

RESILIENT TOURISM

Competitiveness in the Face of Disasters



©2020 The World Bank Group
1818 H Street NW
Washington, DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

All rights reserved.

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; e-mail: pubrights@worldbank.org.

Citation

Please cite the report as follows: World Bank. 2020. *Resilient Tourism: Competitiveness in the Face of Disasters*. Washington, DC: World Bank.

Editor: Mark Mattson

Designers: Saengkeo Touttavong, Korea World, and Linker Creative

Acknowledgments

This report was developed with support from the Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries, which is financed by the Government of Japan and managed by the Global Facility for Disaster Reduction and Recovery (GFDRR) through the Tokyo Disaster Risk Management Hub. It was prepared under the leadership of Caroline Freund, Global Director (ETIDR); Martha Martinez Licetti, Practice Manager (ETIMT); Bernice Van Bronkhorst, Global Director (SCCDR); and Julie Dana, Practice Manager (GFDRR).

The team was led by Etienne Raffi Kechichian (ETIMT) and Shoko Takemoto (GFDRR). The report team was led by Hannah Messerli (ETIMT) and included Wendy Li (ETIMT), Nahyoon Shin (ETIMT), and Paul Phumpiu Chang (EMNF2). The team benefited from the valued contributions of Louise Twining-Ward (ETIMT), Glenn-Marie Lange (SENGL), and Sayaka Yoda (GFDRR). The team also thanks the following external reviewers for their thoughtful guidance: Susanne Becken, Griffith University; Cordula Wohlmuther, UNWTO; and Dirk Glaesser, UNWTO. Lastly, Luis Tineo provided continuous support in the development of this project.

Table of Contents

Acknowledgments	iv
Acronyms	vii
Executive Summary	viii
1. Tourism, Disasters, and Climate Change	1
1.1. Introduction	2
1.2. The Global Tourism Industry	6
1.3. Types of Natural Hazards and Impacts on the Tourism Industry	12
2. The Resilient Tourism Industry	23
2.1. Approaches to Resilient Tourism Industries	24
2.2. Barriers to Resilient Tourism Industries	25
3. Resilient Tourism Framework	29
3.1. Priorities and Approaches	30
3.1.1. Understanding Risks to Tourism	33
3.1.2. Planning and Prioritization	36
3.1.3. Mitigation and Preparedness	41
3.1.4. Response and Recovery Measures	46
3.1.5. Long-Term Resilience Actions	50
4. Conclusions and Areas for Future Work	57
4.1. Conclusions	58
4.2. Areas for Future Work	60

List of Tables

Table 1 Stakeholder Roles in the Resilient Tourism Framework	32
--	----

List of Figures

Figure 1	Tourism Resilience Building Cycle	ix
Figure 2	Resilient Tourism Framework	x
Figure 3	Direct Contribution of Tourism to GDP by Absolute Size and Percentage (2018)	6
Figure 4	List of Tourism Products and Services and Corresponding ISIC Divisions	7
Figure 5	The Tourism Ecosystem - A Typical Tourist's Points of Contact and Services	8
Figure 6	Connections Between Local and Tourist Economies	9
Figure 7	Sector Interlinkages in Thailand's Tourism Sector	10
Figure 8	Direct and Indirect Impacts of Disasters on the Tourism Sector	14
Figure 9	Supply Shock Impact Types for Thailand's Tourism Sector	15
Figure 10	Supply Composition of Different Impact Types on Thailand's Tourism Sector	16
Figure 11	Tourism Resilience Building Cycle	30
Figure 12	Resilient Tourism Framework	31
Figure 13	Components of the Standards on Disaster Risk Management for Hotels and Resorts	36
Figure 14	Building Blocks for Tourism Resilience in Queensland, Australia	38
Figure 15	Evacuation Signage from the Tsunami-Ready Toolbox	41
Figure 16	Satellite Image Analysis of Earthquake Damage at Bhaktapur Durbar Square Monumental Zone, Kathmandu (2015)	49

List of Boxes

Box 1	Key Definitions	4
Box 2	Examples of Tourism Losses Caused by Disasters	14
Box 3	Slow-Onset Events and Impacts on Tourism	17
Box 4	Tourism's Contribution to Climate Change	17
Box 5	Insurance Barriers for Tourism Operators and Consumers	26
Box 6	Resilient Tourism Projects at the World Bank	33
Box 7	Climate Change Risk Assessment for Thailand's Tourism Sector	34
Box 8	Regional Disaster Risk Management for Sustainable Tourism in the Caribbean Project	35
Box 9	Tourism Resilience Index	36
Box 10	Phuket Tourism Risk Management Strategy 2007–2012	39
Box 11	Applying the Resilient Tourism Framework to Pandemics	59

Acronyms

BCP	Business Continuity Planning/Business Continuity Plan
CARICOM	Caribbean Community
CDM	Comprehensive Disaster Management
DMO	Destination Management Organization
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EMDE	Emerging Market and Developing Economy
EP&R	Emergency Preparedness and Response Plan
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
GP	Global Practice (World Bank Group)
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
ISIC	International Standard Industrial Classification of All Economic Activities
LDC	Least Developed Country
NDCs	Nationally Determined Contributions
OECD	Organisation for Economic Co-operation and Development
PATA	Pacific Asia Travel Association
SIDS	Small Island Developing State
SME	Small and Medium-Sized Enterprise
UNDRR	United Nations Office for Disaster Risk Reduction
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research
UNWTO	United Nations World Tourism Organization
WBG	World Bank Group
WEF	World Economic Forum
WTTC	World Travel & Tourism Council

All dollar amounts are in US dollars unless otherwise indicated.

Executive Summary

The risk environment for the global tourism sector is intensifying. A changing climate is amplifying the frequency and severity of dangerous weather and degrading the appeal of many destinations in multiple ways. These impacts threaten the tourism industry's potential to grow, generate jobs, and compete. As disasters occur more often, so too does the risk of industry disruptions and losses. Most recently, the COVID-19 pandemic – itself a product of deteriorating environmental conditions – has revealed the sector's global interconnectedness, vulnerability, and exposure to risk. Today, governments are intent on building back hard-hit tourism sectors because of the vital roles they play in many countries' economies and in alleviating poverty and creating jobs.

In 2019, the world recorded nearly 400 natural disasters. These caused an estimated \$130 billion in economic losses and affected 95 million people (CRED 2020). While there are no global figures for the economic toll on tourism, individual disasters suggest the scale of costs. The World Travel & Tourism Council (2018) estimated that the 2017 hurricane season prevented 826,100 tourists from visiting the Caribbean, equating to \$741 million in lost revenue. In Thailand, widespread floods in 2011 caused Bangkok's domestic airport to close for months and resulted in an estimated \$3 billion impact on tourism, mostly from private sector losses (World Bank 2012). Exacerbating the impacts of disasters is the growing climate change crisis. Compared to the two previous decades, there has been a sharp increase in natural disasters in the period 2000–2019, which resulted in \$2.97 trillion in global economic losses. Many of these losses can be attributed to the rise in climate-related disasters including floods, storms, and droughts (UNDRR 2020).

Objectives

Resilient Tourism: Enhancing Competitiveness in the Face of Disasters presents the case to government decision-makers, tourism private sector stakeholders, and development partners that the industry must act urgently to integrate resilience as a core component of its competitiveness agenda. Its objectives are to: build knowledge of how and why the tourism sector is vulnerable to disaster and climate risks; raise awareness of disaster and climate impacts on tourism competitiveness; examine barriers to proactive mitigation and risk-informed decision-making; and present examples of approaches in different countries. The report flags the need for research and methodology in this emerging field and proposes a **Resilient Tourism Framework** to integrate preparedness, response, and recovery actions into the sector. This report is part of a series under the World Bank's Resilient Industries Program which proposes ways to integrate disaster and climate resilience considerations into the industrial development investment projects the World Bank supports. Its flagship report, *Resilient Industries: Competitiveness in the Face of Disasters*, details a Resilient Industries Framework which informs the tourism-specific framework in this publication.

In the face of disasters, resilient industries can:

- **Minimize losses and disruptions** – of physical and human assets and key business operations, as well as shutdown times and associated losses to both organizations and individuals. Actions taken before, during, and immediately after disasters are critical.

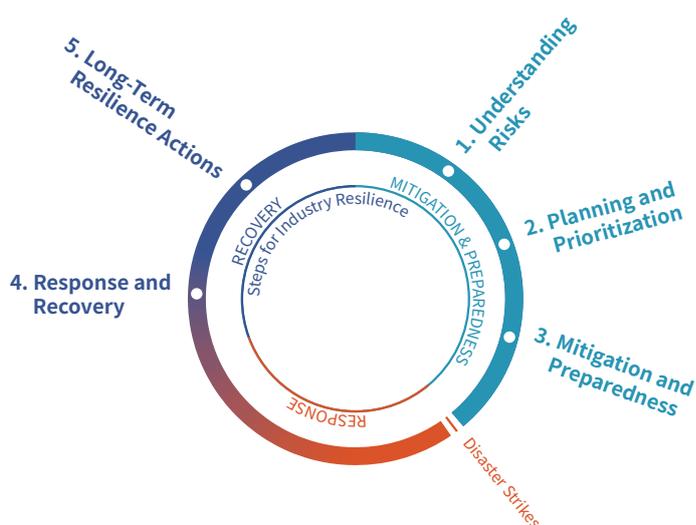
- **Continue or quickly resume operations** – during and immediately after disasters. This can be enabled through preparatory business continuity and disaster response plans which guide post-disaster actions.
- **Sustain and increase competitiveness** – following disasters through response and recovery actions. After large-scale disasters industries need to remain in business and recover quickly within contracted markets or altered economic landscapes. Post-disaster competitiveness may require innovations to regain market share and consumer confidence, and build back better, more resilient businesses, rather than returning to business as usual (World Bank 2020).

Resilient Tourism Framework

A Resilient Tourism Framework is presented to guide governments, firms, and industry associations to integrate resilience into tourism development. The tourism resilience building cycle (see figure 1) consists of the following priorities:

- **Understanding Risks:** Identifying disaster and climate risks that threaten the tourism sector and analyzing their potential impacts for destinations and firms.
- **Planning and Prioritization:** Planning and prioritizing tourism development and investments to build resilience and avoid or minimize negative impacts, at the destination and firm levels.
- **Mitigation and Preparedness:** Implementing resilience measures in advance to lessen the impact of shocks and help destinations and firms recover. These can be structural (e.g., infrastructure design and construction) and nonstructural (e.g., prearranged agreements for coordination, communications, disaster risk financing, etc.).
- **Response and Recovery:** Taking good response decisions and actions during and after disaster events to minimize disruptions and losses, and as a result, maintain and enhance competitiveness
- **Long-term Resilience Actions:** Planning for the long-term sustainability of the sector through climate change mitigation actions.

Figure 1 Tourism Resilience Building Cycle



1. Understanding Risks

Identifying disaster and climate risks that threaten the tourism sector and analyzing their potential impacts for destinations and firms.

2. Planning and Prioritization

Planning and prioritizing tourism development and investments to build resilience and avoid or minimize negative impacts.

3. Mitigation and Preparedness

Implementing resilience actions and investments in advance to lessen the impacts of disasters and climate change.

4. Response and Recovery

Taking good response decisions and actions during and after disaster events to minimize disruptions and losses, and as a result, maintain and enhance competitiveness.

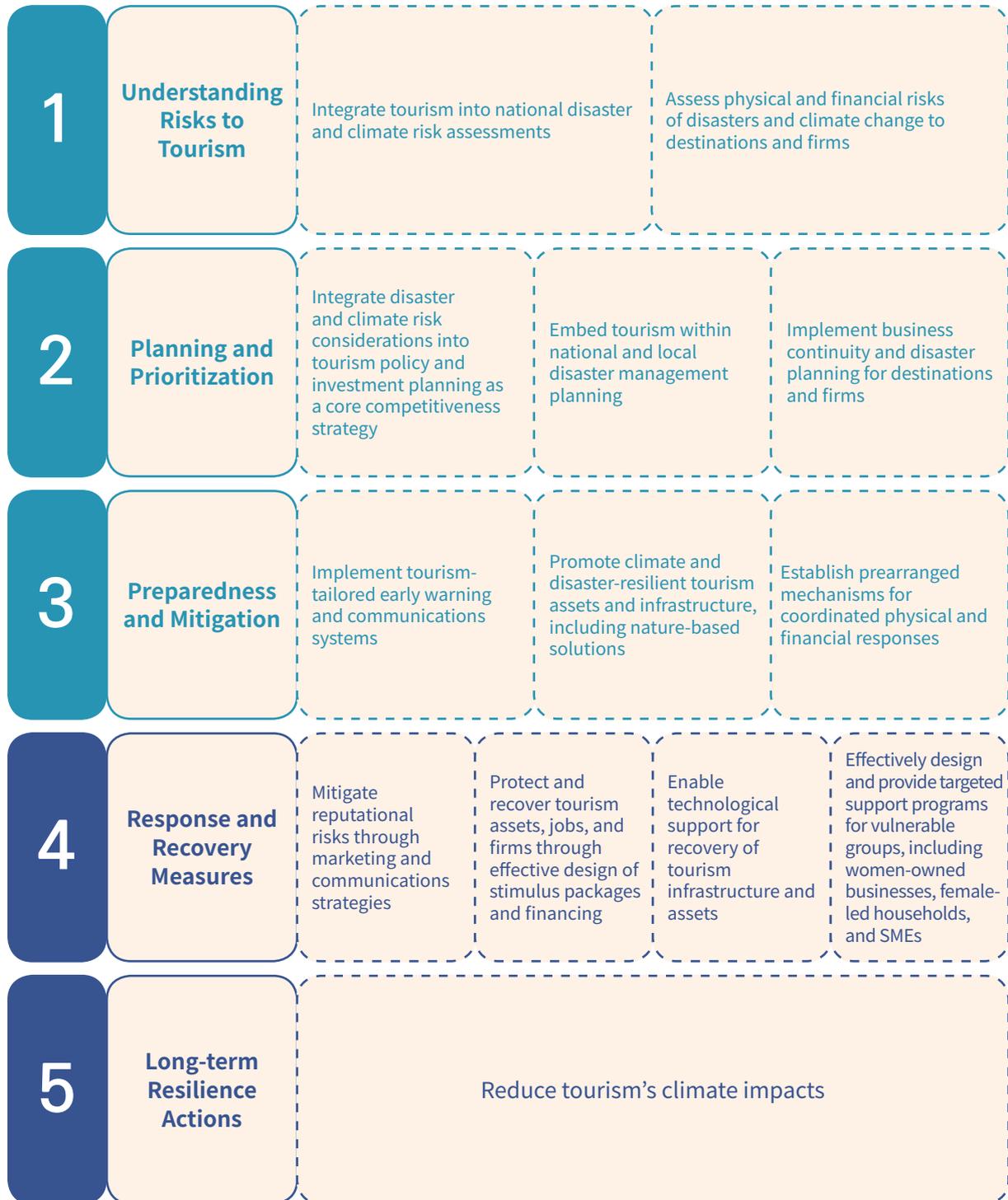
5. Long-Term Resilience Actions

Planning for the long-term competitiveness of the sector through climate change mitigation actions.

Source: Adapted from World Bank 2020.

When applied to the tourism industry, the framework provides actionable guidance for building resilience (see figure 2).

Figure 2 Resilient Tourism Framework



Source: Developed by World Bank.

Ways Forward

Resilience requires sector-wide commitments and actions from stakeholders in the most critical areas. The analysis and examples in this report identify several key paths for stakeholders to build a more resilient tourism sector.

Public Sector

- **Commit to the resilience agenda.** Tourism policy makers should embed resilience as a key element of their competitiveness agendas, collaborate with stakeholders to overcome the fragmented nature of the sector, and promote top-down and bottom-up resilience actions. Governments can link financial support and subsidies to compliance with resilience criteria.
- **Make use of and disseminate risk information.** Resilience planning should be risk-informed, evidence-based, and multi-hazard in approach. Industry-wide sharing of risk information raises awareness and encourages follow-up actions. Stronger cost-benefit analyses support the business case for preparatory resilience investments. Finally, governments can work to improve data collection and help to close the gap in sector resilience.
- **Build resilience in the private sector, including of vulnerable groups.** Policy makers should support tourism firms including SMEs, women-owned businesses, and other vulnerable groups with limited resources. Assistance may include policies and incentives to support risk assessments, emergency preparedness and response (EP&R) plans, business continuity planning (BCP), and finance and insurance schemes needed by vulnerable groups for preparation and recovery. Governments will need to design open, transparent, and efficient criteria to reach out to vulnerable populations and to monitor impacts.

Industry

- **Strengthen resilience of SMEs.** The resilience of tourism SMEs to disasters is critical to that of the industry. SMEs need to proactively invest in their own resilience, such as through business continuity planning and by leveraging the increasingly available resources from industry partners in these efforts.
- **Collaborate to address long-term climate impacts.** Large corporations such as airlines, hotels, and tour operators need to address the climate crisis at scale by energizing stakeholder partnerships and leading the industry to commit to reducing climate impacts and decarbonizing operations.
- **Cultivate employee awareness.** Training to raise understanding and awareness of workers contributes to resilience and can even be the source of new insights and innovations.

Development Partners

- **Integrate resilience into tourism development.** Agencies like the World Bank, which provide technical assistance and funding for tourism, should emphasize risk-informed and resilient developments, partner with destinations to pilot resilient tourism approaches, and assist countries to improve disaster preparedness and response in their tourism sectors.
- **Develop the resilience knowledge base.** Development partners can fill knowledge gaps, monitor and evaluate progress towards resilience, share best practices, and build capacity.

Financial Institutions

- **Finance resilience.** Banks and insurance companies should continue to improve access to disaster risk financing, risk insurance, and other instruments needed for preparedness and recovery.

Tourists

- **Be aware of local risks and procedures.** Tourists can be a vulnerable group when disasters strike. By informing themselves of local risks and evacuation procedures and opting into public warning systems such as mobile apps, tourists can strengthen their own resilience and lessen impacts on destinations.
- **Choose resilient firms and destinations.** Tourists can decrease their carbon footprints through informed and responsible travel behavior, such as choosing short-haul destinations and taking longer but fewer trips. They can push the sector toward better climate practices by favoring companies that have made climate commitments.

Resilience is the new mantra for tourism to stay competitive in the face of growing hazards. This report aims to support stakeholders to translate this guidance into action for resilience.

References

- CRED (Centre for Research on the Epidemiology of Disasters). 2020. “CRED Crunch 58 - Disaster Year in Review (2019).” Brussels: CRED.
- NDRR. (United Nations Office for Disaster Risk Reduction). 2020. *The Human Cost of Disasters: An Overview of the Last 20 Years (2000–2019)*. Geneva: UNDRR.
- World Bank. 2012. *Thai Flood 2011: Rapid Assessment for Resilient Recovery and Reconstruction Planning (Vol. 2): Final Report (English)*. Washington, DC: World Bank.
- World Bank. 2020. *Resilient Industries in Japan: Lessons Learned in Japan on Enhancing Competitive Industries in the Face of Disasters Caused by Natural Hazards*. Washington, DC: World Bank.
- World Travel & Tourism Council. 2018. “Caribbean Recovery.” London: World Travel & Tourism Council.

1

Tourism, Disasters, and Climate Change

1.1. Introduction

The tourism industry, a driver of the global economy, is highly exposed to disaster risks.

Characterized by global value chains and reliance on natural resources, many destinations' tourism sectors are vulnerable to a number of threats to their competitiveness. Most recently, this vulnerability has been highlighted by the COVID-19 global pandemic in which the cessation of travel and tourism has jeopardized government revenues and the survival of firms and led to significant economic losses across the tourism value chain. The United Nations World Tourism Organization (UNWTO) forecasts that international tourism could decline by 60 to 80 percent in 2020, translating to a loss of up to \$1.2 trillion in export revenues and 100 to 200 million tourism jobs (UNWTO 2020b). Also hit hard by travel restrictions is the global domestic tourism market, which is six times the size of the international market in terms of trips and represents a large share of travel spending in many countries (UNWTO 2020a). This extraordinary disaster has raised awareness of tourism's vulnerability to shocks. In addition to zoonotic spillovers, many other shocks will stem from natural hazards, the frequency and magnitude of which may be amplified by climate change.¹ These have severe implications for the competitiveness of tourism sectors on which a growing number of economies rely.

Many countries are unprepared for the impacts inflicted by disasters on their tourism sectors.

In 2019 the world recorded approximately 396 natural disasters (CRED 2020). These disasters caused an estimated \$130 billion in economic losses and affected 95 million people, though there are no global figures for the economic toll on tourism. Asia was the most affected region, suffering 40 percent of disasters, followed by Africa with 20 percent (CRED 2020). Climate change is further magnifying disaster risks. According to the United Nations Office for Disaster Risk Reduction (UNDRR), there has been a sharp increase in natural disasters in the period 2000 to 2019, which resulted in \$2.97 trillion in global economic losses, compared to the preceding two decades. Much of this increase is attributable to the rise of climate-related disasters including floods, storms, and droughts (UNDRR 2020). Since 2000, there has been an average of 314 climate-related disasters each year, mainly storms and floods, which is an increase of 44 percent from the 1994–2000 average (CRED 2015). As populations grow and tourism development persists on coastlines, flood plains, and other high-risk areas, the potential for catastrophes amplifies.

The Sendai Framework for Disaster Risk Reduction (2015–2030), adopted by United Nations member states to prevent and reduce disaster risk, recognized the need to consider the tourism sector.

It states the priority for national and local authorities to “promote and integrate disaster risk management approaches throughout the tourism industry, given the often-heavy reliance on tourism as a key economic driver” (UNDRR 2015). Tourism also faces substantial risks from climate change, although these are still not well-understood. Tourism is a highly climate-sensitive sector, affected by climate variability and patterns, and by global warming. According to the Intergovernmental Panel on Climate Change (IPCC), a major barrier to understanding climate risks has been the lack of integrated sectoral assessments that analyze the interactions of potential climate impacts with the drivers of tourism, from the destination community scale to the global level (2018). However, recent analyses show that much is at stake. One analysis of the vulnerability to climate change of tourism sectors in 181 countries found that the highest risk was in Africa, the

¹ Climate change also influences infectious diseases, although it is difficult at present to specify its impacts on human-vector diseases such as COVID-19. See Altizer and others (2013).

Middle East, South Asia, and small island developing states (SIDS) in the Caribbean, Indian, and Pacific Oceans – regions where tourism is anticipated to grow the fastest through 2030 (Scott, Hall, and Gössling 2019).²

The role that resilience can play in buffering the sector from shocks is drawing increasing attention, yet knowledge is still limited on how it can be built. To support clients, the World Bank is developing a *Resilient Industries Framework* to enhance the ability of key sectors to better prepare for and withstand disasters and climate change. Manufacturing and tourism contribute significantly to developing countries' GDPs, job markets, and poverty alleviation, and both rely on assets with high exposure to natural hazards. Conventional disaster risk management frameworks do not include resilience perspectives and are inadequate in the face of mounting risks and losses.

The *Resilient Industries Framework* shows how disaster and climate change resilience considerations can be integrated within the industry development investment projects the World Bank supports. The framework defines industrial resilience as *the ability of firms, sectors, and industrial parks to increase competitiveness by minimizing losses and damages, and by achieving continuity and growth in the face of ever more frequent and intensifying disasters*. This definition also serves as a definition of tourism resilience, and considers economic, environmental, and social resilience, while flagging research gaps in this emerging field. See box 1 for key terms and definitions.

In the face of disasters, resilient industries can:

- **Minimize losses and disruptions** – of physical and human assets and key business operations, as well as shutdown times and associated losses to both organizations and individuals. Actions taken before, during, and immediately after disasters are critical.
- **Continue or quickly resume operations** – during and immediately after disasters. This can be enabled through preparatory business continuity and disaster response plans which guide post-disaster actions.
- **Sustain and increase competitiveness** – following disasters through response and recovery actions. After large-scale disasters, industries need to remain in business and recover quickly within contracted markets or altered economic landscapes. Post-disaster competitiveness may require innovations to regain market share and consumer confidence, and build back better, more resilient businesses, rather than returning to business as usual (World Bank 2020c).

This report presents the case to tourism stakeholders that the industry must act urgently to integrate resilience in order to increase growth and competitiveness and protect jobs and livelihoods. Its primary audiences are governments, the tourism industry (associations, firms, and financial institutions), and practitioners such as development agencies that support tourism. Its objective is to: build knowledge of how and why the tourism sector is vulnerable to disaster and climate risks; raise awareness of disaster and climate impacts on competitiveness; examine barriers to proactive mitigation and risk-informed decision-making; and present examples of approaches in different countries. The report flags the need for research and methodology in this emerging field, and proposes a **Resilient Tourism Framework** to integrate preparedness, response, and recovery actions into the sector.

² The researchers found that countries with the highest risk, and where tourism makes up more than 15 percent of GDP include many SIDS such as the Maldives, Seychelles, Mauritius, Antigua and Barbuda, The Bahamas, St. Lucia, Grenada, Barbados, Jamaica, Vanuatu, Fiji, and Kiribati. Non-SIDS with high risk and tourism dependence include Costa Rica, Belize, Honduras, Laos, Thailand, Cambodia, Vietnam, Mexico, Namibia, and the Gambia. The lowest sectoral risk from climate change was found in western and northern Europe, Central Asia, Canada, and New Zealand.

This report was developed through secondary research based on case studies. The authors compiled examples of actions that strengthen disaster and climate preparedness, response, and recovery, and chose destinations from regional, national, and subnational levels. Common approaches formed the basis of the Resilient Tourism Framework. Where possible, these cases are supported with data and evidence for their effects on industry resilience; more research is needed to build this evidence base.

Resilience to natural hazards and climate-exacerbated events can enhance resilience to other shocks, such as pandemics. Though the duration and scale of COVID-19 has shown that it requires a specific set of tools, which are still being rolled out and tested, many of the proposals in this framework are applicable to a wide range of crises.

Box 1 Key Definitions

Business continuity plan (BCP): Documented information that guides an organization to respond to a disruption and restore the delivery of products and services (such as manufactured items) consistent with its business continuity objectives. BCPs are often related to management systems and processes.³

Climate hazard: A hazard that is triggered by an event or trend related to climate change, such as warming temperatures, sea level rise, ocean acidification, etc.

Destination: The place that is central to a tourist's decision to visit or the place where tourists' activities occur. A destination includes attractions, infrastructure, facilities, resources, communities, and tourists. It has boundaries defining its management (typically administrative or geographical) and brand perceptions affecting its market competitiveness. It can be a country, region, municipality, or other area. Within the tourism sector, Kenya, Tokyo, the Great Barrier Reef, and Disneyworld may all be called destinations (adapted from UNWTO 2019c).

Disaster: A serious disruption of the functioning of a community or society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to losses and impacts in one or more of the following realms: human, material, economic and environmental.⁴ The effects of disasters can be immediate and localized, but are often widespread, and may last a long time. Disasters create emergency situations.

Disaster damage: Damage occurring during and immediately after a disaster. Disaster damages are usually measured in physical units (e.g., square meters of housing, kilometers of roads, etc.), and describe the total or partial destruction of physical assets, the disruption of basic services, and damage to livelihoods.⁵

Disaster impact: The total effect, including negative effects (e.g., economic losses) and positive effects (e.g., economic gains), of a hazardous event or a disaster.⁶ The term includes economic, human and environmental impacts, and may include death, injury, disease, and other negative effects on human physical, mental and social well-being.⁷

Disaster risk: The potential loss of life, injury, or asset loss which may occur in a system, society, or a community over a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity.⁸

Disaster risk reduction: Disaster risk reduction (DRR) aims to prevent new, reduce existing, and manage residual risk (defined as the risk that remains even after DRR measures are in place), all of which contribute to strengthening resilience and therefore to sustainable development.⁹

3 ISO 22301:2019(en) Security and resilience — Business continuity management systems — Requirements

4 <https://www.undrr.org/terminology/disaster>

5 <https://www.undrr.org/terminology/disaster>

6 <https://www.undrr.org/terminology/disaster>

7 <https://www.undrr.org/terminology/disaster>

8 <https://www.undrr.org/terminology/disaster-risk>

Extreme weather event: An event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of probability.¹⁰

Industry competitiveness: The ability to compete in national or international markets, and can be measured at the firm, sector, or country level in terms of net profits, productivity, skills, innovations, reputation, net exports, and investment flows that affect economic performance (Deloitte 2016; Kechichian and others 2016; UNIDO 2019; McKinsey & Company 2012).

Industry resilience: The ability of industry (including the tourism sector) to increase competitiveness by minimizing losses and damages and achieving continuity and growth in the face of ever more frequent and intensifying disasters (World Bank 2020b).

Multi-hazard risk assessment: Analysis of risk for more than one hazard in a given area, and the potential interactions between these hazards.

Natural hazard: A natural process/phenomenon that may cause loss of life, injury, or other health impacts, property damage, social and economic disruption, or environmental degradation. These include the following: geological hazards (earthquakes, tsunamis, volcanic activity); hydrological hazards (floods, avalanches); meteorological hazards (storms, extreme temperatures), and biological hazards (epidemics).¹¹

Nature-based solutions: Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.¹²

Rapid-onset or sudden-onset event: A single, discrete hazardous event that emerges quickly or unexpectedly (UNFCCC 2012).

Resilient industries: Industries that increase competitiveness by minimizing losses and damages and achieve continuity and growth in the face of ever more frequent and intensifying disasters (World Bank 2020b).

Risk-informed approach: Decision-making that integrates disaster risk knowledge and information.

Slow-onset event: An event that emerges gradually and may be associated with drought, desertification, sea-level rise, epidemics, etc. (UNFCCC 2012).

SMEs: Definitions of SMEs vary by country. The World Bank Group defines a firm as an SME if it meets two of the following three requirements: (i) have less than 300 employees, (ii) have less than \$15 million in assets, and (iii) have less than \$15 million in annual sales. As some financial institutions are unable to report data based on any of these three criteria, loan size is also used as a proxy. In that case, a firm is considered an SME if the size of its outstanding loan from a financial institution is less than \$1 million.¹³ While there is no widely-accepted definition of tourism SMEs, they are generally smaller businesses which do not meet the three WBG requirements described above.

Tourism infrastructure: Physical infrastructure that facilitates tourism, including airports and ports, roads, hotels, entertainment facilities, and utilities such as energy and water supply (WEF 2019).

Vulnerability: The physical, social, economic, and environmental conditions which increase the susceptibility of an individual, community, assets, or systems to the impacts of hazards.¹⁴

9 <https://www.undrr.org/terminology/disaster-risk-reduction>

10 https://www.ipcc-data.org/guidelines/pages/glossary/glossary_e.html

11 <https://www.undrr.org/terminology/hazard>

12 See IUCN for more on nature-based solutions: <https://www.iucn.org/theme/nature-based-solutions>

13 <https://databank.worldbank.org/data/download/g20fidata/G20%20Set%20Methodology.pdf>

14 <https://www.undrr.org/terminology/vulnerability>

1.2. The Global Tourism Industry

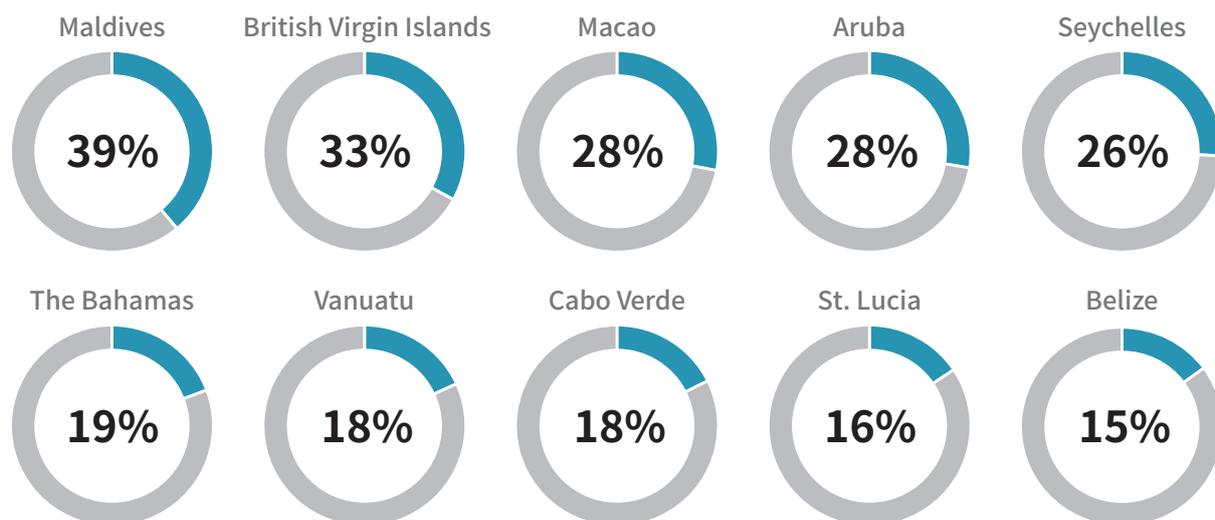
Tourism has been a major contributor to economic growth, accounting for an estimated 10.3 percent of global GDP and supporting one in 10 jobs in 2019.¹⁵ International arrivals reached nearly 1.5 billion in 2019, a 3.6 percent increase from the year before, and prior to the pandemic were projected to grow by an average of 4 percent annually over the next decade (UNWTO 2020c). The sector is a significant global export industry, valued at \$1.4 trillion, or one-fourth of all trade in commercial services in 2019. While mature destinations such as the United States and European countries lead the word in travel exports, tourism is a leading economic sector for least developed countries (LDCs) (WTO 2020). Furthermore, SIDS in the Caribbean and South Pacific rank among the world’s most tourism-dependent economies, some with over 40 percent of GDP generated by tourism (WTTC 2019). See figure 3.

Figure 3 Direct Contribution of Tourism to GDP by Absolute Size and Percentage (2018)

Countries with largest contribution of tourism to GDP by absolute size (\$ billion)



Countries most reliant on tourism for GDP



Note: Color segment represents the percentage share of GDP in 2018 from tourism.

Source: World Bank using World Travel & Tourism Council data (from <https://tcddata360.worldbank.org/>).

15 See economic research from World Travel & Tourism Council at <https://wtcc.org/Research/Economic-Impact>.

The structure of the tourism sector is complex and fragmented, encompassing multiple subsectors involving diverse assets. The UNWTO defines the tourism industry as a grouping of 12 categories, covering products and activities related to hotels and accommodation, restaurants and bars, transport (air, rail, road, water), travel agencies, retail, and sports and cultural recreation, among others (United Nations 2008). Figure 4 summarizes this list of *tourism industries* along with each product or service's corresponding ISIC division.¹⁶ This report treats the tourism sector as a grouping of these categories.

Figure 4 List of Tourism Products and Services and Corresponding ISIC Divisions

1. Accommodation services for visitors	<ul style="list-style-type: none"> • 5510 Short-term accommodation activities • 5520 Camping grounds, recreational vehicle parks and trailer parks • 5590 Other accommodation • 6810 Real estate activities with own or leased property (related to second homes and timeshare properties) • 6820 Real estate activities on a fee or contract basis (related to second homes and timeshare properties)
2. Food and beverage serving services	<ul style="list-style-type: none"> • 5610 Restaurants and mobile food service activities • 5629 Other food service activities • 5630 Beverage serving activities
3. Railway passenger transport services	<ul style="list-style-type: none"> • 4911 Passenger rail transport, interurban
4. Road passenger transport services	<ul style="list-style-type: none"> • 4922 Other passenger land transport
5. Water passenger transport services	<ul style="list-style-type: none"> • 5011 Sea and coastal passenger water transport • 5021 Inland passenger water transport
6. Air passenger transport services	<ul style="list-style-type: none"> • 5110 Passenger air transport
7. Transport equipment rental services	<ul style="list-style-type: none"> • 7710 Renting and leasing of motor vehicles
8. Travel agencies and other reservation services	<ul style="list-style-type: none"> • 7911 Travel agency activities • 7912 Tour operator activities • 7990 Other reservation services and related activities
9. Cultural services and activities	<ul style="list-style-type: none"> • 9000 Creative, arts and entertainment activities • 9102 Museums activities and operation of historical sites and buildings • 9103 Botanical and zoological gardens and nature reserves activities
10. Sports and recreational services and activities	<ul style="list-style-type: none"> • 7721 Renting and leasing of recreational and sports goods • 9200 Gambling and betting activities • 9311 Operation of sports facilities • 9319 Other sports activities • 9321 Activities of amusement parks and theme parks • 9329 Other amusement and recreational activities not elsewhere classified
11. Country-specific tourism characteristic goods and their retail trade (note that these activities do not have 4-digit ISIC number)	<ul style="list-style-type: none"> • Duty free shops • Specialized retail trade of souvenirs • Specialized retail trade of handicrafts • Other specialized retail trade of tourism characteristic goods
12. Country-specific tourism characteristic services	<ul style="list-style-type: none"> • Other country-specific tourism characteristic services

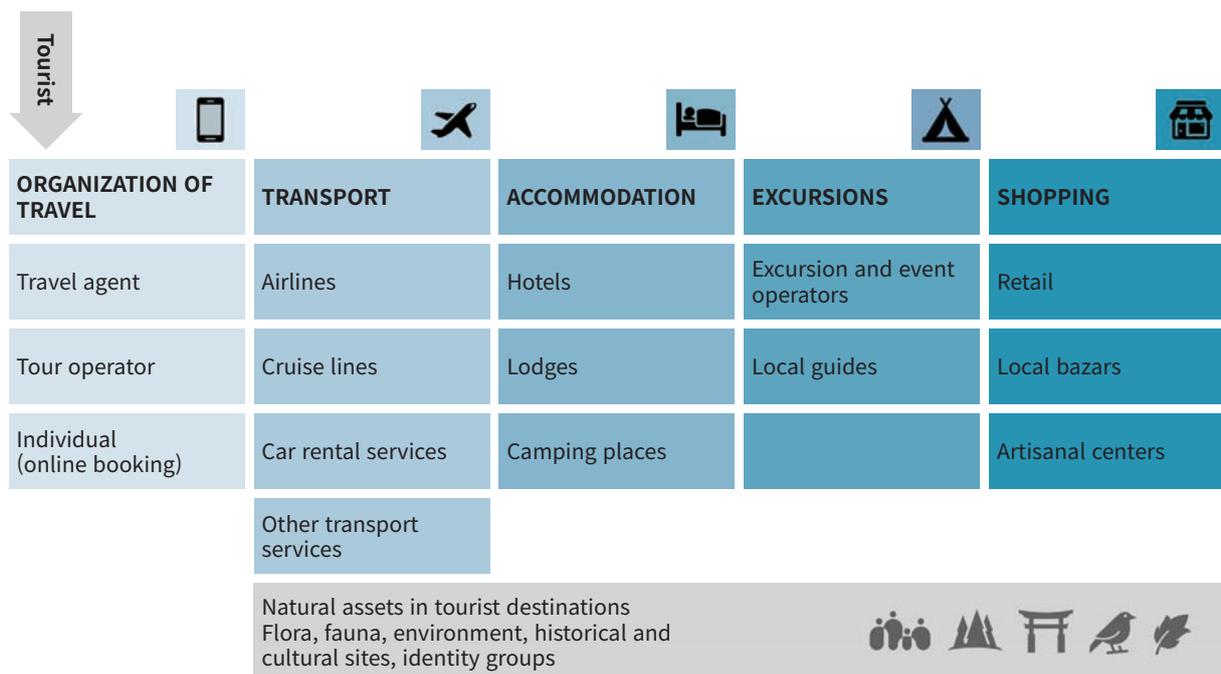
Source: United Nations 2008.

¹⁶ ISIC refers to the International Standard Industrial Classification of All Economic Activities, the international reference classification of productive activities. See the UN website at <https://unstats.un.org/unsd/classifications/Econ/isic>.

Tourism assets are vast, varied, and valuable. They comprise the physical infrastructure that enable these services and activities to operate as well as the natural environments that serve double duty as the physical asset base for tourism and as tourist attractions. Beaches, coastlines, coral reefs, national parks, mountains, forests, and other natural areas underpin billions of dollars in tourism revenues. Visits to the world’s protected areas are conservatively estimated to yield \$600 billion per year in direct expenditure (Balmford and others 2015).

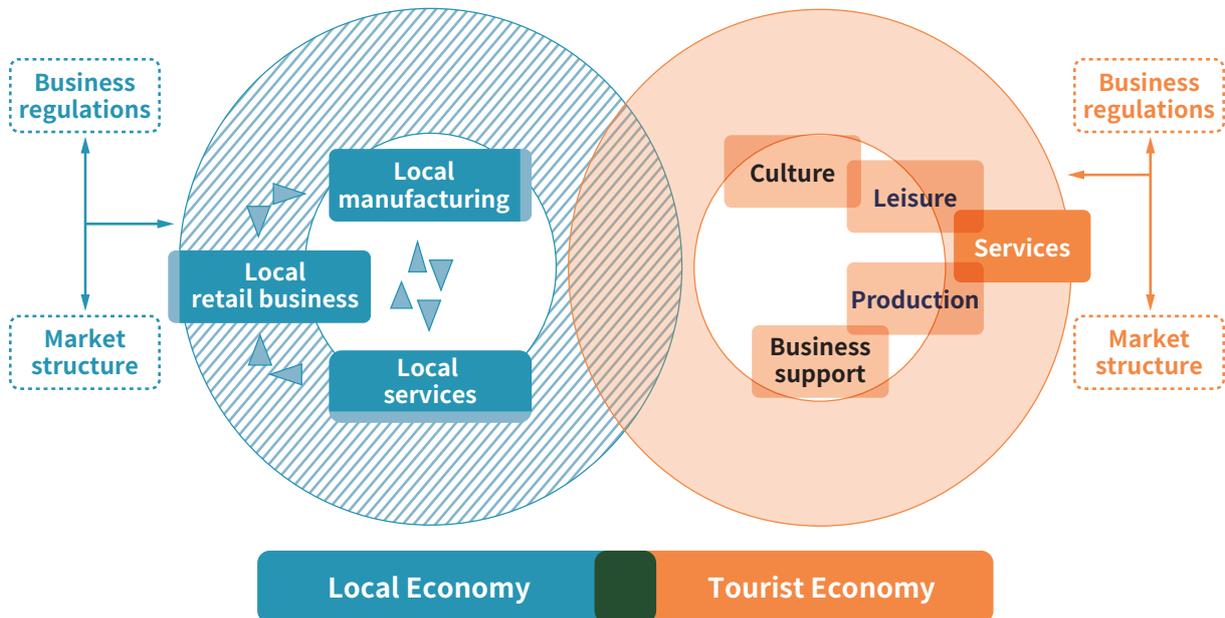
The tourism arena involves a complex interplay of multiple public, private, and civil sector actors at various points of the tourist experience. Figure 5 illustrates the interdependence of the components or subsectors of the tourism value chain (World Bank Group 2019). The globalization of tourism value chains, in which global and local firms are connected in their efforts to supply tourists’ needs (Staritz and Reis 2013), further exposes the sector to disasters and shocks originating in other parts of the world. When most countries suspended international flights during the COVID-19 pandemic, the ensuing crisis in the aviation subsector led to cascading effects along the rest of the value chain (OECD 2020). International coordination is essential, as many operations and decisions occur across national boundaries. This report considers the tourism system as a whole, consisting of national and local decision-makers and private sector players operating within and across international borders.

Figure 5 The Tourism Ecosystem - A Typical Tourist’s Points of Contact and Services



Source: World Bank Group 2019.

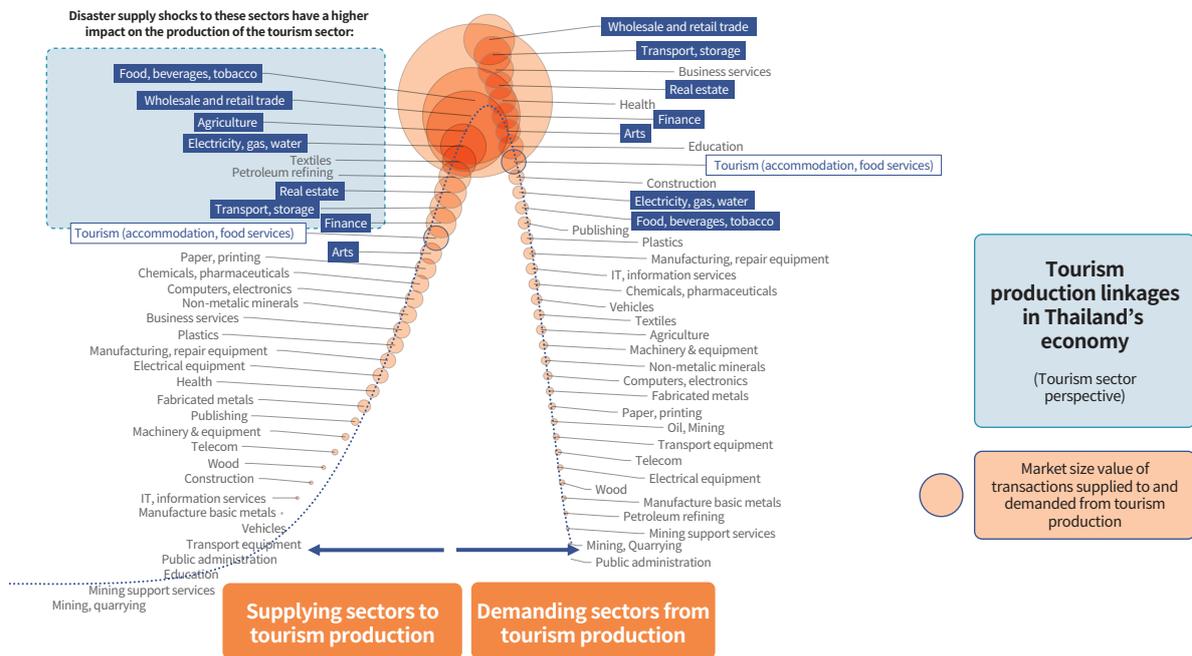
For a given destination, tourism economic activities may be closely linked to local economies and markets. For a limited period, unlike permanent residents, tourists enjoy benefits from both the economic activities, products, and services of local economies and from the infrastructure and services provided for tourists. Figure 6 shows how the local economy and the tourist economy connect to each other through trade market structures and business regulations. Various amounts of overlap occur between markets for local and tourist economies. These economies may be indistinguishable from each other or they may be separate.

Figure 6 Connections between Local and Tourist Economies

Source: Developed by World Bank.

The interlinkages between tourist and local markets mean that the tourism sector is vulnerable to disaster impacts on supply and demand chains. Tourism is often highly connected to multiple supply chains and markets because of its need for a range of inputs and labor skills (Zha 2019; Carvahlo 2014). This makes tourism vulnerable to disaster-related supply chain shocks, which reduce the resilience of the sector. As an example, figure 7 shows the interlinkages of Thailand's tourism sector. Disasters impact many markets within supply sectors, such as the food and beverage, and wholesale and retail trades which supply the country's tourism sector. When a disaster affects one of these sectors, it sets in motion a chain of knock-on effects that impact tourism, which can create further disruptions to demand in wholesale and retail trade; transport and storage; business services; real estate; finance; and other sectors (shown on the right side of figure 6). Through market linkages there is a sequence of aftermath impacts affecting tourism in Thailand's economy.

Figure 7 Sector Interlinkages in Thailand's Tourism Sector



Source: Developed by World Bank, using data from OECD 2015; SUT, Thailand.

Note: The most important supply sectors to Thailand's tourism sector are food, beverages, and tobacco; wholesale and retail trade; agriculture; electricity, gas, water; textiles; real estate; transport and storage; and finance.

The vulnerability and resilience of tourism enterprises are influenced by the market structures and business environments in which they operate. Potential issues within the broader or local economy, such as anti-competitive behavior or regulations, can strongly affect business performance recovery and resilience. Market structures can be competitive (e.g., with low barriers to entry, high rivalry between firms, variety of choices for consumers) or non-competitive (e.g., with few firms, high prices). Certain market dynamics and supply chain relations may need to be corrected rather than replicated post-disaster. For example, in markets characterized by anti-competitive behavior (e.g., abuse of dominance, price or quantity collusion), firms affected by this behavior (usually SMEs) have unequal market access and tend to be less profitable (World Bank Group 2018). Under the stress of disaster shocks, SMEs may find it difficult to survive while the unfair dominance of privileged firms or cartels is enhanced to the further detriment of vulnerable firms. Because the tourism ecosystem is typically represented by many SMEs, an environment free of discriminatory practices and that allows all sizes of firms to enter and compete is critical.

At the organization and individual level, tourism stakeholders are potential drivers of resilience through their actions and degrees of resilience. For example, the ability of a hotel, or several hotels, to resume operations after a disaster affects whether the destination is ready to receive tourists. The actions of individuals such as employers, employees, community members, and tourists in preparing for and responding to disasters (such as developing and practicing emergency evacuation plans) are also aspects of resilience. For these reasons, tourism disaster preparedness and response actions require a multi-stakeholder, multisectoral, and multi-level approach. The main stakeholder groups are described below, although overlaps are common (World Bank Group 2019):

- **Public sector:** National, regional, and local authorities, such as ministries or departments of tourism, and destination management organizations (DMOs). DMOs are typically public organizations which market and manage destinations, and may be called tourist boards, convention bureaus, or other terms. They may be funded by the public sector, private sector (such as through hotel and tourism taxes), or both.
- **Tourism industry:** Tourism businesses, industry associations, and tourism suppliers such as transport companies, catering and cleaning services, etc.
- **Communities:** People living in tourist destinations who may be tourism business owners, their employees, or those who do not work in the sector but are affected by tourism investment, revenues, and the presence of tourists themselves.
- **Tourists:** International and domestic visitors.
- **Development partners:** Agencies and nonprofit organizations that facilitate the development of tourism in emerging economies.
- **Financial sector:** Banks, investors, insurance companies, etc. that finance the tourism sector.

The multi-component, multisectoral nature of the tourism sector increases the challenge of collaborating on complex problems like disaster risk management. The public sector is responsible for tourism policy, planning, and regulation. It may develop and manage tourism-related public infrastructure such as ports and parks, but in other cases, these activities may fall to other agencies (e.g., ministries of transport, environment, etc.). The private sector develops tourism products such as hotels, attractions, tours, and activities, but governments may also play significant roles, including ownership of assets. Public and private sectors will often partner on destination marketing and promotion; however, these roles may be duplicated or uncoordinated. Compounding the challenge, disaster risk management and climate change adaptation normally fall under other ministries which may not be accustomed to working with tourism stakeholders. This raises the potential for conflicting policy goals, as tourism authorities strive to boost tourism volumes while climate change and environmental authorities may wish to contain growth.

Furthermore, tourism has unique characteristics that amplify its vulnerability to disaster and climate risks and make it difficult to prepare and respond. Key traits include:

- Tourism development tends to be concentrated in areas that are exposed to natural hazards, such as coastlines, islands, river valleys, and mountainous regions (UNWTO 1998). These areas often host large resident populations as well, heightening the potential for damage (Ritchie 2008).
- Climate is closely linked to tourism, which depends on climatic conditions such as snow for skiing and sunny weather for beaches. Shifts in weather and climate patterns have immediate and long-term effects on the sector.
- Tourism is largely private sector-driven but relies on public infrastructure and assets such as roads, airports, marinas, and the natural environment to perform; thus, it requires active coordination across public and private sectors and multiple agencies.
- The tourism product is a network of service providers (e.g., transportation, accommodation, tour operators, information and reservations, etc.) ideally cooperating within broader, often global supply chains in which the adaptation strategies of each contribute to the resilience of the overall system (Luthe, Wyss, and Schuckert 2012).
- Small and medium-sized enterprises (SMEs) generate at least 60 percent of tourism jobs in many countries (OECD 2010), and participate in global value chains, which raises their exposure to risk. However, they have limited capacity to invest in infrastructure and business continuity or contingency planning. Informal or loosely regulated businesses, such as the Airbnb-type home-sharing arrangements found in many tourist areas, are typically not part of local emergency and disaster management systems (Becken,

Montesalvo, and Whittlesea 2018). The informal enterprises commonly owned by artisans and vendors in the sector may not qualify for government subsidies for disaster preparedness and response.

- Fifty-four percent of people employed in global tourism and hospitality are women, with regional variations, such as in Africa, the Caribbean, and Latin America, where this proportion is higher (UNWTO 2019a). Women and other marginalized groups are more vulnerable to shocks as a result of gender norms that may prevent them from acquiring the capacity to adapt to and recover from crises (World Bank 2014).
- Tourism assets are typically location-specific and space-bound, and tourists “consume” products and services at locations that are not substitutable. If not consumed, these perishable goods and services, such as a hotel room or an airline ticket, lose their value. Location-specificity makes it difficult for stakeholders to relocate their assets to unaffected areas in cases of disaster or substitute other destinations. One exception is tour operators and travel agencies that may be able to revise itineraries depending on the availability of alternative destinations.
- Cultural heritage assets are vital to tourism, often fragile and unmovable, and exposed to disasters and climate-related damage (UNESCO 2016). An overlay of UNESCO World Heritage sites on the map of global earthquake hot spots shows that many are located near fault lines. Yet, it is not uncommon for cultural heritage properties to lack management and disaster risk reduction plans (UNESCO 2015).
- Destinations and tourism experiences are vulnerable to reputational risks that surpass the actual damage suffered by destinations and can prolong their recovery, if not countered effectively.
- Tourists are highly vulnerable to natural hazards, as they may be less familiar with the landscape, risks, and local languages, and may not receive important disaster information. Moreover, the willingness of tourists to visit areas that have suffered reputational or physical disaster damage is crucial to recovery but out of the control of tourism operators and destinations.

Disasters affect a destination or firm’s ability to attract and satisfy potential tourists – in other words, its competitiveness. Industry competitiveness is expressed as the ability to compete in national or international markets, and can be measured in terms of productivity, skills, job creation, reputation, net exports, investment flows and other factors that affect economic performance (Deloitte 2016; Kechichian and others 2016; UNIDO 2019; McKinsey & Company 2012) . Drivers of competitiveness are not only tourism-specific factors, such as location, climate, culture, attractions, prices, safety, and brand image, but also a wider range of business factors that influence firms supplying services at the destination. These drivers include infrastructure such as transportation services, communication systems, access to information, water and power supply, sanitation, and public facilities (Crouch and Ritchie 1999). Also critical to competitiveness are institutional factors, such as political stability, government policy, investment incentives, and overall economic conditions (Enright and Newton 2004). Disasters and climate change can threaten any or all of these conditions, with implications for a destination’s competitiveness.

1.3. Types of Natural Hazards and Impacts on the Tourism Industry

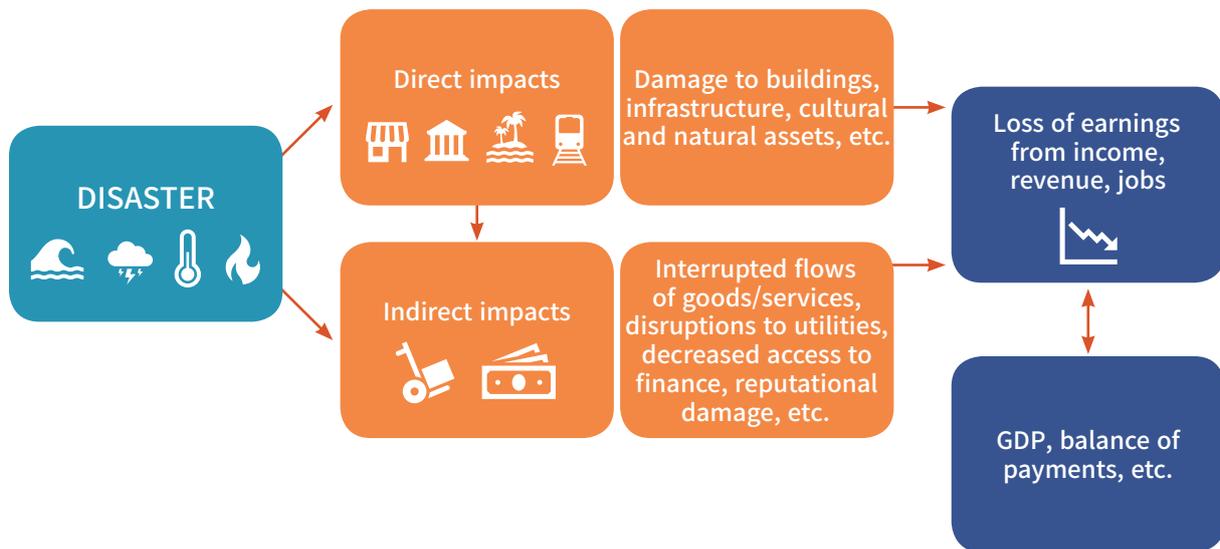
The *Resilient Tourism Industry Framework* considers direct and indirect impacts from disasters and climate change in two categories: damage to physical assets, and losses in capital, revenue, and jobs.

- **Damage to physical assets**, which are often translated into the costs of repair, rehabilitation, and reconstruction of:
 - Infrastructure (roads, bridges, ports, water supply, power supply, sanitation, etc.)
 - Buildings (hotels, resorts, retail, attractions, etc.)
 - Cultural assets (city centers, historical monuments and properties, etc.)
 - Natural assets (beaches, coral reefs, mountains, glaciers, forests, etc.).
- **Losses in capital, revenue, and jobs**, as a result of:
 - Interrupted production and consumption of tourism goods and services
 - Disruptions in utilities and services (water, power, sanitation, food, etc.)
 - Decreased access to finance due to lowered creditworthiness of firms
 - Increased operating costs
 - Reputational damage.

This report focuses on natural and climate-related hazards that threaten the competitiveness of the tourism sector. Examples of natural hazards that affect tourism include earthquakes, tropical cyclones, tsunamis, floods, landslides, wildfires, storm surges, and heat waves. Climate-related hazards are those that are triggered by an event or trend associated with climate change, such as warming temperatures, sea level rise, or ocean acidification. These events manifest as rapid-onset (or extreme weather events) and slow-onset events (UNFCCC 2011). Rapid-onset events are single and discrete, occurring in a matter of days or hours. While they would occur anyway, their frequency, severity, and/or location may be influenced by climate change. Slow-onset events, on the other hand, are caused by climate change and stem from incremental changes occurring over many years, or from increasing frequency or intensity of recurring events (UNFCCC 2012).

Rapid-onset, or extreme weather events, such as tropical storms, floods, and earthquakes, affect the profitability of the tourism industry both directly and indirectly (see figure 8). Direct impacts include losses from damage to infrastructure, buildings, and natural resources; losses in revenue from declines in tourism; and costs for repair and reconstruction. Governments also lose revenues from tourism taxes, entry fees, and other tourism-related inflows that may fund a country's tourism budget, natural resource management budget, or others.

Though less quantifiable, indirect impacts can be equally or more significant. Tourism operators may lose income from business interruptions due to physical and reputational damage. Simultaneously, they may experience higher disaster preparedness, response, and recovery costs (e.g., for insurance, evacuations, water and energy backup systems), causing them to seek financing. Under disaster conditions, however, finance may be unavailable, as emergencies can also weaken financial institutions and lead to firm closures, insurance industry losses, and halted loan repayments (Ye and Abe 2012). Losses and damage from disasters can total millions of dollars, span years, and accrue across public and private sectors, sometimes disproportionately (see box 2 for examples). However, there is little evidence that governments are tracking the direct and indirect costs of disasters to the tourism sector, or how they are distributed among stakeholders, including the tourism industry, the public sector, insurance companies, and tourists.

Figure 8 Direct and Indirect Impacts of Disasters on the Tourism Sector


Source: Adapted from United Nations 2014.

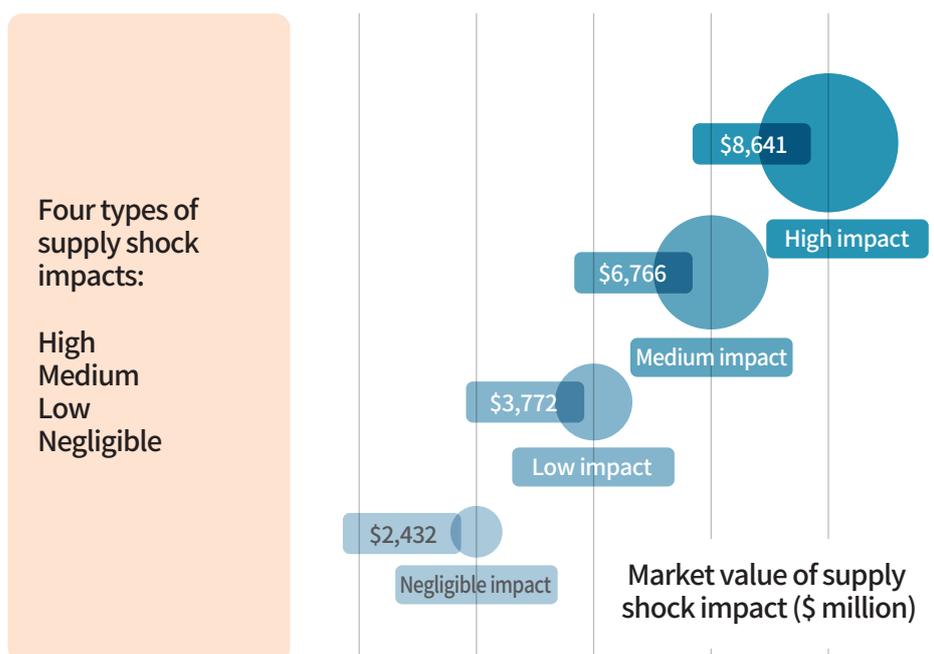
Box 2 Examples of Tourism Losses Caused by Disasters

- Hurricanes Maria and Irma struck a third of Caribbean destinations in September 2017; however, a public misperception of the extent of impact led to tourism declines even on unaffected islands. The World Travel & Tourism Council estimated that the hurricane season led to a loss of 826,100 visitors to the Caribbean in 2017, who would have generated \$741 million, compared to pre-hurricane visitor forecasts (WTTC 2018).
- On Dominica, in the wake of Hurricane Irma, a post-disaster needs assessment estimated damages of \$20 million to the tourism sector. The hotel subsector saw a substantial reduction in room stock as a result of infrastructure damage. Estimated losses from reduced cruise and non-cruise visits and visitor spending totaled \$71 million. In addition, Dominica's rainforest, its biggest tourist attraction, was destroyed (World Bank 2018).
- The Indian Ocean Tsunami of 2004 devastated countries in the region. In Sri Lanka, it was estimated that 25 percent of registered hotels were affected by the tsunami and half of the 105 medium-sized and large hotels were damaged. These numbers overlook the many informal, unregistered establishments that were affected (Jayasuriya, Steele, and Weerakoon 2006). The projected total tourism losses were placed at \$250 million (ADB, JICA, and World Bank 2005).
- In Thailand, widespread floods in 2011 caused Bangkok's domestic airport to close for months. Most of the \$3 billion of estimated tourism impact stemmed from losses in revenue from accommodation, transport, shopping, food and beverages, entertainment, and sightseeing, and was heavily concentrated in the private sector (World Bank 2012).
- On Vanuatu, in 2014, a post-disaster needs assessment following Cyclone Pam found that the tourism sector suffered 26 percent of total losses and 20 percent of total damage costs. Most major hotels closed for three to six months to assess and repair damage from wind and water (Government of Vanuatu 2014).
- The 2010 and 2011 earthquakes in Christchurch, New Zealand caused significant infrastructure losses and damage to a destination where tourism is an important component of the services economy. The central business district, key attractions, sports stadiums, swimming pools, tourism infrastructure, and conference centers were all damaged, with negative effects on visitor experience. Tourist accommodation capacity dropped 43 percent (Herrschnner and Honey 2017). Five years after the earthquakes, inbound tourism had not recovered to pre-disaster levels, largely because of reduced accommodation capacity and the unreplaced convention center (Orchiston and Espiner 2017).
- Nepal's 2015 Gorkha earthquake had disastrous impacts on tourism flows and triggered numerous hazards, such as avalanches and landslides over the following months that further depressed tourism. Compared to the previous year, visitor arrivals dropped by 70 percent in the months after the earthquake (van Strien 2018).
- In April 2010, Iceland's Eyjafjallajökull volcanic eruption and resulting ash cloud led to the cancellation of 104,000 flights (a decline of 48 percent) over eight days; these flights would have carried 10 million passengers (Eurocontrol 2010). One estimate placed the loss in visitor spending at \$1.6 billion (Oxford Economics 2010).

Tourism sectors may be also affected by disaster impacts along their supply chains.

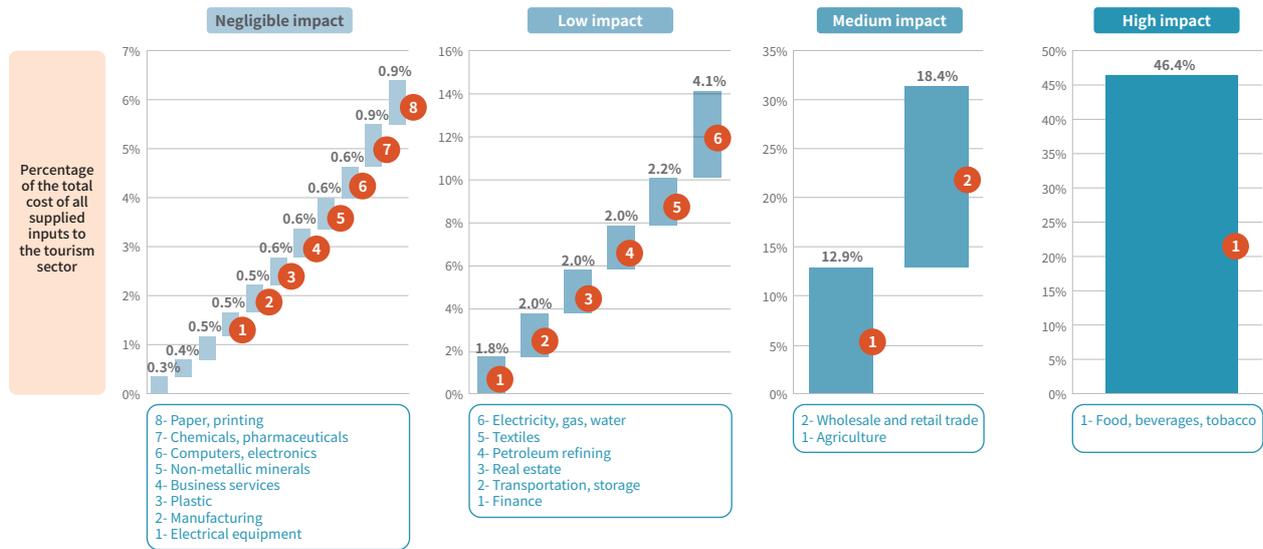
An industry that concentrates its supply requirements in a single sector is likely to be more vulnerable to disaster shocks affecting suppliers (Acemoglu and others 2012). As an example, figures 9 and 10 illustrate that, in Thailand's tourism sector, the food, beverages, and tobacco industries represent 46 percent of all supply inputs to the tourism sector in terms of cost. If a disaster affected the food and beverage industry by damaging a factory, for example, it would have a larger impact on the tourism sector than damage in a less closely related sector, e.g., paper and chemicals. These figures also illustrate the economic value of these supply chains to tourism and the potential multiplication of losses that can occur. After a disaster, if the market structure of the food-supplying sector is dominated by a small number of firms, then this market structure itself would jeopardize food supply to hotels in the tourism sector. This jeopardy may take many forms, e.g., input-supply may not be guaranteed in time; alternative or substitute suppliers may be absent; and remaining providers may leverage their market power through higher prices, collusive agreements, quality reduction, refusals to deal, and mergers. To make matters worse, poorly regulated disaster responses may widen the gaps between market dominant firms and smaller firms. SMEs in the tourism sector may be unable to survive or bargain effectively with input food-suppliers, and thus may suffer the same fate as SMEs in the food sector. It is also important to note that if tourism is highly impacted, then downstream firms in the supply chain would also be impacted.

Figure 9 Supply Shock Impact Types for Thailand's Tourism Sector



Source: Developed by World Bank.

Figure 10 Supply Composition of Different Impact Types on Thailand’s Tourism Sector



Source: Developed by World Bank.

These disaster events can also lead to losses in tourism employment and workforce.

In New Orleans, nearly 23,000 tourism jobs were lost in the ten months following Hurricane Katrina, marking the largest impact among all sectors in the city. These losses were tied to the destruction of the city’s infrastructure, loss of places of employment, and the housing damage and public health crisis that forced many residents to leave New Orleans indefinitely (Dolfman, Wasser, and Bergman 2007). The damage to Sri Lanka’s tourist accommodation and other facilities after the 2004 Indian Ocean Tsunami led to an estimated 14,000 job losses (ADB, JICA, and World Bank 2005). Within tourism, this loss of employment affects women disproportionately. In the United States, because of their high representation in the service sector, women suffered more job losses from COVID-19 than men, with the heaviest losses in leisure and hospitality (IWPR 2020).

These impacts on the tourism sector affect the larger economy. Emerging market and developing economies¹⁷ (EMDEs) that are heavily reliant on tourism revenues are more susceptible to knock-on effects from major economies. As a result, the World Bank predicts that these EMDEs will contract more severely as a result of COVID-19 (World Bank 2020a). Recovery times can vary greatly. The WTTC found that, for nearly two dozen natural disasters, tourism recovery¹⁸ averaged 16 months, although the range was from one month to 93 months (WTTC and Global Rescue 2019). In its research on the impacts of disasters on trade in six countries, the World Trade Organization (WTO) found that tourism sector recovery was slowed by sustained power outages, restricted access to credit, and slow insurance payouts (2019).

Slow-onset events adversely affect the tourism sector through the deterioration of environmental assets and threats to tourism infrastructure. Warming temperatures, sea level rise, ocean acidification, biodiversity loss, land and forest degradation, glacial retreat, and desertification are changing many destinations (UNWTO 2011). The IPCC asserts that global warming has already affected tourism, with increased risks in certain locations, and

17 According to the World Bank’s country classifications, emerging market and developing economies include countries such as Brazil, China, India, Turkey, and South Africa.

18 Tourism recovery is measured by the WTTC study as the duration of the drop in international arrivals and spending from the beginning of the crisis until arrivals return to previous levels.

changes in areas offering activity-specific conditions such as snow (2007). Water shortages, coastal erosion, altered agricultural production (e.g., wine tourism), and increasing incidences of vector-borne diseases are all potential impacts. Mountain, island and coastal destinations, and nature-based tourism are especially vulnerable to slow-onset events, as shifting climate conditions are expected to alter the suitability of destinations for a wide range of tourist activities (UNWTO 2011). The tourism industry is only beginning to quantify these risks, and research gaps remain, including how tourist behaviors will be influenced by long-term climate change. Box 3 highlights implications of slow-onset events for the tourism sector.

Box 3 Slow-Onset Events and Impacts on Tourism

Higher temperatures are expected to alter tourism patterns. Some destinations will experience more hot days or more intense and frequent precipitation that may reduce their attractiveness to tourists. Conversely, other destinations may benefit from warmer temperatures that extend their favored seasons (UNWTO 2011). An econometric analysis of the relationship between regional tourism demand and climate conditions (specifically, average temperature, precipitation, humidity, and wind speed) predicted that a two-degree warming would reduce European tourism by 5 percent or €15 billion a year (Ciscar and others 2014). The United States ski industry, with revenues of \$2.9 billion a year, is estimated to have lost \$1.07 billion in aggregated revenue between November 1999 and April 2010 as a result of 15 million fewer visits due to increases in temperature and decreases in snowfall (Bebb 2015; Burakowski and Magnusson 2012).

Sea-level rise threatens tourism infrastructure in low-lying and coastal areas. In the tourism-dependent Caribbean, one study forecasts that a 1.0-meter sea-level rise would partially or fully inundate 29 percent of 900 coastal resorts in 19 countries. Up to 60 percent of resorts would be vulnerable to associated coastal erosion (Scott and Verkoeyen 2017). Another analysis found that 99.9 percent of sandy beaches and 84.5 percent of tourism infrastructure in Tangiers, Morocco could be lost under a scenario of a 0.86-meter sea-level rise by 2100 (Snoussi, Ouchani, and Niazi 2008).

Climate change will reduce the viability of tourism as it drives biodiversity loss and degradation of natural assets such as protected areas. Coral reef systems, for example, support tourism revenues for over 100 countries and territories. One study estimated that 30 percent of the world's reefs are collectively valued at \$36 billion for the tourism sector, through indirect benefits such as provision of sandy beaches, and direct benefits from diving and snorkeling (Spalding and others 2017). Mass coral bleaching caused by rising water temperatures associated with climate change has intensified in recent years, affecting nearly three-quarters of UNESCO-listed World Heritage reefs, including the Great Barrier Reef in Australia (UNDP 2018). The IPCC estimates that a 1.5°C increase in temperature will kill 80 percent of the world's reefs (2018). Interestingly, there is evidence that public awareness of these threats has led to "last chance tourism," in which tourists visit sites such as the Great Barrier Reef and Antarctica before they are substantially degraded by climate change (Piggott-McKellar and McNamara 2017).

Because tourism itself significantly contributes to climate change, these impacts cannot be divorced from the global growth of the sector (see box 4). While this document focuses on resilience and adaptation, plans and actions for low-carbon, even regenerative tourism, in which the sector rebuilds natural and social capital, are imperative for reducing tourism's climate impacts and supporting its long-term competitiveness.

Box 4 Tourism's Contribution to Climate Change

The tourism sector contributed an estimated 8 percent of global greenhouse gas emissions in 2013, mainly from transport, food, and retail. Research indicates that tourism is highly carbon-intensive and that demand for travel, particularly in high-income countries and regions experiencing rapid economic growth, outstrips consumption of other products and services. Moreover, decarbonization of tourism operations is not keeping pace with the growth of global tourism demand (Lenzen and others 2018). Air transport is highly concerning because international aviation is not included in most countries' Nationally Determined Contributions (NDCs) under the Paris Climate Agreement. The UNWTO predicts that transport-related emissions from tourism will grow from 5 to 5.3 percent of all emissions by 2030, driven by more air transport in both international and domestic tourism (2019b).

References

- Acemoglu, Daron, Vasco M. Carvalho, Asuman Ozdaglar, and Alireza Tahbaz-Salehi. 2012. "The Network Origins of Aggregate Fluctuations." *Econometrica* 80 (5).
- Altizer, Sonia, Richard S. Ostfeld, Pieter T.J. Johnson, Susan Kutz, and C. Drew Harvell. 2013. "Climate Change and Infectious Diseases: From Evidence to a Predictive Framework." *science* 341 (6145): 514-519.
- Asian Development Bank, Japan Bank for International Cooperation, and World Bank. 2005. *Sri Lanka 2005 Post-Tsunami Recovery Program: Preliminary Damage and Needs Assessment*. Manila: Asian Development Bank.
- Balmford, Andrew, Jonathan M.H. Green, Michael Anderson, James Beresford, Charles Huang, Robin Naidoo, Matt Walpole, and Andrea Manica. 2015. "Walk on The Wild Side: Estimating the Global Magnitude of Visits to Protected Areas." *PLoS Biol* 13 (2). <https://doi.org/10.1371/journal.pbio.1002074>.
- Bebb, Donna. 2015. "Climate Exposure Impact on Equity Valuation: Case Study of Vail Resorts, Inc." Stanford: Steyer-Taylor Center for Energy Policy and Finance.
- Becken, Susanne, N. Montesalvo, and E. Whittlesea. 2018. "Building a Resilient Tourism Industry: Queensland Tourism Climate Change Response Plan." Brisbane: State of Queensland.
- Burakowski, Elizabeth, and Matthew Magnusson. (2012). "Climate Impacts on the Winter Tourism Economy in the United States." New York: Natural Resources Defense Council.
- Carvahlo, Vasco. 2014. "From Micro to Macro via Production Networks." *Journal of Economic Perspectives* 28 (4).
- Ciscar, Juan-Carlos, Luc Feyen, Antonio Soria, Carlo Lavallo, Frank Raes, Miles Perry, Françoise Nemry et al. 2014. "Climate Impacts in Europe – The JRC PESETA II project." *JRC Scientific and Political Reports* EUR 26586EN. Seville: Joint Research Centre of the European Commission.
- CRED (Centre for Research on the Epidemiology of Disasters). 2015. *The Human Cost of Natural Disasters 2015: A Global Perspective*. Brussels: CRED.
- CRED (Centre for Research on the Epidemiology of Disasters). 2020. "CRED Crunch 58 - Disaster Year in Review (2019)." Brussels: CRED.
- Crouch, Geoffrey I., and J.R. Brent Ritchie. 1999. "Tourism, Competitiveness, and Societal Prosperity." *Journal of Business Research* 44 (3): 137-152.
- Deloitte. 2016. "2016 Global Manufacturing Competitiveness Index." London: Deloitte.
- Dolfman, Michael L., Solidelle F. Wasser, and Bruce Bergman. 2007. "The Effects of Hurricane Katrina on the New Orleans Economy." *Monthly Lab. Rev.* 130 (3).
- Enright, Michael J., and James Newton. 2004. "Tourism Destination Competitiveness: A Quantitative Approach." *Tourism Management* 25 (6): 777-788.
- Eurocontrol. 2010. "Impact of Volcanic Ash on Air Travel." Eurocontrol. https://www.eurocontrol.int/eec/public/standard_page/ETN_2010_2_ASH.html
- Government of Vanuatu. 2014. *Vanuatu Post-Disaster Needs Assessment – Tropical Cyclone Pam, March 2015*. Port Vila: Vanuatu Prime Minister's Office.
- Heron, Scott Fraser, Carlon Mark Eakin, Fanny Douvère, Kristen L. Anderson, Jon C. Day, Erick Geiger, Ove Hoegh-Guldberg et al. 2017. "Impacts of Climate Change on World Heritage Coral Reefs: A First Global Scientific Assessment." Paris: UNESCO World Heritage Centre.
- Herrschner, Irina, and Phoebe Honey. 2017. "Tourism and the Psychologically Resilient City." In *Tourism Resilience and Adaptation to Environmental Change: Definitions and Frameworks*, edited by Alan A. Lew and Joseph M. Cheer, 218-235. London and New York: Routledge.

- Institute for Women's Policy Research. 2020. "Quick Figures – April 2020."
- IPCC (Intergovernmental Panel on Climate Change). 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC.
- IPCC (Intergovernmental Panel on Climate Change). 2018. *Special Report: Global Warming of 1.5 Degree Celsius*. Geneva: IPCC.
- IUCN (International Union for Conservation of Nature).
- Jayasuriya, Sisira, Paul Steele, and Dushni Weerakoon. 2006. "Post-Tsunami Recovery: Issues and Challenges in Sri Lanka." *ADB Research Paper Series 71*. Tokyo: ADBI Publishing.
- Kechichian, Etienne Raffi, Alexios Pantelias, Ari Reeves, Guy Henley, and Jiemei Liu. 2016. "A Greener Path to Competitiveness: Policies for Climate Action in Industries and Products." Washington, DC: World Bank.
- Lenzen, Manfred, Ya-Yen Sun, Futu Faturay, Yuan-Peng Ting, Arne Geschke, and Arunima Malik. 2018. "The Carbon Footprint of Global Tourism." *Nature Climate Change* 8 (6): 522-528.
- Luthe, Tobias, Romano Wyss, and Markus Schuckert. 2012. "Network Governance and Regional Resilience to Climate Change: Empirical Evidence from Mountain Tourism Communities in the Swiss Gotthard Region." *Regional Environmental Change* 12 (4): 839-854.
- McKinsey & Company. 2012. "Manufacturing the Future: The Next Era of Global Growth and Innovation." <https://www.mckinsey.com/business-functions/operations/our-insights/the-future-of-manufacturing>.
- OECD (Organisation for Economic Co-operation and Development). 2010. *OECD Tourism Trends and Policies 2010*. Paris: OECD.
- OECD (Organisation for Economic Co-operation and Development). 2015. "Supply Use Tables, Input-Output – Thailand." Paris: OECD.
- OECD (Organisation for Economic Co-operation and Development). 2020. "Covid-19: Tourism Policy Responses Updated 25 March 2020." Paris: OECD.
- Orchiston, Caroline, and Espiner, Stephen. 2017. "Fast and Slow Resilience in the New Zealand Tourism Industry." In *Tourism Resilience and Adaptation to Environmental Change: Definitions and Frameworks*, edited by Alan A. Lew and Joseph M. Cheer, 250-266. London and New York: Routledge.
- Oxford Economics. 2010. "The Economic Impacts of Air Travel Restrictions Due to Volcanic Ash." Oxford: Oxford Economics.
- Piggott-McKellar, Annah E., and Karen E. McNamara. 2017. "Last Chance Tourism and the Great Barrier Reef." *Journal of Sustainable Tourism* 25 (3): 397-415.
- Quinn, Colm. 2020. "The Tourism Industry Is in Trouble. These Countries Will Suffer the Most." *Foreign Policy*, April 1, 2020. <https://foreignpolicy.com/2020/04/01/coronavirus-tourism-industry-worst-hit-countries-infographic/>
- Ritchie, Brent. 2008. "Tourism Disaster Planning and Management: From Response and Recovery to Reduction and Readiness." *Current Issues in Tourism* 11 (4): 315-348.
- Scott, Daniel, C. Michael Hall, and Stefan Gössling. 2019. "Global Tourism Vulnerability to Climate Change." *Annals of Tourism Research* 77 (July): 49-61.
- Scott, Daniel, and Stephanie Verkoeyen. 2017. "Assessing the Climate Change Risk of a Coastal-Island Destination." In *Global Climate Change and Coastal Tourism: Recognizing Problems, Managing Solutions and Future Expectations*, edited by Andrew L. Jones and Michael Phillips., 62-73. Wallingford, UK: CABI.
- Snoussi, Maria, Tachfine Ouchani, and Saïda Niazi. 2008. "Vulnerability Assessment of the Impact of Sea-Level Rise and Flooding on the Moroccan Coast: The Case of the Mediterranean Eastern Zone." *Estuarine, Coastal and Shelf Science* 77 (2): 206-213.

- Spalding, Mark, Laretta Burke, Spencer A. Wood, Joscelyne Ashpole, James Hutchison, and Philine Zu Ermgassen. 2017. "Mapping the Global Value and Distribution of Coral Reef Tourism." *Marine Policy* 82 (August): 104-113.
- Staritz, Cornelia, and José Guilherme Reis. 2013. "Global Value Chains, Economic Upgrading, and Gender: Case Studies of The Horticulture, Tourism, and Call Center Industries." Washington, DC: World Bank.
- UNDP (United Nations Development Programme). 2018. "To Protect Billion-Dollar Tourism Industry, Mauritius and Seychelles to Restore their Coral Reefs with New US\$10 Million Grant from Adaptation Fund." Press release, November 27, 2018.
- UNDRR (United Nations Office for Disaster Risk Reduction). 2015. *The Sendai Framework for Disaster Risk Reduction 2015-2030*. Geneva: UNDRR.
- UNDRR. (United Nations Office for Disaster Risk Reduction). 2020. *The Human Cost of Disasters: An Overview of the Last 20 Years (2000-2019)*. Geneva: UNDRR.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2015. "Fostering Resilience: Towards Reducing Disaster Risks to World Heritage." *World Heritage: Fostering Resilience* 74 (January). Paris: UNESCO.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2016. *World Heritage and Tourism in a Changing Climate*. Paris: UNESCO.
- UNFCCC (United Nations Framework Convention on Climate Change). 2011. "Report of the Conference of the Parties on its Sixteenth Session, held in Cancun from 29 November to 10 December 2010 – Addendum – Part Two: Action Taken by the Conference of the Parties at its Sixteenth Session." Geneva: UNFCCC.
- UNFCCC (United Nations Framework Convention on Climate Change). 2012. "Slow Onset Events – Technical Paper." Geneva: UNFCCC.
- UNIDO (United Nations Industrial Development Organization). 2013. *The Industrial Competitiveness of Nations Looking Back, Forging Ahead*. Vienna: UNIDO.
- United Nations. 2008. *International Standard Industrial Classification of All Economic Activities, Revision 4*. New York: United Nations.
- United Nations. 2014. "Tourism and Disaster Risk: A Contribution by the United Nations to the Consultation Leading to the Third UN World Conference on Disaster Risk Reduction."
- UNWTO (United Nations World Tourism Organization). 1998. *Handbook on Natural Disaster Reduction in Tourist Areas*. Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2011. *Fostering Innovation to Fight Climate Change – Public Report*. Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2019a. *Global Report on Women in Tourism, Second Edition*. Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2019b. *Transport-Related CO2 Emissions of the Tourism Sector – Modelling Results*. Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2019c. *UNWTO Tourism Definitions*. Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2020a. "Understanding Domestic Tourism and Seizing its Opportunities - UNWTO Briefing Note –Tourism and Covid-19, Issue 3 - September 2020." Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2020b. "World Tourism Barometer – Volume 18, Issue 2, May 2020." Madrid: UNWTO.
- UNWTO (United Nations World Tourism Organization). 2020c. "World Tourism Barometer and Statistical Annex, Update July 2020." Madrid: UNWTO.
- van Strien, Marjorie. 2018. "Tourism Business Response to Multiple Natural and Human-Induced Stressors in Nepal." In *The Tourism–Disaster–Conflict Nexus (Community, Environment and Disaster Risk Management, Vol. 19)*, edited by Andreas Neef and Jesse H. Grayman, 87-104. Bingley, UK: Emerald Publishing Limited.

- World Bank. 2012. *Thai Flood 2011: Rapid Assessment for Resilient Recovery and Reconstruction Planning (Vol. 2): Final Report (English)*. Washington, DC: World Bank.
- World Bank. 2014. *Turn Down the Heat: Confronting the New Climate Normal*. Washington, DC: World Bank.
- World Bank. 2018. *Dominica Post-Disaster Needs Assessment – Hurricane Maria – September 18, 2017*. Washington, DC: World Bank.
- World Bank. 2020a. *Global Economic Prospects, June 2020*. Washington, DC: World Bank. doi: 10.1596/978-1-4648-1553-9.
- World Bank. 2020b. *Resilient Industries: Competitiveness in the Face of Disasters*. Washington, DC: World Bank.
- World Bank. 2020c. *Resilient Industries in Japan: Lessons Learned in Japan on Enhancing Competitive Industries in the Face of Disasters Caused by Natural Hazards*. Washington, DC: World Bank.
- World Bank Group. 2018. *Promoting Competition in Local Markets in Mexico*. Washington, DC: World Bank.
- World Bank Group. 2019. *Tourism for Development: An Introduction to Tourism Diagnostics*. Washington, DC: World Bank Group.
- World Economic Forum. 2019. *The Travel & Tourism Competitiveness Report 2019: Travel and Tourism at a Tipping Point*. Geneva: World Economic Forum.
- World Travel & Tourism Council. 2018. “Caribbean Recovery.” London: World Travel & Tourism Council.
- World Travel & Tourism Council. 2019. “Caribbean 2019 Annual Research: Key Highlights.” London: World Travel & Tourism Council.
- World Travel & Tourism Council and Global Rescue. 2019. “Crisis Readiness: Are You Prepared and Resilient to Safeguard Your People & Destinations?” London: World Travel & Tourism Council.
- WTO (World Trade Organization). 2019. “Country Research on Natural Disasters and Trade – Summary.” Geneva: WTO.
- WTO (World Trade Organization). 2020. *World Trade Statistical Review 2020*. Geneva: WTO.
- Ye, Linghe, and Masato Abe. 2012. “The Impacts of Natural Disasters on Global Supply Chains.” *ARTNeT Working Paper Series* 115. Bangkok: Asia-Pacific Research and Training Network on Trade.
- Zha, Jianping, Yuhong Shao, and Zhiyong Li. 2019. “Linkage Analysis of Tourism-related Sectors in China: An Assessment Based on Network Analysis Technique.” *International Journal of Tourism Research* 21 (4).

2

The Resilient Tourism Industry

Integrating risk-informed actions and investments into tourism policy, planning, and management is key to staying competitive in the face of disasters and climate change.

These resilience-building actions support tourism sectors and firms by mitigating or avoiding disaster losses and damages; spurring development through innovation, investments, and planning; and generating co-benefits such as greenhouse gas mitigation for the wider environment and society.

2.1. Approaches to Resilient Tourism Industries

The *Resilient Industries Framework* defines industry resilience as the ability of firms, industry sectors, and industrial parks to increase competitiveness by minimizing losses and damages, and by achieving continuity and growth in the face of ever more frequent and intensifying disasters. A resilient tourism industry invests in:

- 1) Understanding disaster and climate risks
- 2) Planning and prioritizing strategies that enhance resilience
- 3) Preparing for shocks and mitigating impacts
- 4) Response and recovery actions
- 5) Addressing long-term climate impacts

These critical actions require that tourism stakeholders in government and industry take ownership of resilience through a sector-wide and collaborative approach. Stakeholders at every destination level need to proactively coordinate across agencies and subsectors to adopt resilience measures that help them to reduce their vulnerabilities to disaster, avoid or minimize losses or physical damage, safely welcome back tourists, and quickly resume operations – including shifting to new and better markets or business models. Tourism businesses and the broader private sector have powerful roles in resilience through employment creation and links to communities and value chains. Destinations and firms may still experience business interruptions, declines in tourist volumes, and jobs losses after a disaster, but resilience actions and investments can help minimize these effects and strengthen the capacity to “build back better.” Furthermore, by building back more competitive market structures, policy makers can alleviate uncompetitive environments in which disadvantaged firms are more vulnerable and less able to recover from disasters.

While this report focuses on specific actions that strengthen disaster and climate preparedness, response, and recovery, other indicators may demonstrate sectoral ability to withstand upheavals in general. These include diversified source markets, including robust domestic and regional tourism, and tourism products in which risk can be spread. These elements of business resilience are essential but outside of the scope of this document to cover in full.

Finally, a resilience mindset requires rethinking the conventional indicators of tourism industry performance. Tourism officials tend to measure a destination’s post-disaster recovery by the upward trend of tourist arrivals and spending. However, these metrics fail to capture a destination’s level of resilience and ability to prepare for and recover from the next disaster. Work is needed to develop indicators which capture the uptake of resilience – such as the proportion of public funds dedicated to tourism resilience, the presence of sectoral risk assessments, the number of firms with business continuity plans, and others.

2.2. Barriers to Resilient Tourism Industries

Tourism sectors face significant barriers to preparing for disaster and climate risks. Policy, infrastructure, and financial barriers, as well as cross-cutting barriers related to gender, all impede progress. An important task is to enable and incentivize the private sector, largely consisting of under-resourced SMEs, to implement resilience measures in advance.

Policy barriers

Within tourism, it is difficult to coordinate within and across layers, and between public and private sectors. Disaster risk management, including preparedness, response, and recovery, are complex undertakings that require continuous collaborative action. The fragmented nature of the sector makes collaboration difficult at local, state, provincial, national, and transnational levels. Despite tourism's importance to many developing economies, its development is often based within ministries with limited resources and/or influence, or ability to coordinate effectively (Mahon, Becken, and Rennie 2013). Tourism agencies do not typically view disaster management as one of their responsibilities. These factors inhibit the integration of tourism into national disaster management and curtail disaster management within the sector itself. Collaboration between tourism businesses and emergency response organizations has also been found to be lacking. Small firms in the tourism sector tend to assume that local authorities are responsible for emergency planning and that they themselves have no role (Hystad and Keller 2008).

The sector's awareness of disaster and climate risks, as well as of the benefits of resilience, is low. As a result, stakeholders respond inadequately to growing threats. National disaster risk assessments are critical to inform risk reduction measures; however, assessments of threats facing the tourism sector are lacking in both the public and private sectors. Due to their size and limited resources, tourism SMEs struggle to understand risks and prepare for disasters (Tsai and Chen 2011) and usually do not conduct disaster risk assessments or have business continuity plans (BCPs). Because BCPs are a relatively new concept in developing countries, governments have not widely supported their adoption (APEC 2014). The costs of preparing for disasters are considered prohibitive in light of limited financial resources, competing needs, and uncertainty about future disasters. Lack of economic and financial data make it difficult to assess the value of resilience investments to a firm's core business, or they may not be effectively communicated (Mahon, Becken, and Rennie 2013). For these reasons, research has shown that tourism businesses tend to be unprepared for disasters, and that approaches which rely on them to take responsibility for resilience planning are not effective (Hystad and Keller 2008).

Infrastructure barriers

Incentives for the private sector to invest in disaster preparedness and climate-resilient infrastructure are weak. Hotel owners and operators typically operate on 20- to 30-year ownership or management contracts and expect to make a profit within five to ten years; this disincentivizes them to invest in long-term resilience measures. Additionally, when tourists favor sensitive areas such as coastlines, operators are disinclined to relocate assets to less vulnerable areas or to otherwise change their products (Hystad and Keller 2008). Governments may be reluctant to develop structural mitigation measures or to modify land-use through urban planning due to costs, impact on tourism appeal, and space constraints (Nguyen, Fumihiko, and Iuchi 2016).

Financial barriers

Tourism businesses tend to be under-resourced SMEs with limited access to finance for resilience investments. Investing in resilience may mean diverting limited funds from

essential payments of salaries, taxes, and utilities. Accessing immediate post-disaster financing to respond to disasters and maintain business continuity is also a challenge. For example, as risks increase in a location, insurance premiums may rise, making it harder for small businesses to obtain coverage. Furthermore, tourism's complex mix of public, private, and community partners makes it difficult to allocate financial and other responsibilities for disaster response. Agreement on these responsibilities requires strong relationships backed by prearranged contingency mechanisms. Insurance and government assistance may also be restricted to only those businesses that have suffered physical damage, overlooking those that have been impacted in other ways, such as business interruptions (see box 5 for discussion on insurance). During catastrophic events such as COVID-19, insurance sectors may be weakened by unprecedented claims burdens and place restrictions on pandemic-related claims (WTTC 2020).

Box 5 Insurance Barriers for Tourism Operators and Consumers

Insurance is critical within the tourism industry to protect both operators and tourists. Businesses can buy disaster insurance policies to supplement standard business insurance. However, these policies are often designed to compensate only for physical damage and do not support recovery from business interruption. In the wake of floods and Cyclone Yasi in 2011, a survey of tourism businesses in Queensland, Australia found that while nearly all lost income and reduced staff, only 11 percent of them accessed disaster relief funding from state or federal governments. The main reason for this was that most businesses did not meet criteria for physical damage to their properties, making them ineligible for government support. While about half of the businesses were covered by insurance policies against floods or disasters, only those suffering physical damage (i.e., approximately one fifth) were able to lodge successful claims (Richardson and others 2014).

Business interruption insurance is a type of coverage that replaces part of a firm's lost revenue when it is forced to suspend operations as a result of a disaster. However, policies often stipulate that "direct physical damage" must force business closure to justify a claim. Following the SARS epidemic in Asia, insurers began excluding business interruptions caused by disease. With this precedent established, many businesses, including hotels and restaurants, are finding that insurers are refusing to pay for COVID-related business interruption claims. In the United States, 400 businesses to date have filed lawsuits against insurance companies over this matter. The U.S. insurance industry claims that, because of the scale of the pandemic, these payouts would cause them enormous losses – an estimated \$1 trillion a month. Policy makers and the insurance industry are demanding greater involvement from the U.S. government in providing relief to affected businesses (Walsh 2020).

For tourists, travel insurance covers cancellations and interruptions, for example, due to injury, illness, or medical emergencies at the destination. During the pandemic, however, the unprecedented number of cancellations led many travel insurance providers to restrict claims related to COVID-19, resulting in unrecovered costs for airline tickets and hotel rooms that went unused. Looking ahead, insurance coverage that protects against COVID-19 and similar epidemics/pandemics will be critical to boosting traveler confidence and sector recovery.

Gender

Gender is frequently overlooked as a cross-cutting factor in resilience. While progress has been made to mainstream gender into disaster risk management, many measures are not gender aware and fail to appreciate the contributions that women can make to resilience. Within tourism, women represent over half the global workforce, concentrated in lower-paid, less professional employment (UNWTO 2019). Throughout the world, gender inequality increases exposure and vulnerability to disaster and climate change risks. Studies show that women and children often suffer disproportionately during and after disasters (Aguilar 2009). Lower levels of skills, combined with household obligations and few opportunities to take up paid post-disaster reconstruction work, can prolong women's recovery. However, awareness of the tourism, gender, and disaster risk management nexus remains low.

In sum, a number of policy, infrastructure, financial, and social barriers affect the ability of tourism sectors to adequately prepare for disaster and climate risks.

References

- Aguilar, Lorena. 2009. "How Natural Disasters Affect Women." IUCN (International Union for Conservation of Nature), June 17, 2009. <https://www.iucn.org/content/how-natural-disasters-affect-women>.
- APEC (Asia-Pacific Economic Cooperation). 2014. "How to Promote Business Continuity Planning to Mitigate the Impact of Disasters: A Guide for Government Officials." Singapore: APEC.
- Hystad, Perry W. and Peter C. Keller. 2008. "Towards a Destination Tourism Disaster Management Framework: Long-Term Lessons from a Forest Fire Disaster." *Tourism Management* 29 (1): 151-162.
- Mahon, Roché, Susanne Becken, and Hamish Rennie. 2013. "Evaluating the Business Case for Investment in the Resilience of the Tourism Sector of Small Island Developing States. A Background Paper Contributing to the Global Assessment Report on Disaster Risk Reduction (GAR) 2013." *LEaP Research* 32. Christchurch: Lincoln University.
- Nguyen, David, Fumihiko Imamura, and Kanako Iuchi. 2016. "Disaster Management in Coastal Tourism Destinations: The Case for Transactive Planning and Social Learning." *International Review for Spatial Planning and Sustainable Development* 4 (2): 3-17.
- Richardson, Scott, Roger March, Jan Lewis, and Kylie Radel. 2014. "Analysing the Impact of the 2011 Natural Disasters on the Central Queensland Tourism Industry." In *Tourism Crisis and Disaster in the Asia-Pacific*, edited by Brent W. Richie and Kom Campiranon, 149-160.
- Tsai, Chung-Hung, and Cheng-Wu Chen. 2011. "The Establishment of a Rapid Natural Disaster Risk Assessment Model for the Tourism Industry." *Tourism Management* 32 (1): 158-171.
- UNWTO (United Nations World Tourism Organization). 2019. *Global Report on Women in Tourism, Second Edition*. Madrid: UNWTO.
- Walsh, Mary Williams. 2020. "Businesses Thought They Were Covered for the Pandemic. Insurers Say No." *New York Times*, August 5, 2020. <https://www.nytimes.com/2020/08/05/business/business-interruption-insurance-pandemic.html>.
- World Travel & Tourism Council. 2020. "Global Protocols for the New Normal – Insurance." London: World Travel & Tourism Council.

3

Resilient Tourism Framework

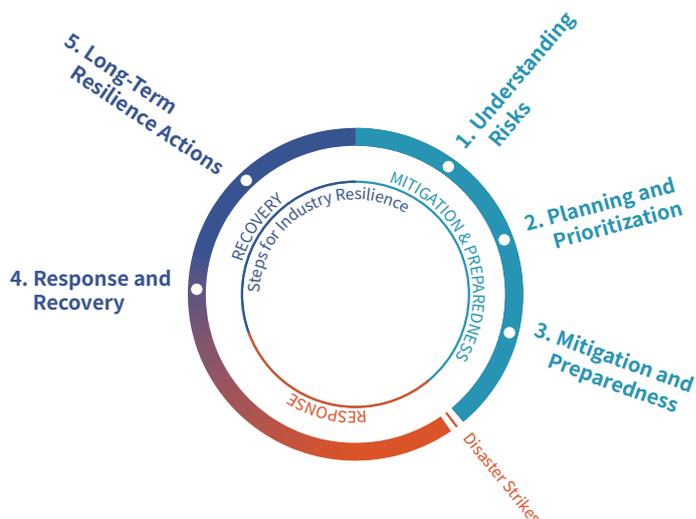
3.1. Priorities and Approaches

A Resilient Tourism Framework is proposed to guide governments, firms, and industry associations to integrate resilience into tourism development. Following the priorities set by the Sendai Framework and the World Bank’s Resilient Industries Framework, it captures the following categories of measures to minimize losses and disruptions and enable stronger recovery (see figure 11):

- *Understanding Risks:* Identifying disaster and climate risks that threaten the tourism sector and analyzing their potential impacts for destinations and firms.
- *Planning and Prioritization:* Planning and prioritizing tourism development and investments to build resilience and avoid or minimize negative impacts, at the destination and firm levels.
- *Mitigation and Preparedness:* Implementing resilience measures in advance to lessen the impact of shocks and help destinations and firms recover. These can be structural (e.g., infrastructure design and construction) and nonstructural (e.g., prearranged agreements for coordination, communications, disaster risk financing, etc.).
- *Response and Recovery:* Taking good response decisions and actions during and after disaster events to minimize disruptions and losses, and as a result, maintain and enhance competitiveness
- *Long-term Resilience Actions:* Planning for the long-term sustainability of the sector through climate change mitigation actions

These actions can confer resilience, strengthen competitiveness, and stimulate innovation, investment, costs savings, and reputation. They also create co-benefits for the wider environment, such as mitigating pollution and greenhouse gas emissions, and contributing to the resilience of communities within a destination (World Bank 2020).

Figure 11 Tourism Resilience Building Cycle



1. Understanding Risks

Identifying disaster and climate risks that threaten the tourism sector and analyzing their potential impacts for destinations and firms.

2. Planning and Prioritization

Planning and prioritizing tourism development and investments to build resilience and avoid or minimize negative impacts.

3. Mitigation and Preparedness

Implementing resilience actions and investments in advance to lessen the impacts of disasters and climate change.

4. Response and Recovery

Taking good response decisions and actions during and after disaster events to minimize disruptions and losses, and as a result, maintain and enhance competitiveness.

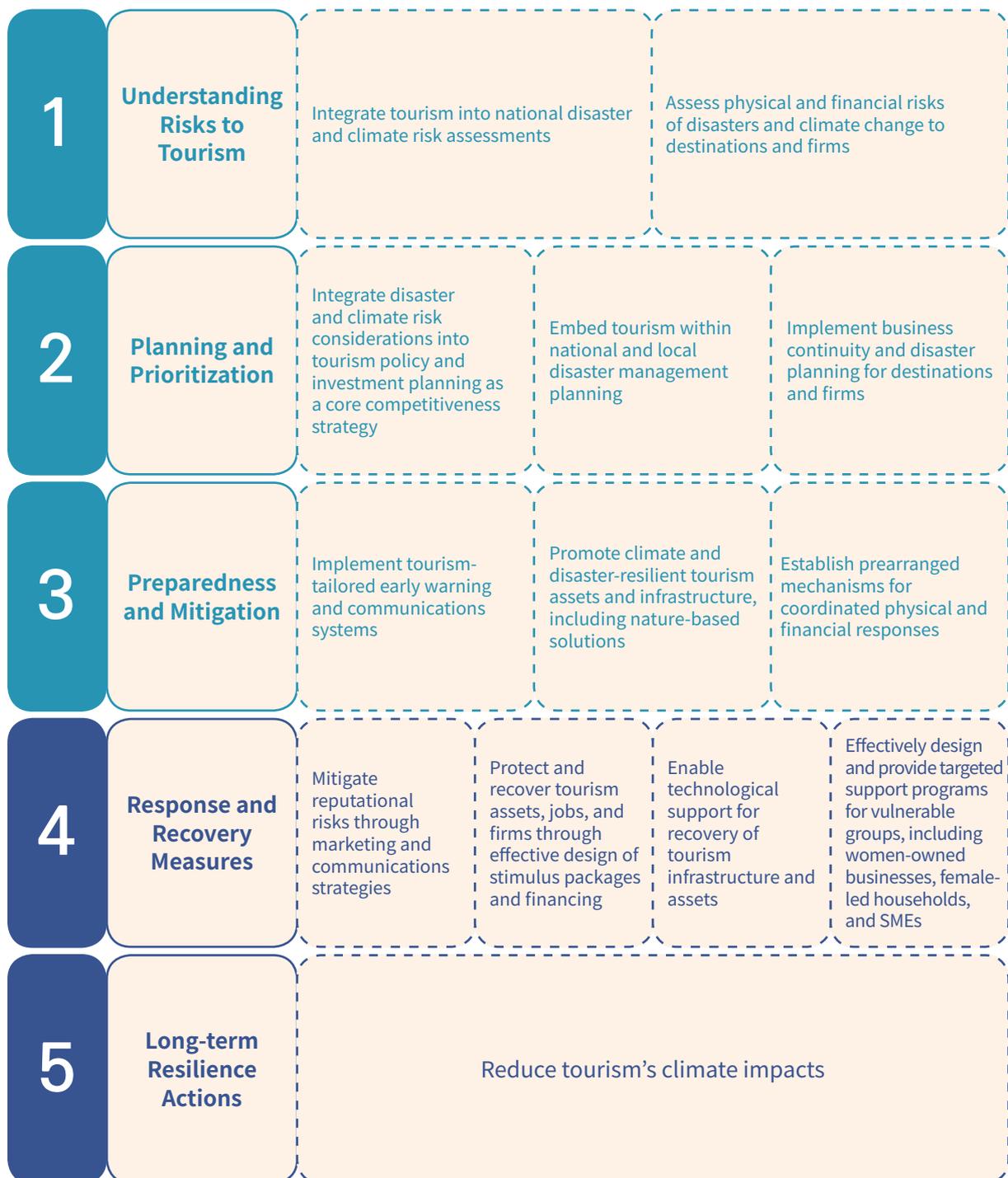
5. Long-Term Resilience Actions

Planning for the long-term competitiveness of the sector through climate change mitigation actions.

Source: Adapted from World Bank 2020.

Though the field of tourism resilience is nascent and new measures are emerging, established actions have been introduced by governments, businesses, development agencies, and other stakeholders. At the World Bank, a growing number of projects are addressing tourism resilience through different entry points (see box 6). The proposed Resilient Tourism Framework (in figure 12) captures key resilience actions and investments, supported with cases of their implementation across a range of destinations. Where questions and gaps remain, these are flagged.

Figure 12 Resilient Tourism Framework



Source: Developed by World Bank.

Resilience requires commitment and engagement from all stakeholders. Table 1 depicts the main stakeholders that can play a role in each measure.

Table 1 Stakeholder Roles in the Resilient Tourism Framework

Measures	Public Sector (national)	Public Sector (regional and local, including DMOs)	Tourism Industry	Communities	Tourists	Development Partners	Financial Institutions
1. Understanding Risks to Tourism							
Integrate tourism into national disaster and climate risk assessments	Lead	X				X	
Assess physical and financial risks of disasters and climate change to destinations and firms	Lead	Lead	X				X
2. Planning and Prioritization							
Integrate disaster and climate risk considerations into tourism policy and investment planning as a core competitiveness strategy	Lead	Lead	X				
Embed tourism within national and local disaster management planning	Lead	Lead	X	X	X		
Implement business continuity and disaster planning for destinations and firms	Lead	Lead	X	X	X	X	X
3. Preparedness and Mitigation							
Implement tourism-tailored early warning and communications systems	Lead	Lead	X	X	X		
Promote climate and disaster-resilient tourism assets and infrastructure, including nature-based solutions	Lead	Lead	Lead			X	X
Establish prearranged mechanisms for coordinated physical and financial responses	Lead	Lead	X	X	X		
4. Response and Recovery Measures							
Mitigate reputational risks through communication and marketing strategies	Lead	Lead	X				
Protect and recover tourism assets, jobs, and firms through stimulus packages	Lead	Lead					X
Enable technological support for recovery of tourism infrastructure and assets	Lead	Lead	X				X
Provide targeted support programs for vulnerable groups, including women-owned businesses, self-employed or informal workers, and SMEs	Lead	Lead					X
5. Long-Term Resilience Actions							
Reduce climate impacts	X	X	X	X	X	X	X

Source: Developed by World Bank.

Box 6 Resilient Tourism Projects at the World Bank

The World Bank is increasingly addressing resilience to climate change and disasters in the tourism sector. An increasing number of projects focus on disaster recovery and resilience, and emphasize rehabilitation, structural risk reduction, and adaptation. In addition, there is a need to develop long-term policies and frameworks to improve resilience, which this knowledge publication aims to support.

Tourism operations are implemented by multiple Global Practices (GPs) at the World Bank, reflecting the diversity of entry points to tourism development. These GPs include Finance, Competitiveness and Innovation (FCI); Environment, Natural Resources and Blue Economy (ENB); Transport; and Urban, Resilience and Land (URL). The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership managed by the World Bank to support disaster risk management projects, including on cultural heritage and tourism resilience with the URL GP. Examples of approaches to enhance disaster resilience within the tourism industry can be found in the following projects:

- Andhra Pradesh Disaster Recovery Project (2015–2020) (URL GP)
- Cusco Regional Development Project (2014–2019) (URL GP)
- St. Maarten Tourism Sector Recovery Strategy Support (2018–2020) (FCI GP)
- Senegal Tourism and Enterprise Development Project (2017–2022) (FCI GP)
- Resilient Cultural Heritage and Tourism Technical Assistance (various countries and dates including: Bhutan, China, Myanmar, Nepal) (GFDRR and URL GP)
- Timor-Leste Branch Roads Project (2019–2025) (Transport GP)

Projects may aim to build resilience in sectors relevant to tourism, though the connection may not be explicitly stated. For example, the Transport GP produced a report in 2015, *Disaster Risk Management in the Transport Sector*, that discussed mainstreaming resilience in transport projects important for tourism (World Bank 2015). Additionally, mainstreaming resilience into water supply, sanitation, and infrastructure will have indirect benefits for the tourism sector.

3.1.1. Understanding Risks to Tourism

As the tourism industry grows in many countries and the frequency of disasters increase, stakeholders need to understand the risks facing the sector.

RECOMMENDED MEASURES

Integrate tourism into national disaster and climate risk assessments

Assess physical and financial risks of disasters and climate change to tourism destinations and firms

1. Integrate tourism into national disaster and climate risk assessments

Disaster and climate risk assessments conducted at the national level must integrate tourism considerations. Risk assessments follow an internationally recognized approach that combines three elements: hazard, exposure, and vulnerability. They can range from qualitative national risk profiles to quantitative assessments of risk, and use various tools, models, and data sources such as natural hazard risk maps.¹⁹ When tourism assets and stakeholders are considered, governments can better understand the range of disaster and

¹⁹ For more information, see PreventionWeb at <https://www.preventionweb.net/risk/disaster-risk>.

climate risks that threaten the sector. Integrating climate change scenarios and adaptation into risk assessments can further enhance understanding of compounded risks, particularly over the long term. If done collaboratively, involving key stakeholders from national hotel, tour operator, and other industry associations, risk assessments can provide a platform to engage the private sector, raise their awareness, and prompt preparedness actions (UNDRR 2017b). For example, a World Bank advisory project assisted Bulgaria to develop its National Climate Change Adaptation and Strategy Plan, informed by detailed climate change risk assessments of nine economic sectors, including tourism. It identified the key risks to tourism as a shorter winter season, which is critical for its ski industry, lower numbers of tourists, water shortages, and degraded conditions for outdoor recreation, among other threats (World Bank 2018).

2. Assess physical and financial risks of disasters and climate change to tourism

Destinations and firms can conduct tourism-specific risk assessments to understand the disaster and climate risks that threaten the sector. These can yield more comprehensive analyses of the risk environments likely to affect current and future tourism development. They can also identify vulnerable assets within tourism supply chains, such as low-lying airports, coral reefs, and coastal communities. Translating physical risks into potential financial impacts to destinations and firms remains difficult but is important, as it enables the sector to quantify threats to its competitiveness. Results from assessments can inform climate- and disaster-resilient tourism policy and planning. Policy makers or firms, for instance, can use this information to prioritize investments in less risky locations (e.g., inland sites versus coastlines) or tourism segments (e.g., hiking versus skiing) and to implement visitor safety measures in vulnerable areas. Robust data on tourist volumes, movements, and trends in supply and demand are critical for strengthening these assessments, particularly in developing countries where such information is often limited. Finally, risk analyses should be shared with relevant stakeholders to raise awareness.

Recent work in Thailand by the national Office of Natural Resources and Environmental Policy and Planning (ONEP) in partnership with Germany's development agency, GIZ provides an example of a climate change risk assessment developed specifically for the country's tourism sector (see box 7). The Caribbean also developed a regional disaster risk management strategy and hazard mapping standards for tourism stakeholders (see box 8).

Box 7 Climate Change Risk Assessment for Thailand's Tourism Sector

Tourism has been identified by Thailand's government as a priority sector for implementing climate change adaptation. ONEP and GIZ's assessment followed a six-step framework that assessed hazards, vulnerability, and exposure within the context of Thailand's tourism sector; it also considered wider socio-economic trends, infrastructure, and land-use planning. The framework covered:

1. Analysis of the tourism system, including socio-economic trends
2. Climate hazards, including trends and projected changes
3. Tourism risks, including an historical review of disasters
4. Suggested risk metrics for tourism
5. Future climate risks for tourism - considering evidence to select priorities for adaptation planning
6. Policy recommendations - translating findings into policy, partnerships, and other instruments

The assessment involved diverse stakeholders, including the following:

- Ministry of Tourism and Sports
- Department of Tourism
- Office of Natural Resources and Environmental Policy and Planning
- Tourism Council of Thailand
- Tourism Authority of Thailand
- Designated Areas for Sustainable Tourism Administration
- Private sector associations (travel agents, tour guides)
- Research and academia

The climate risk assessment identified risks from flooding, higher temperatures, drought, and sea level rise, which would affect tourism assets and infrastructure, and visitor and community safety, comfort, and well-being. A follow-up report identified entry points in Thailand's tourism planning structures at which climate risks and actions can be integrated.

Source: Becken and others 2019.

Box 8 Regional Disaster Risk Management for Sustainable Tourism in the Caribbean Project

The Caribbean, a highly tourism-dependent and hazard-prone region, implemented the Regional Disaster Risk Management for Sustainable Tourism in the Caribbean Project between 2007–2010. Funded by the Inter-American Development Bank and led by the Caribbean Disaster Emergency Management Agency (CDEMA) with the Caribbean Tourism Organization and other partners, the initiative targeted national disaster offices, national tourism organizations, and regional bureaus of standards. The project established a regional disaster risk management strategy and action plan for the sector, as well as standards for hazard mapping and vulnerability assessments. These documents supported the Comprehensive Disaster Management Framework for the region and the Caribbean Regional Sustainable Tourism Policy.

Source: CDEMA 2009.

Firms can conduct their own risk and resilience assessments to gauge the impacts of hazards on their operations and better inform planning (see box 9 for an example of an adaptable tourism resilience index). The Hotel Resilient Initiative was conceived to increase the resilience of hotels to climate and disaster risks by moving from reactive crisis management to proactive risk management. It was launched in 2013 by GIZ within the framework of the Global Initiative on Disaster Risk Management (GIDRM) in partnership with the UNDRR and the Pacific Asia Travel Association (PATA).

One of the outcomes of the Hotel Resilient Initiative has been the *Standards on Disaster Risk Management for Hotels and Resorts*, a multi-hazard framework for auditing risks to and resilience of hotels (Khazai and others 2018). The framework led to the development of a *Hotel Resilient Standards* document, and the establishment of the Hotel Resilient Institute. The global standards address 250 compliance guidelines within three categories (see figure 13). Detailed descriptions can be found in the abovementioned report, *Standards on Disaster Risk Management for Hotels and Resorts*.

Figure 13 Components of the Standards on Disaster Risk Management for Hotels and Resorts

BUILDINGS		SYSTEMS		MANAGEMENT	
B1	General	S1	Fire Protection	M1	Roles and Responsibilities
B2	Site	S2	Hazard Protection	M2	Training and Drills
B3	Grounds	S3	Critical Infrastructure	M3	Disaster Prep and Response
B4	Design	S4	Evacuation	M4	Evacuation Plan
B5	Structure	S5	Information and Communication	M5	Communication Plan
B6	Information and Communication	S6	Emergency Supply	M6	Business Continuity Plan

Source: Khazai and others 2018.

Members of the Hotel Resilient Association can access tools and technology to conduct resilience assessments of their properties and to apply for certification. These tools analyze multi-hazard risks, future climate scenarios, site conditions, and property vulnerability, and offer steps to improve resilience. On completing the self-assessment, hotels can view their resilience scores; and, if they qualify for the Hotel Resilient Certification, can then use it to demonstrate their disaster preparedness and resilience to potential customers, tour operators, insurers, and financial institutions. To receive certification, properties also submit documents which are reviewed by accredited assessors and undergo site audits. Those properties that meet mandatory criteria and receive a Resilience Score of at least 80 percent may be awarded one of several levels of certification, renewable annually through the same process.²⁰

Hotel Resilient is a promising standard that can be applied to other subsectors. Because the initiative is still in the pilot stage, evidence for how certification has benefited members' hotels is not yet available. Following the COVID-19 pandemic the Hotel Resilient Institute launched a COVID-READY standards model consisting of 50 steps relevant for a hotel's pandemic response strategy, and is partnering with Thailand's Phuket Hotels Association to endorse COVID-READY among its members as part of their reopening strategies.

Box 9 Tourism Resilience Index

The Tourism Resilience Index (TRI) is a simple and inexpensive self-assessment tool for tourism businesses and stakeholders. It helps users to assess whether they are prepared to maintain operations during and after disasters. Developed by the Mississippi-Alabama Sea Grant Consortium in the United States, the checklists cover yes/no questions related to elements of disaster preparedness planning, marketing, workforce, and engagement with local authorities. A resilience score helps respondents understand actions needed to address vulnerabilities and enhance resilience.

Source: Swann and others 2015.

3.1.2. Planning and Prioritization

Resilience needs to be part of all decision-making. Following risk identification, planning and prioritization of resilience actions and investments should proceed as part of core strategies to enhance tourism competitiveness.

20 See the Hotel Resilient website for more information: <https://hotelresilient.org/certification/#steps>.

RECOMMENDED MEASURES

Integrate disaster and climate risks into tourism policy and investment planning as a core competitiveness strategy

Embed tourism within national and local disaster management planning

Implement business continuity and disaster planning for destinations and firms

1. Integrate disaster and climate risks into tourism policy and investment planning as a core competitiveness strategy

Disaster and climate risk information should guide actions, investments, and planning in the tourism sector, such as:

- Developing and financing tourism projects by type, geographical location, infrastructure, and other considerations. For example, the risks of tropical cyclones and storm surges increase when natural barriers are removed for coastal tourism development to provide tourists with direct waterfront access. Information about these risks and their potential impacts on tourism assets can be used to persuade stakeholders to mitigate or avoid future damaging construction.
- Improving environmental management of natural assets such as reefs and forests that can protect against hazards and serve as tourism attractions. At least a dozen countries, for instance, link tourism to environmental protection through “green” tourism taxes that raise money for conservation. Palau’s \$100 Pristine Paradise Environmental Fee, levied on tourists, is considered an example of a transparent and effective system (von Saltza 2019).
- Investing in capacity building for vulnerable tourism stakeholders, such as SMEs, women, and residents, to prepare for and respond to disasters.

In Australia, Queensland’s tourism sector has adopted an industry-led climate change and resilience response plan, which lays out priorities to build business resilience and reduce tourism’s climate impacts. Under Queensland’s Climate Adaptation Strategy, tourism is a sector for which action plans are to be developed. A 2018 report from the nonprofit Climate Council warned that Australia’s top five natural tourist attractions (beaches, wildlife, the Great Barrier Reef, wilderness, and national parks) could be affected by climate change impacts – extreme heatwaves, increasing temperatures, rising sea-levels, coastal flooding, and coral bleaching. Notably, the tourism industry is both the most vulnerable to and least prepared for these risks (Hughes and others 2018). To increase the resilience of the tourism private sector, the Department of Environment collaborated with the Queensland Tourism Industry Council on a climate response plan. The process raised awareness of climate risks and expected impacts on the tourism sector, developed a vision for the sector (see figure 14), and set forth an action plan. It also flagged ways for the public sector to support tourism businesses to pursue these goals, such as improving insurance access for small firms, following lessons learned from Cyclone Yasi in 2011 (Becken, Montesalvo, and Whittlesea 2018).

Figure 14 Building Blocks for Tourism Resilience in Queensland, Australia

Source: Becken and others 2018.

The private sector can also use risk information to implement measures that protect their operations and cut operational costs while reducing climate impacts. In the case of accommodation, hotels can use drought and water availability projections to inform infrastructure updates and water conservation investments such as rainwater capture, gray water reuse, and leak detection (International Tourism Partnership and IFC 2020). Such resilience actions can strengthen sector competitiveness by stimulating innovation, investment, and other benefits, and create co-benefits for the wider environment (World Bank 2020).

2. Embed tourism within national and local disaster management planning

Tourism needs to be integrated into national and local disaster management planning.

The sector is largely missing from national-level disaster management plans, and planning at all levels of government may be done without the participation of the tourism sector. Disaster management planning should consider the presence of tourists (which ebbs and flows seasonally, and can increase the local population by thousands), link businesses and attractions to emergency communications systems using real-time information, and prepare to use tourism assets such as hotels as evacuation shelters for tourists and residents when necessary. The tourism sector, represented by DMOs and industry associations, can also develop their own disaster preparedness and response plans, which can be integrated by local emergency authorities into their planning (see box 10 for an example).

Box 10 Phuket Tourism Risk Management Strategy 2007–2012

The Phuket Tourism Risk Management Strategy encompassed a range of actions including public-private partnerships and integration of tourism disaster management into national planning. The 2004 Indian Ocean Tsunami devastated Thailand, including the island and province of Phuket, which as one of the most important tourism destinations in the country, was unprepared for the disaster. Much of Phuket's tourism infrastructure was coastal, and the lack of risk awareness led to the preventable deaths of both residents and tourists, negatively affecting its image as a safe destination. Tourist arrivals declined precipitously and were slow to recover, causing business closures and job losses (Gurtner 2006).

To improve the preparedness and resilience of Phuket's tourism industry, government officials, tourism industry officials, civil society, and the media formed a multi-stakeholder group, chaired by the provincial governor, to develop the Phuket Tourism Risk Management Strategy 2007–2012. It aimed to mitigate risks from floods, typhoons/cyclones, storms, earthquakes, and tsunamis, and to protect tourists through improved infrastructure and communications. Through a series of workshops, stakeholders discussed operational arrangements and implementation strategies, including a tourism crisis management plan, a media coordination and communications plan, and construction of an Emergency Operations Center. Importantly, the strategy was integrated into national plans for tourism, development, and disaster management (ADPC 2010; UNEP and CAST 2008). The government also formulated regulations requiring future developments to be set back from the foreshore and protected with natural barriers, eliciting pushback from the private sector (Gurtner 2007).

The Okinawa Tourism Crisis Management Initiative is a good example of prefectural-level tourism disaster planning. In 2011, the Great East Japan Earthquake and tsunami claimed 20,000 lives and caused an estimated \$210 billion in economic damage. Media coverage conveyed the impression that all of Japan was unvisitable, despite the damage being limited to a certain area. While the government went to great lengths to communicate Japan's safety for tourists, the aftermath showed that most destinations in Japan were unprepared to manage the crisis or to communicate their progress (Takamatsu 2011). Though the region of Okinawa was not directly affected by the earthquake, it spurred public authorities into action. Okinawa is prone to paralyzing typhoons each year and there is a risk of a major tsunami in the next several decades. Tourism is the region's main economic engine. Yet 50 percent of municipalities in Okinawa did not have a crisis management plan or evacuation manual for visitors, and less than half of hotels had a tsunami evacuation plan. The government launched a three-year, \$500,000 project to reduce disaster risks for tourism. It partnered with a tourism consulting firm on the Tourism Crisis Management Initiative, which developed the Okinawa Tourism Crisis Management Plan and Action Plan, the first of its kind for a prefectural government in Japan. At the local level, municipalities developed tourism crisis management plans or added specific measures to existing plans to protect tourists and tourism businesses. Evacuation maps and elevation signage were produced for major destinations, and informational signs and handbooks created for tourists. Tourism businesses were included in workshops and supported to develop crisis management manuals and other business continuity plans. This initiative promoted cooperation between the public and private sectors and between government agencies (UNDRR 2017a; Takamatsu 2014).

Planning and prioritization of resilience measures needs to be gender-aware and informed by the different needs of men, women, and other vulnerable groups within tourism. Gender-blind or gender-neutral measures may overlook women or even worsen disaster impacts or prolong women's recovery. In many developing countries, women are disproportionately affected by disaster impacts on the tourism sector due to their high representation in tourism jobs and in informal sectors that rely on tourism. In the Caribbean region, for example, women tend to work in hotels and are more likely to lose their jobs if

hotels close following disasters. They are also less likely to be employed in post-disaster reconstruction jobs or receive other types of support. From 2013 to 2018, the project “Enhancing Knowledge and Application of Comprehensive Disaster Management” supported the implementation of the Caribbean Community’s (CARICOM) Comprehensive Disaster Management (CDM) Strategy and Framework 2014–2024. One of the Strategy’s cross-cutting themes was the integration of gender issues into CDM. As part of the project, implemented by the University of the West Indies in Jamaica, a training manual was developed to guide policy makers to mainstream gender into disaster risk management for tourism. The manual includes modules on conducting gender analyses, checklists for integrating gender sensitivities into each phase of the disaster management life cycle, training workshop exercises, case studies, and guidelines for collecting gender-disaggregated data. It asks participants to analyze the distribution of men and women in tourism employment and to consider how these differences may affect their experiences of disasters, along with the gender implications for safety, security, and livelihood risks (The University of the West Indies 2018). Practical solutions such as this are starting to emerge and can easily be scaled up and replicated across destinations.

3. Implement business continuity and disaster planning for destinations and firms

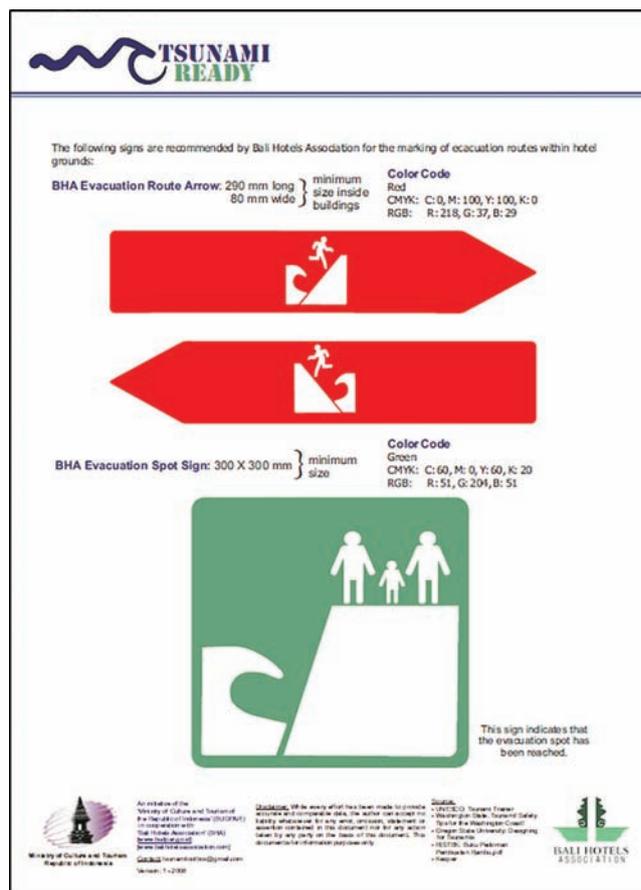
Emergency preparedness and response (EP&R) plans and business continuity plans (BCPs) can enhance resilience for destinations and firms. EP&R and BCPs are new concepts within the tourism sector, in which a lack of crisis management plans is apparent across organizations and subsectors including hotels and tour operators (Ritchie and Jiang 2019). The objective of EP&R plans is to help stakeholders plan for disasters, and they can be implemented at destination (sector-wide) and individual firm levels. BCPs identify a firm’s critical operations, the potential effects of disasters, and the response and recovery measures needed to avoid or minimize disruptions and continue priority operations (Ranghieri and Ishiwatari 2014). BCPs can help tourism firms maintain key operations after a disaster, which in turn reduces supply chain disruptions and job losses in the broader destination. Through this planning, firms can become aware of their most critical supply chains, such as food, beverages, water, energy, etc., and how they could be impacted by a disaster or climate change, and take measures to protect their resilience, such as diversifying suppliers and making prearranged agreements. Because small businesses are often unaware of BCPs or lack the capacity or resources to undertake them, governments should encourage and support their adoption. EP&R and BCP plans can be combined to streamline planning processes and reduce the burden of adoption on stakeholders.²¹

An added responsibility for stakeholders is that they must plan for the protection, evacuation, and sheltering of tourists. Within a destination these stakeholders include destination management organizations, emergency agencies, and owners and managers at hotels and attractions. Shelters and evacuation routes for tourists and residents need to be determined and developed, keeping in mind seasonal tourist fluctuations and distribution patterns. One initiative to encourage proactive disaster planning within the hotel sector is Indonesia’s Tsunami Ready Hotel Certification. Indonesia is highly prone to frequent earthquakes and tsunamis and has at least 150 active volcanoes. Because tsunami early warning systems provide very little time to respond, and dissemination of official tsunami information is a challenge, response procedures need to be in place and rapidly activated. The

21 For more information on EP&R and BCP plans, see the World Bank report *Resilient Industries in Japan: Lessons Learned in Japan on Enhancing Competitive Industries in the Face of Disasters Caused by Natural Hazards* (2020).

Ministry of Culture and Tourism and the Bali Hotels Association jointly created the certification after the 2004 Indian Ocean Tsunami. A toolbox is available in English and Bahasa Indonesia to guide hotels on tsunami preparation and evacuation planning (see figure 15). Hotels are now encouraged to coordinate with local communities and provide tsunami warnings and emergency shelter for community members as needed. Hotels that have applied the principles and passed an onsite audit can be certified and marketed as “Tsunami Ready” (BUDPAR 2008). About 20 hotels in Bali have been certified (Aquino 2019) and the certification has since been adopted by other destinations, including some in the Caribbean.

Figure 15 Evacuation Signage from the Tsunami-Ready Toolbox



Source: BUDPAR 2008.

Policy makers should be careful to plan BCPs and promote prearranged agreements for the tourism sector in a way that maintains competitive market structures and does not create or perpetuate unfair practices that protect the interests of certain types of firms. Opportunities for BCPs and other resilience measures, if not carefully planned, could benefit large, dominant, or politically connected firms at the expense of smaller and more vulnerable firms. For more discussion, see the World Bank report, *Resilient Industries: Competitiveness in the Face of Disasters* (2020).

3.1.3. Mitigation and Preparedness

Resilience measures, both structural and non-structural, can be implemented according to established plans and strategies to prepare for shocks and mitigate their impacts.

RECOMMENDED
MEASURES

Implement tourism-tailored early warning and communication systems

Promote climate and disaster-resilient tourism assets and infrastructure, including nature-based solutions

Establish prearranged mechanisms for coordinated physical and financial responses

1. Implement tourism-tailored early warning and communications systems

Multiple information and communications systems are vital for disaster preparation and response. Early warning systems providing risk information are critical, and this information must reach tourists in their home languages. Weather forecasting services play a role in both disaster resilience and economic efficiency gains. For example, in the Caribbean, as described below, weather forecasts are used to formulate marketing campaigns in targeted tourism markets as well as for local tourism planning (WTO 2019).

Climate early warning systems for the tourism sector can support both operational planning and disaster preparedness. This is illustrated by Samoa, which benefited from a Global Environment Facility (GEF) project to enhance the resilience of tourism-dependent communities following the 2009 tsunami which devastated community-owned beach operations and hundreds of their suppliers (UNDP 2011). Tourism operators are also impacted by prolonged periods of drought, associated with the El Niño climate phenomenon, that require water rationing and conservation activities. While Samoa has a Climate Early Warning System (CLEWS), awareness and uptake of information by tourism operators for strategic planning and mitigation actions was low. The Samoa Tourism Authority partnered with the National Institute of Water and Atmospheric Research to develop a suite of sectoral information tools derived from CLEWS for tourism planners and operators. They included a water conservation alert, drought risk indicator, monthly seasonal forecasts, weather and climate brochures for tourists, and a monitoring and evaluation framework (Williams and others 2016). In the Caribbean the quarterly Caribbean Tourism Climatic Bulletin communicates three-to-six-month climate forecasts, and their implications, to regional tourism businesses and policy makers. The bulletins are made available through a partnership between the Caribbean Institute for Meteorology and Hydrology and representatives of climate-sensitive sectors in the Caribbean, including tourism (Mahon and others 2018). Along with regional climate and weather forecasts to improve business operations and preparation, the bulletins also provide information on conditions in tourist source markets to enhance marketing efforts.

Communicating disaster risks and information to tourists is the responsibility of the tourism sector. This information needs to be understandable, multilingual, and actionable (e.g., a typhoon warning should say what to expect, how much time there is to act, and what to do). The Japan Tourism Agency developed a push-enabled app called “Safety Tips” to provide disaster and weather updates, and information on disaster risk, response, and evacuation.²² Such systems, however, require that tourists download the app and enable push notifications, presenting a barrier to their use.

22 For more information, visit Japan Tourism Agency’s Safety Tips website at <https://www.jnto.go.jp/safety-tips/eng/app.html>.

Innovative emergency warning systems that overcome such barriers are appearing.

These are critical because public emergency warning systems may be inadequate for reaching tourists for a number of reasons:

- a) sirens may not be available in rural areas frequented by tourists, and/or their significance may be mistaken;
- b) tourists may not understand the local languages;
- c) tourists are less likely to use local media such as television and radio where alerts are broadcast;
- d) alerts may be broadcasted only to local mobile subscribers or those who opt in, which overlooks the tourist population.

New technologies such as location-based SMS warning systems provide public alerts more effectively to residents and tourists. Iceland introduced such a system in 2019. In the case of disasters such as volcanic eruptions, tsunamis, and blizzards, authorities can issue SMS warnings to all cell phones roaming on the country's networks and communicate with tourists in their own language by identifying their country of origin through SIM card numbers. The system also allows "geofencing" or targeted alerts to those who enter or leave a determined area. Finally, it counts the people in a disaster-affected area, helping authorities to gauge their response efforts. Singapore, Sweden, and other countries have also introduced this technology (EENA 2019).

2. Promote climate and disaster-resilient tourism assets and infrastructure, including nature-based solutions

Integrating disaster and climate resilience into new and existing tourism infrastructure can reduce risks in both the immediate and long term, and protect investments. Infrastructure such as roads, airports, hotels, and cultural sites can be enhanced to better withstand floods, erosion, earthquakes, extreme temperatures, and other hazards. Natural assets that serve as barriers against hazards can be strengthened; these nature-based solutions may also be tourist attractions.

Multiple World Bank projects aim to improve the resilience of tourism infrastructure in order to build more competitive tourism sectors. The Timor-Leste Branch Roads Project (2019–2025) addresses the small island nation's poor roads that are frequently subject to disasters and climate-related hazards such as cyclones, monsoon rains, floods, landslides, and earthquakes. The government has identified tourism as a priority economic sector which has potential to grow due to the country's natural and cultural attractions. However, the sector's prospects are constrained by the road network, which impedes mobility, limits tourism gains, and raises transit costs. By improving the resilience and coverage of the road network, the \$65.8 million project aims to improve access to the key tourist destination of Mount Ramelau, develop ecotourism along the improved roads, and enhance women's mobility and safety. Forty-four kilometers of roads will be upgraded, and upgrades will incorporate climate resilient design features such as slope stabilization and improved drainage (World Bank 2019b).

The World Bank is also partnering with the GFDRR to strengthen cultural heritage assets which underpin cultural tourism in many countries. Japan's rich cultural heritage, for instance, is exposed to hazards such as earthquakes, volcanic eruptions, tsunamis, typhoons, floods, landslides, and fire. As a result, the country has developed a culture of continuous improvement in the face of hazard events, including in the management of its cultural heritage. The government has invested in communication and collaboration, supported explicitly

through budgets and incentives, to connect public actors at different levels before a disaster occurs. Authorities also show cultural assets on hazard maps and develop methods for users to understand and prepare for risks. Structural measures such as reinforcements increase the resilience of historic buildings to earthquakes and other hazards (GFDRR and World Bank 2019).

The retention and protection of coral reefs, coastal wetlands, and forests offers natural protection against hazards, which form the basis for nature-based solutions. In many places, integrating conventional “gray” infrastructure, such as dams and seawalls, with “green” infrastructure (e.g., mangroves) can potentially provide lower-cost and more resilient services for disaster risk reduction and climate change adaptation (World Bank 2019a). For example, sound ecosystem management practices that harness the ability of reefs to mitigate storm surges, which erode and damage beaches, can both protect reefs and save money on gray infrastructure. While still in their early stages, nature-based solutions can benefit the tourism sector by conserving valuable natural assets and offering resource efficiencies and high returns-on-investment (Watkins and others 2019).

3. Establish prearranged mechanisms for coordinated physical and financial response

Prearranged coordination, communication, and response systems allow stakeholders to act rapidly in the face of disasters. Responsibilities following disasters should be clearly allocated between local emergency authorities and tourism sector entities. Urgent actions may involve evacuating and sheltering tourists, coordinating with local authorities, disseminating information to industry and the press, organizing relief measures (such as working with hotels to accommodate humanitarian workers or displaced people), and enabling businesses to access physical and financial resources needed for continuity and response.

New Zealand, which is prone to deadly earthquakes, has created a tourism sector emergency coordination group. After the 2010 earthquake in Christchurch, the Ministry of Civil Defence and Emergency Management (MCDEM) established a national cluster of tourism and government agencies to respond in a coordinated and integrated manner to crises that could affect international visitors (Orchiston and Espiner 2017). The Visitor Sector Emergency Advisory Group (VSEAG) includes members from the tourism industry, local and central governments, and relevant agencies such as ministries of business, education, immigration, and foreign affairs. During an emergency, the VSEAG mobilizes the sector to assist with local and national emergency responses, and to communicate timely, accurate information to tourists and international audiences. It also aims to minimize economic loss to the sector by pre-empting cancellations, re-routing itineraries, and offering tourist transfers as required (New Zealand Government 2015). This group was key to the coordinated response of the tourism sector during the 2011 Christchurch earthquake and its success in moving visitors to safety (Honey 2014).

Public budgets are often limited in their ability to finance post-disaster tourism recovery. Disaster risk financing and insurance can increase the resilience of companies and individuals and reduce disaster-related costs (UNDP 2017). Governments can assist tourism businesses to obtain insurance coverage, which remains out of reach for smaller companies because of costly premiums, high risks, lack of availability, and other factors. Re-insurance will become increasingly important as risk environments worsen, and COVID-19 has shown that disasters of this nature may drain insurance industries of liquidity. Under such circumstances, the re-insurance industry becomes critical and may itself require support.

Prearranging access to disaster risk financing allows for rapid disbursement of funds for preparedness, response, and recovery. These financial measures can support SMEs, women-owned businesses, and other stakeholders with limited resources to implement resilience measures before disasters strike and to access finance post-disaster for response and recovery actions. Using risk financing to prepare for disasters can pay off. The Caribbean Catastrophe Risk Insurance Facility (CCRIF), developed by the World Bank with a grant from the Government of Japan, offers parametric insurance policies across the Caribbean to limit the financial impact of catastrophic hurricanes and earthquakes on governments.²³ When a policy is triggered in one of the 22 member countries, the facility quickly pays out, providing governments with short-term liquidity for repairs, humanitarian support, and other essential activities. This liquidity is essential to buffer losses in tourism revenues, on which Caribbean countries are highly dependent, and to repair critical infrastructure, including tourism infrastructure which is primarily located on coastlines. Since its inception in 2007, CCRIF has made 44 payouts for 22 events to 14 governments at a total of \$163 million (CCRIF 2020).

Uninsured losses due to disasters work against industry resilience and travelers. Public information on how disasters lower the market value of firms can be used by the private sector to improve insurance instruments. Direct and indirect negative effects from disasters are both important to address and doing so can help mitigate economic harm in local and tourist economies. For example, managing coastal disaster risks with optimal insurance premiums requires knowledge of the types of disaster impacts across supply chains related to tourism. Also, up-to-date data on firms' trade flows, input-supply interdependence, and linkages can inform the public and private sectors and better enable them to take collective and individual precautionary actions to mitigate disaster-induced market failures or distortions spreading through business and market networks. Going forward, the provision of insurance for tourism resilience should ideally have options supporting investments for business growth, as well as investments to reduce risks (Borja and others 2020; Breckner and others 2016).

Creative insurance products, such as for natural assets, may be particularly relevant for the tourism sector. The Mexican state of Quintana Roo, home to Cancun, has a \$9 billion per annum tourism industry based on healthy beaches and coral reefs, which are threatened by extreme storms. Reefs are a natural defense against storms and coastal erosion and, when they are damaged, financial losses from major storms increase (TNC and UNDP 2018). Repairing damaged reefs is possible but expensive. The Nature Conservancy and the global insurance provider Swiss Re have developed an innovative insurance policy with the government of Quintana Roo. The local Cancun Hotel Owners Association pays into a trust that finances i) the maintenance of a 60-kilometer stretch of reef and ii) a parametric insurance policy that, when triggered, pays a pre-defined sum for reef rehabilitation. Because it does not require formal assessment of losses involved in a storm, a parametric insurance policy can pay out in a matter of days, lessening recovery costs and time. The Nature Conservancy is partnering with UNDP to scale up nature-based insurance products to other countries, potentially extending coverage to coastal marshes and mangroves.

23 Parametric insurance can be explained as: "Parametric indexes enable pre-defined payments that are based on expected losses, correlated against a measurable parameter (such as rainfall, temperature or earthquake intensity) or index of parameters. Traditional indemnity insurance relies on costly verification of actual losses whereas parametric insurance allows payments to be triggered automatically when pre-agreed risk thresholds are breached. Dispensing with the need for verification allows substantial savings to the insurer. These savings are reflected in reduced premium costs, making parametric insurance a more affordable product for low-income purchasers" (OECD 2014).

3.1.4. Response and Recovery Measures

Organized emergency responses can help the tourism sector to protect assets, jobs, and tourists; mitigate disruptions and losses; and recover more rapidly.

RECOMMENDED MEASURES

Mitigate reputational risks through communication and marketing strategies

Protect and recover tourism assets, jobs, and firms through effective design of stimulus packages and financing

Enable technological support for recovery of tourism infrastructure and assets

Effectively design and provide targeted support programs for vulnerable groups, including women-owned businesses, female-led households, and SMEs

1. Mitigate reputational risks through communication and marketing strategies

Managing reputational risk is crucial to the tourism sector, which relies on perceptions of brand and safety to attract consumers. Negative or inaccurate media coverage can increase trip cancellations or postponements and delay tourism recovery. Governments and firms can proactively deploy positive messaging to restore tourist confidence, paving the way for tourism to resume once destinations are ready.

As an example, PATA's Project Phoenix reputation recovery campaign proactively corrected misperceptions about SARS in Asia. First reported in February 2003, the SARS epidemic brought tourism in Asia to a standstill. By the end of the year, international visitor arrivals were estimated to have declined by more than 15 million, the equivalent of \$11 billion in tourism revenue (PATA, quoted in Yates 2006). Fear and misperception amplified these consequences, even for countries with few or no cases, such as Thailand. In June, the region's leading industry association, PATA, launched Project Phoenix, a three-month campaign to spread the message that Asia was safe for travelers. Project Phoenix partnered with CNN, the BBC, TIME, Fortune, and the National Geographic Channel to showcase Asian destinations and welcome tourists to return. The trans-national campaign facilitated collaboration between national tourism offices, the private sector (including major hotel chains, airlines, and tour operators), and PATA. Project Phoenix likely played a role in the resumption of visitor arrivals in the worst affected countries by late 2003/early 2004. This campaign demonstrated the importance of coordinated and rapid mitigation of reputational risks. Also noteworthy is that PATA recognized the need for partnerships with the World Health Organization (WHO) and health authorities in source countries, since these organizations issue advisories that influence the confidence of tourists to travel (Yates 2006; Bierman 2015).

Improving the marketing, communication, and rebranding of destinations can positively influence the recovery trajectory. Marketing strategies can be developed by DMOs and public authorities, private sector firms and associations, or partnerships of these players. In 2011, floods in Thailand damaged airports, roads, and bridges, and led to an estimated \$3 billion in tourism sector losses. Thailand’s tourism authority set up a telephone hotline to disseminate information about the disaster, sought positive publicity in priority markets, and initiated a new “Beautiful Thailand” campaign once the immediate crisis was over (Ghaderi, Mat Som, and Henderson 2015). In Malaysia, the private sector responded to various regional and global crises by seeking new source markets, promoting domestic tourism, and shifting attention to regional and medium-haul inbound markets. Public authorities encouraged cultural and heritage tourism after the 2004 Indian Ocean tsunami damaged some of Penang’s beaches (Ghaderi 2012). In New Orleans after Hurricane Katrina, tourism officials rebranded the city to focus on entertainment and cuisine through marketing campaigns and investments in entertainment infrastructure (Gotham 2007).

Proactively communicating safety protocols to tourists can help change perceptions and increase consumer confidence post-disaster. As tourism sectors that have been locked down by COVID-19 begin to reopen, they will need to reassure safety-conscious tourists and work to prevent a resurgence of coronavirus cases. The WTTC has introduced Safe Travels Protocols which align the private sector around common standards to protect workers and tourists. Destinations and companies can apply for the “Safe Travels” stamp once protocols have been implemented.²⁴ Multiple destinations have introduced their own campaigns. In Singapore, the National Environment Agency launched SG Clean to promote hygienic habits. By adopting the SG Clean quality mark, hotel, restaurant and other business owners can demonstrate their commitment to sector-specific sanitation and hygiene checklists.²⁵

The sector can also use digital technology and social media platforms in its recovery strategies. Post-Hurricanes Irma and Maria in 2017, the Puerto Rico Tourism Company (PRTC), the island’s DMO, was eager to welcome tourists back as part of its recovery strategy. PRTC successfully used TripAdvisor to upload post-disaster media, create new content to reflect on-the-ground conditions, and correct public misperceptions. PRTC also leveraged user-generated content (UGC) such as social media posts, photos, videos, and traveler reviews to promote the destination cost-effectively (Salem and Twining-Ward 2018). Following the 2011 floods in Thailand, the Tourism Authority of Thailand (TAT) accelerated its partnership with Google to become the second country in Southeast Asia to obtain the Street View service. Following a request from government, Google rolled out images of several destinations on Street View to show that flooded areas had returned to normal, reassure potential tourists, and aid travel research (Wagstaff 2012).

2. Protect and recover tourism assets, jobs, and firms through effective design of stimulus packages and financing

Because of tourism’s links with local and global supply chains and its labor-intensive nature, government support to aid tourism recovery is essential to help minimize further disruptions. Rapid fiscal support to firms after a disaster can help protect jobs and reduce losses, particularly for SMEs which are characterized by low cash reserves, inadequate insurance coverage, and limited disaster preparedness. Tourism workers, many of whom are women in precarious jobs with few protections, also need assistance. Support may include grants, wage subsidies, tax exemptions, loan repayment deferrals, access to finance, skills training, and

24 For more information on WTTC’s Safe Travels Protocol, see its website at <https://wtcc.org/COVID-19/Safe-Travels-Global-Protocols-Stamp>.

25 For more information about SG Clean, see its website at <https://www.sgclean.gov.sg/about/>.

employment programs. Easy access and targeted strategies for reaching women and other marginalized groups are vital. These programs, however, should be carefully designed with open, transparent criteria so that limited fiscal resources are deployed effectively. Consideration should also be given to supplementing government funds with private sector finance from financial institutions. The Government of Malaysia released a \$4.8 billion emergency stimulus package in response to COVID-19, of which \$453 million was targeted to the hard-hit tourism sector. Measures included financial support for SMEs, travel discount vouchers for tourists, tax relief for domestic tourists, and funds for skills training (Medina 2020). “Green” stimulus packages can simultaneously revitalize post-disaster economies and invest in long-term environmental and climate action. New Zealand’s Budget 2020 features a NZ\$ 1.1 billion investment in nearly 11,000 environmental jobs in response to job losses following the COVID-19 pandemic. Programs will restore biodiversity across the country and support the resilient development of nature-based tourism (New Zealand Government 2020).

Although not directly targeted to the tourism sector, New Zealand’s Earthquake Support Subsidy (ESS) was praised for assisting SMEs following the 2011 earthquake in Christchurch. The policy granted six weeks of financial support to small businesses to assist their recovery. Notably, businesses did not have to demonstrate physical damage and could qualify on the basis of reduced accessibility to workers, lack of essential services, or loss in trade. Staff from the Ministry of Social Development, which administered the program, traveled to Christchurch to provide application assistance. By the program’s end, over 8,000 businesses employing nearly 47,000 people had claimed the subsidy at a cost of NZ\$ 185 million. SMEs commented that the program allowed them to think through their options and prevented certain closures. Lessons learned included the importance of simple and flexible application processes, and the provision of grants rather than loans when possible (Fisher-Smith 2013). However, for a prolonged crisis like COVID-19, governments will need to think through such programs in terms of duration, administration, number of rounds, and grant amounts.

Reconstruction and cleanup activities can generate environmental benefits and provide employment for tourism workers who have lost jobs. Following Cyclone Yasi in Queensland, Australia in 2011, national and state governments established a \$20 million Rural Resilience Fund. Called Operation Cleanup, the fund’s employment component hired unemployed local farm and tourism workers in cyclone-affected areas to be part of the cleanup efforts. This enabled residents to remain in their communities and receive training and other assistance to increase their job prospects (World Bank 2011).

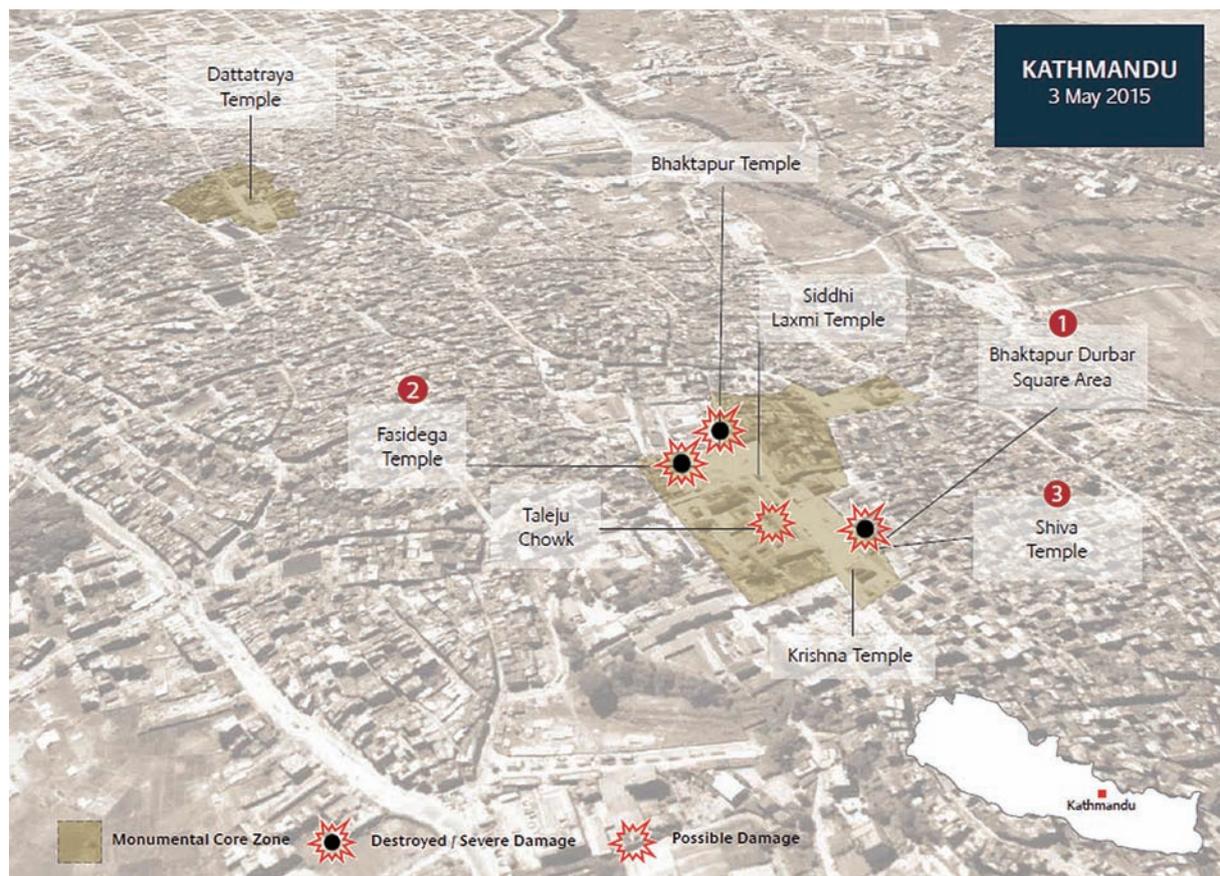
Stimulus packages and other actions need to be carefully designed and implemented so that they do not privilege certain firms (e.g., larger or more well-resourced) over more vulnerable ones. Economic implications should be carefully considered, and programs designed so that they encourage competition and innovation rather than weaken it (World Bank 2020).

3. Enable technological support for recovery of tourism infrastructure and assets

The tourism sector can accelerate disaster recovery using current and emerging technologies for real-time asset monitoring and rapid damage assessment. Stakeholders need to know the extent and distribution of damage in order to guide response and recovery measures. The use of technologies such as big data analytics, satellite imaging, and unmanned aerial vehicles (UAVs) for real-time asset monitoring and damage assessment is still limited in the tourism sector; however, some examples highlight their potential. After the 2015 Gorkha earthquake in Nepal, UNESCO partnered with the United Nations Institute for Training and Research (UNITAR) to assess damage to cultural heritage sites using satellite

imagery. The partners found that six of the seven Monument Zones within the Kathmandu Valley World Heritage site had suffered extensive damage (see figure 16) (UNITAR and UNESCO 2016). When the Philippines was struck by the Bohol Earthquake and Haiyan super typhoon in 2013, researchers used geotagged social media data to monitor tourism recovery (Yan and others 2017). Improved monitoring of tourism damage and recovery can contribute to sector resilience by shedding light on the comparative resilience of tourism assets, infrastructure and destinations, and on the effectiveness of response and recovery actions.

Figure 16 Satellite Image Analysis of Earthquake Damage at Bhaktapur Durbar Square Monumental Zone, Kathmandu (2015)



Source: UNITAR and UNESCO 2016.

4. Effectively design and provide targeted support programs to vulnerable groups including women-owned businesses, self-employed or informal workers, and SMEs

Disasters like COVID-19 have highlighted the importance of financial safety nets and programs for SMEs and for vulnerable tourism employees and owners such as women and self-employed or informal workers. Given their low cash reserves, limited access to finance, and, for many, absence of sick leave and other benefits, they need assistance to manage disaster impacts and avoid further losses, potential bankruptcies, and higher incidences of poverty. Governments and financial institutions have introduced a range of measures for tourism SMEs during COVID-19. In Brazil, the national Brazilian Development Bank (BNDES) opened working capital loan lines for tourism and service SMEs (KPMG 2020). Japan

introduced measures to support micro-enterprises and SMEs in tourism and other sectors by securing JPN 500 billion for emergency lending and loan guarantees from the Japan Finance Corporation and other institutions (OECD 2020). Measures should also include informal workers, who are prevalent in many countries' tourism sectors. In Costa Rica, the government provided direct cash transfers for three months to individuals who lost work as a result of the coronavirus, including informal workers; people applied electronically and needed only to sign an affidavit as a statement of good faith. Other countries such as Mexico and India are targeting loans to informal workers and street vendors (OECD 2020). Supporting women is key to sector resilience, given their high representation in tourism, and efforts are also needed in sectors dependent on tourism, such as handicrafts and food services (WTO 2020).

3.1.5. Long-Term Resilience Actions

New approaches have emerged in recent years to enhance tourism competitiveness in the long-term by addressing the sector's contribution to climate change now.

RECOMMENDED MEASURES

Reduce climate impacts

1. Reduce climate impacts

A small but growing number of governments and businesses have committed to tourism decarbonization, with carbon offsetting being the most common, if controversial, measure.²⁶ Stakeholders are increasingly aware that unsustainable practices that contribute to climate change and exacerbate natural hazards will affect industry competitiveness. Diversifying away from carbon-intensive coal and oil and transitioning to renewable energy and carbon-neutral, or even carbon-positive activities, can strengthen the sector against crises. In the long term, these actions help to reduce both climate-induced impacts on the sector and climate impacts caused by the sector. The private sector drives many of these actions, while governments use incentives, subsidies, and other policies to support them. Tourists and consumers can also leverage their purchasing decisions to favor companies taking climate-friendly measures.

As travelers grow more aware of the environmental costs of tourism, those destinations that can position themselves as doing less harm, or producing benefits, will earn a competitive advantage. The Government of Montenegro launched a GEF-funded project with UNDP in 2014 to transition to a carbon-neutral tourism sector and enhance its green destination reputation. The project introduced greenhouse gas emissions monitoring for the tourism sector; supported 32 investment projects valued at €10 million to implement technologies to reduce tourism carbon emissions; introduced a voluntary carbon offset scheme; and other measures to help maintain emissions at 2014 levels.²⁷ The concept of regenerative tourism takes this even further and calls for tourism to renew and restore its destinations.

²⁶ Carbon offsetting refers to activities that compensate for the emission of greenhouse gases by reducing or avoiding emissions elsewhere. Common programs include tree-planting and use of renewable energy.

²⁷ For more information on the UNDP project, see its website at <https://www.me.undp.org/content/montenegro/en/home/projects/TCNT.html>.

Governments can conditionally support the tourism industry to drive climate action.

Subsidies and support to firms can be linked to conditions that enhance long-term resilience. As a result of the cessation of flying during the COVID-19 lockdowns, the global aviation industry is projected to lose \$84 billion in 2020. This loss in revenues coupled with high fixed and semi-fixed costs is jeopardizing the survival of airline and aviation companies (IATA 2020). Airlines are requesting bailouts from governments, and the French government has linked its €7 billion aid package to Air France with (non-binding) climate conditions. For domestic flights, emissions must be halved by 2024, and 2 percent of fuel will have to be derived from alternative, sustainable sources by 2025 (Thomas 2020). However, these conditions have been criticized for not being binding or far-reaching enough.

Other companies, such as the Australia-based tour operator Intrepid Travel, have announced their ambition to be carbon-positive by 2020.

With the Climate Foundation and the University of Tasmania Intrepid raised A\$ 600,000 from donors and fundraisers to build a carbon-sequestering seaweed platform off the coast of Australia that could remove extra carbon from the atmosphere.²⁸ Other private sector measures involve reducing energy use, improving energy efficiency, and increasing the use of renewable energy. Governments can support these efforts by developing tools and programs and raising awareness of the need for companies to lower their emissions.

Interest has been growing among destinations, firms, and researchers in the potential to apply the circular economy concept to the tourism sector.

Originating in the manufacturing sector as a rethinking of the traditional linear “take-make-dispose” model, the circular economy model promotes the use and re-use of materials to minimize waste and pollution. Key principles are designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.²⁹ Potential exists to apply circular economy principles to tourism, which intensively consumes water, energy, food, and other resources, and generates greenhouse gas emissions and waste. These models offer benefits to firms and destinations through resource efficiency, decentralization and localization of infrastructure, cost savings, reduced dependence on materials, new business opportunities and innovations, and lessened impact on natural resources. For example, the circular use of resources (water, energy, etc.) increases the redundancy and localization of tourism infrastructure, lessening its dependence on supply chains and potentially enhancing its competitiveness. In the long-term, investments in circular economy practices may protect the tourism sector by slowing climate change through reduced greenhouse gas emissions, but research is needed to clarify the effects of proactive decarbonization and circular economy actions on tourism resilience.

The World Bank is supporting the public and private sectors to implement policy, market, financial, and technological interventions to promote the transition to the circular economy.

A new circular economy program in Sierra Leone, Cote d'Ivoire, and Mozambique addresses the challenge of plastics entering local waterways and the sea. The UNWTO reports that much of the plastic used in tourist facilities is single-use and often unrecyclable. The World Bank plans to work with the tourism and manufacturing industries in those countries to minimize waste and replace plastic with new products which create business opportunities. Separately, the Global Tourism Plastics Initiative, led by UNEP and UNWTO in collaboration with the Ellen MacArthur Foundation, aims to help the industry reduce its use of plastic, and to adopt new, alternative products. Businesses, destinations, and organizations can voluntarily commit as signatories. Companies that have joined as advisory members include Accor, ABTA

²⁸ For more information, visit Intrepid's website at <https://www.theintrepidfoundation.org/seaweed-regeneration>.

²⁹ For more information, visit the Ellen MacArthur Foundation's website at <https://www.ellenmacarthurfoundation.org/circular-economy/concept/infographic>.

(the U.K. tourism industry association), and Iberostar, among other businesses and non-governmental organizations.³⁰ These actions may enhance the resilience of the sector by reducing pollution in tourist areas, protecting sensitive environments such as coastlines and waterways, and spurring innovation.

Ultimately, initiatives and commitments such as these need to be scaled up to embrace a global sector comprised of numerous players of various sizes. This, in turn, requires leadership and coordinated strategies and actions.

30 See the Global Tourism Plastics Initiative's website for more information: <https://www.oneplanetnetwork.org/sustainable-tourism/tourisms-plastic-pollution-problem>.

References

- Aquino, Michael. 2019. "All About Bali's Tsunami-Ready Hotels." *Tripsavvy*, June 26, 2019. <https://www.tripsavvy.com/tsunami-ready-hotels-in-bali-1629121>.
- Asian Disaster Preparedness Center (ADPC). 2010. "Planning for Disaster Risk Reduction." Bangkok: ADPC. <https://www.adpc.net/igo/category/ID257/doc/2013-mQh6KX-ADPC-guidebook03.pdf>.
- Becken, Susanne, Janto S. Hess, Daniel Scott, and Jutamas Wisansing. 2019. "Climate Change Risk Assessment for Thailand's Tourism Sector."
- Becken, Susanne, N. Montesalvo, and E. Whittlesea. 2018. "Building a Resilient Tourism Industry: Queensland Tourism Climate Change Response Plan." Brisbane: State of Queensland.
- Beirman, David. 2015. "The Development of a Transnational Tourism Risk, Crisis and Recovery Management Network." In *Tourism Crisis and Disaster in the Asia-Pacific*, edited by Brent W. Richie and Kom Campiranon, 175-189.
- Reguero, Borja G., Michael Beck, David Schmid, Daniel Stadtmuller, Justus Raepfle, Stefan Schussele, and Kerstin Pfiegner. 2020. "Financing Coastal Resilience by Combining Nature-Based Risk Reduction with Insurance." *Ecological Economics* 169 (March).
- Breckner, Miriam, Florian Englmaier, Till Stowasser, and Uwe Sunde. 2016. "Resilience to Natural Disasters – Insurance Penetration, Institutions, and Disaster Types." *Economic Letters* 148 (November).
- BUDPAR (Republic of Indonesia Ministry of Culture and Tourism). 2008. "Tsunami Ready Toolbox." <https://www.preventionweb.net/publications/view/4043>.
- CCRIF (Caribbean Catastrophe Risk Insurance Facility). 2020. "Haiti Receives Payout from CCRIF of US\$7.45 Million following the Passage of Tropical Cyclone Laura." Press Release, September 8, 2020. <https://www.ccrif.org/news/haiti-receives-payout-ccrif-us745-million-following-passage-tropical-cyclone-laura>.
- CDEMA (Caribbean Disaster Emergency Management Agency). 2009. "Disaster Risk Management Strategy and Plan of Action for the Tourism Sector in the Caribbean – Part 1: Disaster Risk Management Strategy." St: Michael, Barbados: CDEMA.
- EENA (European Emergency Number Association). 2019. "Public Warning Systems – Update." Brussels: EENA. <https://eena.org/knowledge-hub/documents/public-warning-systems-2019-update/>.
- Fisher-Smith, Ruth. 2013. "The Earthquake Support Subsidy for Christchurch's Small and Medium Enterprises: Perspectives from Business Owners." *Small Enterprise Research* 20 (1): 40- 54.
- Ghaderi, Zahed. 2012. "Tourism Crises and Island Destinations: Experiences in Penang, Malaysia." *Tourism Management Perspectives* 2 - 3 (April-July): 79 - 84.
- Ghaderi, Zahed, Ahmad Puad Mat Som, and Joan C. Henderson. 2015. "When Disaster Strikes: The Thai Floods of 2011 and Tourism Industry Response and Resilience." *Asia Pacific Journal of Tourism Research* 20 (4): 399-415.
- Gotham, Kevin Fox. 2007. "(Re) Branding the Big Easy: Tourism Rebuilding in Post-Katrina New Orleans." *Urban Affairs Review* 42 (6): 823-850.
- Hughes, Lesley, Petra Stock, Louis Brailsford and David Alexander. 2018. "Icons at Risk: Climate Change Threatening Australian Tourism." Australia: Climate Council.
- GFDRR (Global Facility for Disaster Risk Reduction) and World Bank. 2019. *Resilient Cultural Heritage: Learning from the Japanese Experience*. Washington, DC: GFDRR.
- Gurtner, Yetta K. 2006. "Understanding Tourism Crisis: Case Studies of Bali and Phuket." *Tourism Review International*, 10 (1-2): 57-68.

- Gurtner, Yetta K. 2007. "Phuket: Tsunami and Tourism – A Preliminary Investigation." In *Tourism Crisis Management*, edited by Eric Laws, Bruce Prideaux, and K.S. Chon, 217-233. Wallingford, UK: CABI.
- Honey, Phoebe. 2014. "The Art of Recovery / Planning for the Worst: A Case Study in Adaption, Innovation and Resilience Within the New Zealand Tourism Sector after the 2010 Earthquake Sequence." Destination Gippsland.
- IATA (International Air Transport Association). 2020. "Economic Performance of the Airline Industry." <https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance-june-2020-report/>.
- International Tourism Partnership and IFC (International Finance Corporation). 2020. "The Business Case for Sustainable Hotels." London: International Tourism Partnership.
- Khazai, Bijan, Trevor Girard, Lukas Edbauer, Andreas M. Schäfer, James E. Daniell, Farnaz Mahdavian, Lee Miles, Hamish McLean, Susanne Becken, Mark Evidente, and Brent Ritchie. 2018. *Standards on Disaster Risk Management for Hotels and Resorts*. Bonn: GIZ.
- KPMG. 2020. "Brazil: Government and Institution Measures in Response to COVID-19." September 9, 2020. <https://home.kpmg/xx/en/home/insights/2020/04/brazil-government-and-institution-measures-in-response-to-covid.html>.
- Mahon, Roché, David Farrell, Shelly-Ann Cox, Adrian Trotman, Cédric van Meerbeeck, and Garfield Barnwell. 2018. "Climate Services and Caribbean Resilience: A Historical Perspective." *Social and Economic Studies* 67 (2/3): 239-324.
- Medina, Ayman Falak. 2020. "Malaysia Issues Stimulus Package to Combat COVID-19 Impact." Press Release, ASEAN Briefing, March 19, 2020. <https://www.aseanbriefing.com/news/malaysia-issues-stimulus-package-combat-covid-19-impact/>.
- New Zealand Government. 2015. "The Guide to the National Civil Defence Emergency Management Plan 2015." Wellington: Department of the Prime Minister and Cabinet.
- New Zealand Government Department of Conservation. 2020. "\$1.1 Billion Investment to Create 11,000 Environment Jobs in Our Regions." Press Release, May 14, 2020. <https://www.doc.govt.nz/news/media-releases/2020-media-releases/investment-to-create-11000-environment-jobs-in-our-regions/>.
- OECD (Organisation for Economic Co-operation and Development). 2014. "A Calculated Risk: How Donors Should Engage with Risk Financing and Transfer Mechanisms." Paris: OECD.
- OECD (Organisation for Economic Co-operation and Development). 2020. "Coronavirus (COVID-19). SME policy responses." July 15, 2020. Paris: OECD. <http://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/#endnotea0z444>.
- Orchiston, Caroline, and Espiner, Stephen. 2017. "Fast and Slow Resilience in the New Zealand Tourism Industry." In *Tourism Resilience and Adaptation to Environmental Change: Definitions and Frameworks*, edited by Alan A. Lew and Joseph M. Cheer, 250-266. London and New York: Routledge.
- Pacific Asia Travel Association (PATA). 2004. "Annual Statistical Report 2003." Quoted in Yates, Michael. 2006. "Project Phoenix: A Benchmark for Reputation Management in Travel and Tourism." *Tourism in Turbulent Times: Towards Safe Experiences for Visitors*, edited by Jeff Wilks, Donna Pendergast, and Peter Leggat, 263-276.
- Ranghieri, Federica, and Mikio Ishiwatari, eds. 2014. *Learning from Megadisasters: Lessons from the Great East Japan Earthquake*. Washington, DC: World Bank.
- Ritchie, Brent W., and Yawei Jiang. 2019. "A Review of Research on Tourism Risk, Crisis and Disaster Management: Launching the Annals of Tourism Research Curated Collection on Tourism Risk, Crisis and Disaster Management." *Annals of Tourism Research* 79 (November): 102812.

- Salem, Talia, and Louise Twining-Ward. 2018. *The Voice of Travelers: Leveraging User-Generated Content for tourism Development*. Washington, DC: World Bank Group.
- Swann, LaDon, Tracie Sempier, Colette Boehm, Chandra Wright, Jody Thompson. 2015. "Tourism Resilience Index: A Business Self-Assessment." Ocean Springs, Mississippi: Mississippi-Alabama Sea Grant Consortium. http://masgc.org/assets/uploads/publications/1142/tourism_resilience_index.pdf.
- Takamatsu, Masato. 2011. "Tourism Crisis Management as Business Continuity." *JTB Tourism Research and Consulting Co.*, September 1, 2011. <https://www.tourism.jp/en/tourism-database/insights/2011/09/tourism-crisis-management-1/>.
- Takamatsu, Masato. 2014. "The Okinawa Tourism Crisis Management Initiatives." *International Journal of Event Management Research* 8 (1): 19-34.
- The Nature Conservancy (TNC) and UNDP (United Nations Development Program). 2018. "Innovative Finance for Resilient Coasts and Communities." https://www.nature.org/content/dam/tnc/nature/en/documents/Innovative_Finance_Resilient_Coasts_and_Communities.pdf.
- The University of the West Indies. 2018. "Mainstreaming Gender into Disaster Risk Management for Tourism: Training Manual." Mona, Jamaica: The University of the West Indies.
- Thomas, Leigh. 2020. "Air France Must Cut Emissions, Domestic Flights for Aid: Minister." *Reuters*, April 29, 2020. <https://www.reuters.com/article/us-health-coronavirus-france-economy/air-france-must-cut-emissions-domestic-flights-for-aid-minister-idUSKBN22B2EL>.
- UNDP (United Nations Development Programme). 2011. "Project Identification Form: Samoa: Enhancing the Resilience of Tourism-reliant Communities to Climate Change Risks." Washington, DC: Global Environment Facility.
- UNDP (United Nations Development Programme). 2017. "Disaster Risk Insurance." http://www.undp.org/content/dam/sdfinance/doc/Disaster%20Risk%20Insurance%20_%20UNDP.pdf.
- UNDRR (United Nations Office for Disaster Risk Reduction). 2017a. "Developing a Resilience Plan for the Tourism Industry in Okinawa, Japan." Geneva: UNDRR. https://www.preventionweb.net/files/53209_53209jtb.okinawa.pdf.
- UNDRR (United Nations Office for Disaster Risk Reduction). 2017b. "Words into Action Guidelines: National Disaster Risk Assessment." Geneva: UNDRR.
- UNEP (United Nations Environment Programme) & CAST (Caribbean Alliance for Sustainable Tourism). 2008. "Disaster Risk Management for Coastal Tourism Destinations Responding to Climate Change: A Practical Guide for Decision Makers." Paris: UNEP.
- UNITAR (United Nations Institute for Training and Research) and UNESCO (United Nations Educational, Scientific, and Cultural Organization). 2016. "Satellite-Based Damage Assessment of Cultural Heritage Sites: 2015 Summary Report of Iraq, Nepal, Syria & Yemen." Geneva: UNITAR.
- von Saltza, E. 2019. "Green Passport: Innovative Financing Solutions for Conservation in Hawaii. A Report Prepared for Conservation International."
- Wagstaff, Jeremy. 2012. "Google Charts a Careful Course Through Asia's Maps." *Reuters*, March 23, 2012. <https://uk.reuters.com/article/us-google-asia/google-charts-a-careful-course-through-asias-maps-idUKBRE82M0I020120323>.
- Watkins, Graham George, Mariana C. Silva Zuniga, Amanda Rycerz, Katie Dawkins, John Firth, Val Kapos, Laura Canevari, Barney Dickson, and Amal-Lee Amin. 2019. "Nature-Based Solutions: Increasing Private Sector Uptake for Climate - Resilience Infrastructure in Latin America and the Caribbean." Washington, DC: Inter-American Development Bank.

- Williams, Shaun, Andrew Tait, Juli Ungaro, Alan Porteous, Bernard Miville, and Doug Ramsay. 2016. "Final Report, Climate Early Warning System and Tourism in Samoa. Prepared for Samoa Tourism Authority." Christchurch: National Institute of Water & Atmospheric Research Ltd. <http://www.samoatourism.org/Content/SiteResources/PAGE/184/Samoa%20Tourism%20CLEWS%20Final%20Report.pdf>.
- World Bank. 2011. *Queensland Recovery and Reconstruction in the Aftermath of the 2010/2011 Flood Events and Cyclone Yasi*. Washington, DC: World Bank.
- World Bank. 2015. *Disaster Risk Management in the Transport Sector: A Review of Concepts and International Case Studies*. Washington, DC: World Bank.
- World Bank. 2018. "Republic of Bulgaria: Advisory Services on a National Climate Change Adaptation Strategy and Action Plan – Appendix 6: Assessment of the Tourism Sector." Washington, DC: World Bank.
- World Bank. 2019a. *Integrating Green and Gray: Creating Next Generation Infrastructure*. Washington, DC: World Bank.
- World Bank. 2019b. "Timor-Leste Branch Roads Project Appraisal Document." Washington, DC: World Bank.
- World Bank. 2020. *Resilient Industries: Competitiveness in the Face of Disasters*. Washington, DC: World Bank.
- WTO (World Trade Organization). 2019. "Country Research on Natural Disasters and Trade – Summary." Geneva: WTO.
- WTO (World Trade Organization). 2020. "The Economic Impact of COVID-19 on Women in Vulnerable Sectors and Economies: Information Note." Geneva: WTO.
- Yan, Yingwei, Melanie Eckle, Chiao-Ling Kuo, Benjamin Herfort, Hongchao Fan, and Alexander Zipf. 2017. "Monitoring and Assessing Post-Disaster Tourism Recovery Using Geotagged Social Media Data." *ISPRS International Journal of Geo-Information* 6 (5): 144.
- Yates, Michael. 2006. "Project Phoenix: A Benchmark for Reputation Management in Travel and Tourism." *Tourism in Turbulent Times: Towards Safe Experiences for Visitors*, edited by Jeff Wilks, Donna Pendergast, and Peter Leggat, 263-276.

4

Conclusions and Areas for Future Work

4.1. Conclusions

Resilience is integral to planning and decision-making. For tourism to remain competitive, stakeholders must cooperate to anticipate and prepare for worst-case scenarios. When tourism is flourishing, the need for resilience is a difficult proposition to appreciate; during crises, such as the present day, the need is clear, but resources and capacity are in shorter supply. With the case for resilience becoming increasingly compelling, the moment should be seized to inform the global rebuilding and resetting of tourism. The growing desire of stakeholders to achieve a more integral resilience that offers wider benefits and can withstand worsening shocks is a critical driver. This publication aims to support this moment by advancing a Resilient Tourism Framework to guide next steps for stakeholders.

Actions to strengthen tourism resilience take place at all levels of governance within destinations. They include tourism-tailored risk and hazard mapping; disaster preparedness, response, and recovery plans integrating tourism at national and destination levels; and sector-specific disaster management plans at all levels. Furthermore, integrating tourism into disaster and climate risk assessments enables governments to target their preparedness and response actions. Prearranged mechanisms for coordinating disaster responses are needed, as are communication and marketing strategies to contain reputational damage at all phases of a disaster. Financial incentives, tools, and safety nets for tourism businesses and workers in both the formal and informal sectors help to secure jobs and livelihoods in tourism throughout supply chains. Climate and hazard-resilient infrastructure helps mitigate impacts and reduce losses. Lastly, proactive measures to adapt to climate change and to mitigate the sector's contribution to the climate crisis generate short- and long-term benefits.

Tourism businesses can play powerful roles in resilience by creating jobs and through their links within communities and value chains. At the firm level, resilience is supported by disaster preparedness, management, and recovery plans; ready-to-execute communications and marketing strategies; early information and warning systems; and liquidity and financing. These can be enhanced by EP&R plans and BCP.

Resilience takes a sector-wide approach and requires that the boundaries of the tourism sector be broadened to include critical areas of disaster management and climate change. This publication has identified several key paths for stakeholders to advance resilient tourism agendas:

Public Sector

- **Commit to the resilience agenda.** Tourism policy makers need to bring resilience to the forefront as a key element of their competitiveness agendas, collaborate with stakeholders to unify the sector, and promote top-down and bottom-up resilience actions. Governments can link financial support and subsidies to compliance with resilience criteria.
- **Make use of and disseminate risk information.** Resilience planning should be evidence-based, knowledgeable of the risk environment, and based on many hazard scenarios. Shared risk information will grow awareness and encourage follow-up actions. Improvements in cost-benefit analyses will support business cases for preemptive resilience investments. Additionally, governments can improve the quality of data and address gaps in sector resilience.
- **Build resilience in the private sector, including of vulnerable groups.** Policies should assist tourism firms and focus on SMEs, businesses owned by women, and other at-

risk groups. Assistance may include policy support and incentives for risk assessments, EP&R, BCPs, and finance and insurance for preparation and recovery. Open, transparent, and efficient criteria will be required by governments to reach vulnerable populations and impacts need to be monitored. Finally, sustainability and resilience are strengthened when residents and communities participate actively in tourism decision-making.

Industry

- **Strengthen resilience of SMEs.** SMEs dominate the sector and industry-wide resilience cannot exist without their engagement. Because of their greater risk profiles, SMEs need to proactively invest in their own resilience by adopting business continuity planning and the increasingly available resources from industry partners.
- **Work together to address long-term climate impacts.** Only large corporations can address the climate crisis at scale; airlines, hotels, and tour operators can energize stakeholders, commit to reduced climate impacts, and decarbonize their operations.
- **Cultivate worker awareness.** Employees are a potential source of resilience ideas and actions and should be trained to gain deeper understanding of resilience issues in order to facilitate these contributions.

Development Partners

- **Integrate resilience into tourism development.** Support from agencies like the World Bank should emphasize risk-informed and resilient approaches. Funders should partner with destinations to pilot such approaches and mainstream preparedness and response criteria in their tourism operations.
- **Develop the resilience knowledge base.** Development partners can help grow knowledge of the field, monitor advances, track progress, share best practices, and build capacity.

Financial Institutions

- **Finance resilience.** Banks and insurance companies should increase the availability of tailored disaster risk financing, risk insurance, and other preparedness and recovery instruments.

Tourists

- **Be aware of local risks and procedures.** Because of their potential vulnerability, tourists should familiarize themselves with local risks and evacuation procedures and opt into public warning systems such as mobile apps. In so doing, they can strengthen their own resilience and lessen impacts on destinations.
- **Choose resilient firms and destinations.** By informing themselves and traveling responsibly tourists can reduce industry carbon footprints. For example, short-haul destinations, taking longer but fewer trips, and choosing companies that have made climate commitments can push the sector toward better climate practices.

Box 11 Applying the Resilient Tourism Framework to Pandemics

In 2019, the WHO warned that the chances of a global pandemic were growing and that the world was not prepared (GPMB 2019). COVID-19's heavy toll on the global tourism industry has manifested in millions of lost and furloughed jobs, firm bankruptcies, and depleted government budgets. The challenge of reopening tourism is apparent in the patchwork of quarantine and testing policies of destinations, as well as in the rising numbers of attempts to reopen borders to tourism only to close them again due to surges in coronavirus cases. As of September 1st, 43 percent of destinations worldwide still had their borders completely closed to international tourism (UNWTO 2020). Until a vaccine is widely available, and tourists' confidence in safe travel is restored, full sector recovery is unlikely.

Pandemics are here to stay. Some key differences between the COVID-19 pandemic and other shocks are its impact on travel, its long and uncertain duration, and the lack of physical damage. The first two of these impacts are particularly disruptive to the tourism sector which relies on freedom of movement and trade in goods that lose value if they are not consumed.

Destinations and firms need to prepare for worst-case scenarios in which neither domestic nor international tourists are allowed to travel for unspecified periods, leading to severe economic losses and slow recoveries. Several measures in the proposed Resilient Tourism Framework can help stakeholders address such scenarios:

- **Implement business continuity and disaster planning for destinations and firms:** As hard as it may be, firms must prepare for situations in which, in the absence of government support, survival requires tradeoffs between staff retention, operations, and closures. Making these plans in advance can help firms to streamline costs and adopt new business models (such as moving from restaurant dining to takeout and delivery) if a pandemic strikes. Destinations, too, can review their customer bases, including domestic and regional markets, and plan for different scenarios, such as diversifying products to spread risk and targeting certain activities like nature-based tourism which are safer to reopen.
- **Establish prearranged mechanisms and coordinated tourism disaster responses:** Grappling with a pandemic requires coordination across numerous agencies, from tourism to health, finance, immigration, and foreign affairs, as well as with the private sector. Some countries (i.e., Canada, France, and Ireland) have established these coordinating bodies to monitor and respond to the pandemic's impact on tourism (OECD 2020). In the future, prearranged procedures designed for quick activation should be available to direct media messaging and communication, travel restrictions, tourist evacuation and other priority areas. Such procedures can help destinations and firms to garner positive media attention and lessen the loss of traveler confidence.
- **Mitigate reputational risks through communication and marketing strategies:** At the beginning of COVID-19, destinations such as Portugal and Estonia received positive press for their marketing campaigns telling visitors to stay home until the pandemic was over. Destinations need to consider marketing for various phases of a pandemic, from lockdown to reopening, and for countering negative or inaccurate media portrayals and communicating safety and hygiene measures.
- **Protect and recover tourism assets, jobs, and firms through effective design of stimulus packages and financing:** Governments have introduced a range of both economy-wide and tourism-specific stimulus packages, delivered through loans (the most common measure, according to the World Bank policy tracker [2020]), cash payments, grants, guarantees, and other mechanisms (OECD 2020). These packages have been a lifeline for millions of firms of all sizes. However, as the pandemic continues the challenge is to decide whether, how long, and in what form to continue business support, a particular concern for revenue-strapped governments. The World Bank, OECD, WTTC, and others are tracking tourism policy rollouts in response to COVID-19, and evidence is needed for their effectiveness in the short, medium, and long-term so that these instruments can be improved for future emergencies.
- **Provide targeted support programs for vulnerable groups, including women-owned businesses, self-employed or informal workers, and SMEs:** The pandemic has hit hardest those with limited liquidity to ride out the crisis. Governments and financial institutions can provide financial safety nets and programs, such as low-interest loans, to those groups that are most vulnerable to poverty if their sources of income dried up.

4.2. Areas for Future Work

In exploring the growing field of tourism resilience, this report also flags a number of questions and areas to be further addressed:

Testing and Refining the Resilient Tourism Framework

- Put the framework into practice and pilot resilient tourism initiatives. Gather evidence from such initiatives to feed back into and refine the framework.
- Encourage the tourism industry to assume the responsibility to understand and respond to disaster and climate risks and long-term climate change impacts.

- Develop and share the technical guidance and policies needed for governments and firms to operationalize the framework.

Closing the gaps in understanding risks and bottlenecks

- Conduct gap analyses to help countries and destinations bridge the gaps between understanding and implementation in the sector.
- Examine how the full costs of disasters are borne by various actors in the sector, including direct, indirect, physical, and intangible costs. This information can show governments that investments in tourism disaster preparedness may have positive returns at national government, sectoral, and firm levels. In the same vein, quantify impacts for counterfactual scenarios of unpreparedness for disasters and climate risks in order to stress the costs of inaction.
- Gather quantitative data to describe direct and indirect disaster and climate change impacts, including recovery costs, and their distribution among different actors. Investigate how climate change influences tourist behavior and how it is expected to do so in the long-term.
- Analyze the impacts of disasters across tourism supply chains and international borders to better inform cross-boundary resilience measures.
- Clarify the relationship between market structure and industry resilience, including how resilience measures can promote healthy competition or entrench anti-competitive behavior between firms.
- Research disaster and climate change risk environments and assess the resilience of tourism industry supply chains.
- Research the effects of decarbonization and circular economy practices on enhancing tourism sector resilience.

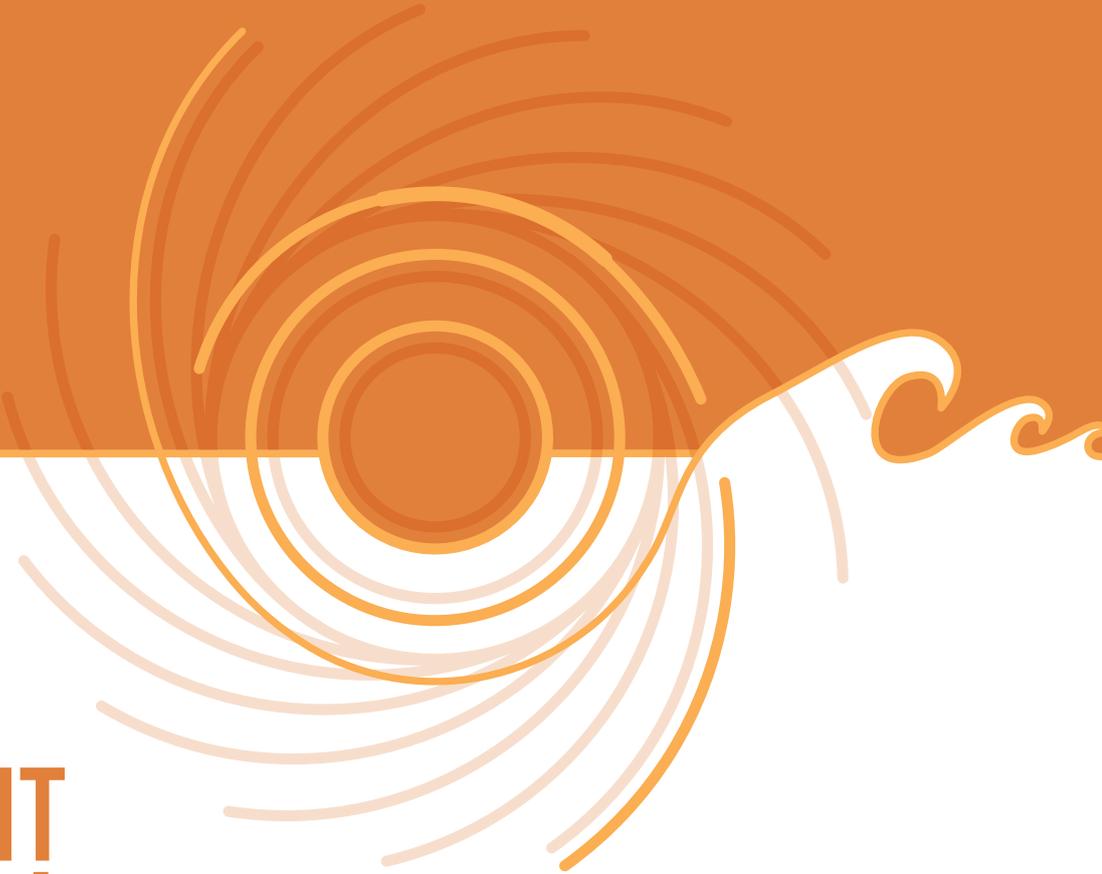
Monitor and evaluate competitiveness in terms of resilience

- Improve tourism research and data, including tracking tourist sentiment.
- Develop new indicators to measure tourism resilience and disaster recovery that take into account long-term sustainability and competitiveness objectives.

Prioritizing the resilience of the tourism sector must be at the forefront of this moment of resetting and rebuilding. By advancing global, national, and local efforts to invest in resilient tourism industries and in the protection of nature, the path can be set for long-term competitiveness that benefits the growing numbers of economies and people that depend on this sector.

References

- GPMB (Global Preparedness Monitoring Board). 2019. "A World at Risk: Annual Report on Global Preparedness for Health Emergencies." Geneva: World Health Organization. https://apps.who.int/gpmb/assets/annual_report/GPMB_Annual_Report_English.pdf.
- OECD (Organisation for Economic Co-operation and Development). 2020. "Covid-19: Tourism Policy Responses to the coronavirus (COVID-19)." June 2, 2020. Paris: OECD.
- UNWTO (United Nations Tourism World Organization). 2020. "COVID-19 Related Travel Restrictions – A Global Review for Tourism – Seventh Report as of 10 September 2020." Madrid: UNWTO.
- World Bank Group. 2020. "Rebuilding Tourism Competitiveness: Tourism Response, Recovery and Resilience to the COVID-19 Crisis." Washington, DC: World Bank.



RESILIENT TOURISM

Competitiveness in the
Face of Disasters