td>165.8</td>
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<tr>
<td>Dominica Hurricane Maria</td>
<td>SEP-17</td>
<td>19%</td>
<td>14</td>
<td>51</td>
<td>94.0</td>
</tr>
<tr>
<td>US Virgin Islands Hurricane Maria</td>
<td>SEP-17</td>
<td>29%</td>
<td>15</td>
<td>674</td>
<td>3,574.9</td>
</tr>
<tr>
<td>Puerto Rico Hurricane Maria***</td>
<td>SEP-17</td>
<td>24%</td>
<td>21</td>
<td>2,820</td>
<td>3,037.2</td>
</tr>
<tr>
<td>Anguilla Hurricane Maria</td>
<td>SEP-17</td>
<td>39%</td>
<td>12</td>
<td>65</td>
<td>121.9</td>
</tr>
<tr>
<td>Mati, Greece Wildfire***</td>
<td>JUL-18</td>
<td>-</td>
<td>11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nigeria Floods</td>
<td>AUG-18</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bali/Lombok, Indonesia Earthquake</td>
<td>AUG-18</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Osaka, Japan Typhoon</td>
<td>AUG-18</td>
<td>5%</td>
<td>1</td>
<td>58</td>
<td>39.8</td>
</tr>
<tr>
<td>California, USA Wildfire - Los Angeles</td>
<td>JAN-17</td>
<td>-</td>
<td>7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CRISIS</td>
<td>CRISIS DATE</td>
<td>IMPACT DEPTH*</td>
<td>MONTHS FROM CRISIS START TO RECOVERY</td>
<td>LOST ARRIVALS (THOUSANDS)**</td>
<td>LOST SPENDING (US$ MILLIONS)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>--------------------------------------</td>
<td>-----------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>VENEZUELA POLITICAL CRISIS</td>
<td>JAN-02</td>
<td>48%</td>
<td>45</td>
<td>728</td>
<td>726.4</td>
</tr>
<tr>
<td>NEPAL UNREST</td>
<td>SEP-04</td>
<td>18%</td>
<td>32</td>
<td>72</td>
<td>431</td>
</tr>
<tr>
<td>ISRAEL BORDER CLASH</td>
<td>JUL-06</td>
<td>13%</td>
<td>15</td>
<td>176</td>
<td>300.9</td>
</tr>
<tr>
<td>LIBANON BORDER CLASH</td>
<td>JUL-06</td>
<td>33%</td>
<td>28</td>
<td>508</td>
<td>2,369.7</td>
</tr>
<tr>
<td>KENYA UNREST</td>
<td>DEC-07</td>
<td>31%</td>
<td>33</td>
<td>407</td>
<td>226.7</td>
</tr>
<tr>
<td>THAILAND UNREST</td>
<td>SEP-08</td>
<td>16%</td>
<td>25</td>
<td>2,278</td>
<td>2,830.2</td>
</tr>
<tr>
<td>MADAGASCAR POLITICAL CRISIS</td>
<td>JAN-09</td>
<td>56%</td>
<td>12</td>
<td>941</td>
<td>1,476.3</td>
</tr>
<tr>
<td>TUNISIA ARAB SPRING</td>
<td>DEC-10</td>
<td>31%</td>
<td>12</td>
<td>4,455</td>
<td>1,495.2</td>
</tr>
<tr>
<td>EGYPT ARAB SPRING</td>
<td>JAN-11</td>
<td>32%</td>
<td>29</td>
<td>18,455</td>
<td>16,425.6</td>
</tr>
<tr>
<td>JORDAN ARAB SPRING</td>
<td>JAN-12</td>
<td>7%</td>
<td>12</td>
<td>652</td>
<td>536.9</td>
</tr>
<tr>
<td>SYRIA CIVIL WAR</td>
<td>MAR-11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,840</td>
</tr>
<tr>
<td>THAILAND COUP</td>
<td>MAY-14</td>
<td>6%</td>
<td>11</td>
<td>792</td>
<td>1,227.7</td>
</tr>
<tr>
<td>CHINA SANCTIONS ON S. KOREA – SEOUL</td>
<td>JAN-17</td>
<td>9%</td>
<td>10</td>
<td>956</td>
<td>964.2</td>
</tr>
</tbody>
</table>

* Equal to 1 - (lowest post crisis arrivals / pre-crisis arrivals).
** The number of arrivals lost between the start of the crisis and the time when arrivals returned to their pre-crisis level.
*** Denotes ongoing crisis - Months from Crisis Start to Recovery reported as months to 6/1/2019 - No evident impact

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ENDNOTES

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