Crisis Resilient Guidelines for the Hospitality Sector

Introduction

The hospitality industry is highly susceptible to the impacts of natural hazards. In addition, climate change exacerbates natural hazards, including heatwaves, floods, windstorms, droughts and forest fires, through increased hazard frequency, intensity and altered geographic distribution. These escalating crises and climate risks highlight the need for improved resilience in the hospitality industry. To meet this growing need, Hotel Resilient and HOTREC present these *Crisis Resilient Guidelines* to HOTREC members, including hotels, restaurants, cafés, and night-life entertainment venues.

These guidelines are intended to assist HOTREC members to better prepare, withstand and recover from crisis and climate related hazards. Note these guidelines do not address sustainability, which generally focuses on the protection and stewardship of environmental resources, habitats and local communities. The focus of these guidelines is on crisis resilience. We define crisis resilience as the ability to withstand and recover from natural hazard impacts. In the hospitality industry, crisis resilience prioritizes above all the safety of guests and staff when faced with natural hazard events, while also implementing measures to maintain essential services and swiftly recover from disaster impacts. Crisis resilience is also a dynamic process rather than a static state, meaning businesses need to adapt to environmental changes and learn from experience to better plan, prepare, respond and recover from future crisis impacts.

The guidelines consist of 9 key criteria that are divided into three main categories as shown on the next page. The guidelines break down each of the 9 criteria to discuss why they are important, what to do (to implement), and the relevant resources for further information. Where applicable, *Special Considerations* have been provided for each of the business types, which go beyond the shared primary goal of saving lives. For example, **hotels** may need to accommodate individuals who have been evacuated from disaster impacted areas, **restaurants and cafés** will need to protect their food supplies and ensure safe shutdown of kitchen equipment and gas lines, and **night-life entertainment venues** may need to manage large crowds at night and in a potentially loud environment.

Note that these guidelines represent recommendations only and are not deemed mandatory for HOTREC members. Implementation of these guidelines is done on a voluntary basis. Furthermore, all companies need to comply with local and national legislation, even where such legislation is more strict or even contradictory to these guidelines. Where applicable please also refer to supporting standards, guidelines etc., such as the EN 54 European standard on fire detection and fire alarm systems, the European Accessibility Act Directive (EU) 2019/882, the European Fire Safety Action Plan, as well as international standards such as ISO 31000 on Risk Management and ISO 22301 on Business Continuity Management Systems.

Site & Building	**1. Hazards & Site:** Complete a hazard assessment and analyze how characteristics of your property influence your vulnerability.
	2. Building Structure: Identify the characteristics of the building structure that influence vulnerability to hazards.
	3. Building Components: Identify vulnerable building components and implement measures to strengthen to better protect against hazard impacts.
Systems	**4. Infrastructure & Supplies:** Strengthen, backup and maintain critical infrastructure and stockpile emergency supplies.
	5. Evacuation & Rescue: Develop evacuation plans and systems to safely evacuate all potential occupants from multiple types of hazards.
	6. Warning Systems: Ensure effective systems are in place to alert and guide occupants and staff during emergencies.
Management	**7. Crisis Communication:** Establish plans to reliably communicate with occupants, staff, emergency services, news media and the public.
	8. Preparedness & Management: Establish disaster management plans and procedures that are informed by a risk assessment and address multiple hazards and scenarios.
	9. Business Continuity: Develop strategies to continue delivering essential services in emergencies, minimize downtime and limit financial loss.

Special Note on Climate Change Impacts to the Hospitality Industry

Climate change presents a range of challenges to the hospitality industry, affecting hotels, restaurants, cafés, and nightlife entertainment venues, with both direct and indirect impacts. Understanding these potential impacts is essential for hospitality businesses to develop crisis plans that address current hazards and risks while also adapting to future climate change scenarios.

Risk to life and property: Extreme weather events such as tropical storms, floods, and wildfires, are changing in frequency and magnitude due to climate change. These hazard events can cause significant threat to life and damage to physical properties.

Operational disruptions: Severe weather can lead to temporary business closures during weather events, but also longer-term shutdowns in areas heavily impacted or where critical infrastructure is severely damaged (e.g., roads, electricity, water supply).

Supply chain volatility: Climate change affects agricultural output and can lead to fluctuations in the availability and cost of food. This can force restaurants to adjust menus, change suppliers, or increase prices, potentially impacting customer satisfaction.

Changes to tourism seasons: Changes in climate can alter the attractiveness of a location. For instance, ski resorts may face shorter winter seasons, while sun destinations may be more attractive on shoulder seasons before and after summers considered too hot.

Changes to tourist behaviour: As temperatures increase tourists will seek activities that help them beat the heat and will prefer restaurants and sites that offer shade or air conditioning.

Heat stress on staff and guests: Prolonged exposure to high temperatures can lead to heat stress among employees and guests, posing health risks and potentially increasing liability for business owners. Providing ways for staff and guest to cool down will be part of future business for many, and may include increasing access to hydration, shade, air conditioning and rest.

Energy costs: Increasing temperatures will lead to higher demands for air conditioning, driving up energy costs. Conversely, colder, longer winters in some regions may increase heating costs.

Insurance and investment: As the risks associated with climate change grow, insurance premiums for properties in vulnerable areas are likely to rise. Additionally, investors may become more cautious about funding ventures in high-risk locations.

Water scarcity: Changes in rainfall patterns and increased droughts can result in water shortages, affecting everything from sanitation and drinking water supply to swimming pools and landscape maintenance, leading to reduced service provision, customer satisfaction and even water conflict with local communities or other businesses.

Criteria 1: Hazards & Site	**Complete a hazard assessment and analyse how the unique characteristics of your property and surrounding site can influence your vulnerability to these hazards.**
	Why it is important:
	Understanding the potential hazards that could impact your property is the first step in disaster planning. A risk assessment should be conducted to determine the likelihood and potential impact of different hazards. It is important to consider the unique characteristics of your property and surrounding site, as they may increase your vulnerability to hazards.
	What to do:
	• **Assess natural hazards:** Assess the likelihood and potential impact of hazards in the area, such as floods, heatwaves, drought, earthquakes and windstorms, including how these hazards may change over time due to climate impacts, changes in land use or other factors. • **Assess site vulnerability factors:** Identify site factors that could increase vulnerability to natural hazards, such as soil type, low lying areas, proximity to fault lines, and topography. • **Implement mitigation measures:** Implement and maintain hazard mitigation measures, such as shading devices and cooling stations for heatwave, water storage for drought, flood protection structures, drainage systems, retaining walls, and firebreaks. • **Assess threats on site:** Identify other potential hazards on site, such as the falling of large trees or electric lines or damage to gas lines. • **Assess threats off-site:** Identify if any buildings, structures or industrial facilities pose a threat to your property if damaged. • **Assess emergency access:** Identify the nearest hospitals and fire stations and assess the accessibility of the site to emergency vehicles.
	Resources:
	The Risklayer Explorer platform assesses the hazards in your area based on your location. https://www.risklayer-explorer.com/region/title=Europe Assessments of ground movement across Europe: https://egms.land.copernicus.eu/ Information on climate risks across Europe: https://www.eea.europa.eu/ Natural and man-made disaster risks in Europe: https://op.europa.eu/en/publication-detail/-/publication/89fcf0fc-edb9-11eb-a71c-01aa75ed71a1 European Commission Risk Data Hub: https://drmkc.jrc.ec.europa.eu/risk-data-hub#/

<table>
<tr><td rowspan="4">Criteria 2: Building Structure</td><td>Identify the characteristics of the building structure that influence vulnerability to hazards.</td></tr>
<tr><td>Why it is important:</td></tr>
<tr><td>The design and condition of the building structure are critical factors in the building’s ability to withstand the physical stresses caused by hazards, such as seismic loads, wind loads and direct impact from water or debris. The building should comply with the latest building codes that are based on an assessment of hazards in the area, such as earthquake, flood and windstorm. Older constructions that may not meet current safety standards and thus are generally more vulnerable to hazards. Factors such as the building’s shape, roof design, and previous damage also influences its ability to resist seismic loads and wind loads.</td></tr>
<tr><td>What to do:</td></tr>
<tr><td></td><td>• Identify the basic details of the building: determine the building age, size, and number of floors.
• Identify the building construction: applicable building code, seismic design, building shape, type of foundation, walls, floors and roof.
• Assess the building condition: assess the condition of the structure, roof and wall cladding, document and monitor areas previously damaged and confirm compliance with past building inspections.
• Structurally reinforce building: install cross bracing, ensure roofs are fastened (not nailed) to walls to prevent uplift, inspect cracked or spalling concrete, inspect all structural elements regularly and repair structure where needed.
• Design symmetric building: building shapes that are symmetrical are best for withstanding seismic loads, so asymmetries should be avoided such as soft storeys (lower floor with less structural support) or complex building footprints.</td></tr>
<tr><td></td><td>Resources:</td></tr>
<tr><td></td><td>The Hotel Resilient platform helps you determine the resilience of your building to different hazards. https://app.hotelresilient.org/en/

Guidelines for conducting building condition assessments:
https://ascelibrary.org/doi/10.1061/9780784404324
https://meridian.allenpress.com/jfmer/article/2/1/1/131400/Building-Condition-Assessments-Methods-and-Metrics
https://www.sciencedirect.com/science/article/pii/S0378778801001025

The Integrated Rapid Visual Screening for Buildings (Department of Homeland Security)</td></tr>
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<tr><td rowspan="4">Criteria 3: Building Components</td><td>Identify vulnerable building components and implement measures to strengthen them to better protect against hazard impacts.</td></tr>
<tr><td>Why it is important:</td></tr>
<tr><td>Ensuring the safety of building components is crucial for protecting both people and property during natural hazards. Properly installed windows featuring safety glass, along with protective shutters, help prevent injuries from flying debris during storms and high winds, while also minimizing damage. Doors and windows should function properly to prevent against wind damage and facilitate effective evacuations. Securing potential falling hazards helps to prevent injuries during seismic events or severe weather conditions. Fire protection measures are also important to reduce the spread of fire. Regular safety inspections help to identify and address safety concerns in a timely fashion.</td></tr>
<tr><td>What to do:</td></tr>
<tr><td></td><td>• Identify window safety issues: ensure safety glass is used where appropriate, install window protection such as shutters, and ensure all windows and doors function properly.
• Protect against falling hazards: structurally brace balconies, overhangs, air conditioning units, canopies, water tanks, partition walls, etc. to prevent them from falling due to seismic or other loads.
• Implement hazard mitigation measures: protect important areas by using for example, fire resistant construction materials, installing sprinklers, and positive pressurization of egress routes.
• Comply with fire/building inspections: regularly have the building inspected by the fire department or similar authority and comply with recommendations.</td></tr>
<tr><td></td><td>Resources:</td></tr>
<tr><td></td><td>Bracing systems and guidelines:
Non-Structural Earthquake Seismic Bracing Safety Program (berkeley.edu)
us-cat-seismic-bracing-systems-5151-il.pdf (ae-admin.com)
Report (ubc.ca)

International Fire Safety Standards: Common Principles</td></tr>
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<tr><td rowspan="5">Criteria 4: Infrastructure & Supplies</td><td>Strengthen, backup and maintain critical infrastructure such as water and electricity and stockpile emergency supplies to effectively respond to emergency situations.</td></tr>
<tr><td>Why it is important:</td></tr>
<tr><td>Effective disaster readiness depends on maintaining key infrastructure like water, electricity, and communication systems. Using backup systems such as generators and water tanks ensures continued delivery of essential services during system disruptions. Routine inspection and maintenance are needed to ensure critical infrastructure and backup systems are in good working condition. A stockpile of emergency supplies like food, water, and first aid kits are essential for quick response capabilities. Staff also need to be trained to manage and maintain critical infrastructure, as well as efficiently utilize backup systems and emergency supplies.</td></tr>
<tr><td>What to do:</td></tr>
<tr><td>Identify critical infrastructure: identify infrastructure that is needed to maintain operation during an emergency, such as electrical systems, water, sanitation and communication.
Protect critical infrastructure: equip critical infrastructure with hazard mitigation measures, such as structural support of free standing equipment, seismic dampers, sump pumps, raising to protect against flooding or installing flood walls / retaining walls.
Establish backup systems: install backup systems like generators and water tanks to ensure continuity of essential services during system disruptions.
Stockpile emergency supplies: maintain essential supplies, such as food, water, rescue equipment, flashlights and first-aid kits to meet your desired level of immediate response capabilities.
Test and maintain: create a maintenance manual for testing and maintaining according to manufacturer instructions.
Train staff: establish protocols for key staff to follow during infrastructure failures and train them to inspect and maintain critical infrastructure.</td></tr>
<tr><td>Resources:</td></tr>
<tr><td>N/A</td></tr>
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Criteria 5: Evacuation & Rescue	**Develop evacuation plans and systems to safely evacuate all potential occupants from multiple types of hazards, considering diverse hazard scenarios and covering all locations in and outside of the building.**
	Why it is important:
	Evacuation plans and systems are critical to ensuring a smooth, effective transfer of occupants to safe areas during an emergency. Plans need to accommodate a variety of hazard scenarios, ensuring all building occupants, including those with special needs, are accounted for and can evacuate or shelter in place as needed. Clear, accessible and safe evacuation routes are critical, as are evacuation signage, maps and instructions to ensure occupants can self-evacuate to safe assembly points. Additionally, equipping staff with essential rescue tools and training on evacuation roles enhances overall preparedness and response capabilities.
	What to do:
	• **Establish an evacuation plan:** create a plan to safely relocate all occupants, including those with special needs, from all areas of the building to safe assembly points in response to multiple hazards, such as fire, flood, or windstorm. • **Account for diverse scenarios:** revisit the evacuation plan and update to consider all potential emergency scenarios such as nighttime, power outage, large crowds, bad weather, smoke or blocked exits. • **Track occupants:** develop a system to track the number of occupants within and outside of the building during an evacuation. • **Establish safe assembly points:** designate safe areas both outside of the building for external evacuation (e.g., fire) and inside of the building for sheltering in place scenarios (e.g., flood, windstorm). • **Create safe evacuation routes:** ensure evacuation routes are well-lit, accessible and unobstructed to facilitate swift and safe exit. • **Install evacuation signage:** install clear signage and maps to guide occupants to safe assembly points, even during power outage. • **Coordinate with emergency services:** ensure you have coordinated your evacuation plans with emergency services. • **Acquire basic rescue tools:** obtain the tools needed to aid the rescue effort before external help is onsite, such as medical kits, stretchers, wheelchairs, hammers, crowbars etc. • **Train staff:** define staff roles in an evacuation, train them on their responsibilities and conduct emergency drills to test evacuation plans.
	Resources:
	Fire safety in existing hotels | EUR-Lex (europa.eu) Fire precautions in existing hotels Fire safety in restaurants: CFPA_E_Guideline_No_9_2012_F.pdf (cfpa-e.eu) European Accessibility Act (EAA) / Directive (EU) 2019/882

	Special Considerations:
	Hotels ● Guests staying at hotels typically do not have another place to go. As such, hotels should have efficient protocols for assessing the safety of the hotel post disaster prior to allowing guests re-enter. ● Hotels must also be prepared for the possibility of evacuation situations while guests are sleeping. ● Hotels may be asked to provide basic needs despite infrastructure and supply chain disruptions, including food, water, sanitation, communication, medical aid, and transportation. ● Hotels may be used to accommodate those evacuated from other areas; therefore, plans should be in place to coordinate these efforts, including: ○ Provision of transport from affected areas to the hotel ○ Rapid post-disaster damage assessment ○ Efficient protocols for safely re-entering the hotel following hazard impact. *Restaurants & cafés* ● Restaurants & cafés are often on the ground floor. During flood events plans / agreements may be needed to evacuate occupants up to higher levels of the building or to other buildings. ● Restaurants & cafés may be small enough to plan on verbal communication during evacuations, rather than an alerting system. ● Restaurants often do not have clear corridors, but rather large open areas. As such, exit signs should be installed in a way to be visible from any area. ● Kitchen areas should have clear guidelines for shutting off equipment during an evacuation to prevent the risk of fire or explosion. ● May require arranging transportation of occupants to other locations *Night-life Entertainment Venues* ● Night-life venues may lack outdoor areas on their property to evacuate to. Agreements may be needed with neighbouring properties or building owners to assign safe assembly points. ● Night-life venues are often on the ground floor. During flood events plans / agreements may be needed to evacuate occupants up to higher levels of the building or to other buildings. ● Kitchen areas should have clear guidelines for shutting off equipment during an evacuation to prevent the risk of fire or explosion. ● Evacuation protocols clearly need to plan for evacuating individuals at night. Emergency lighting that is connected to backup power in case of power failure is therefore critical. ● Night-life venues must also consider peak hours when crowding makes safe evacuation for challenging. ● For those entertainment venues that serve alcohol, evacuation plans need to consider aiding the evacuation of individuals who are intoxicated. ● May require arranging transportation of occupants to other locations

Criteria 6: Warning Systems	**Ensure effective systems are in place to alert and guide occupants and staff during emergencies.**
	Why it is important:
	Warning systems are crucial in ensuring the safety and timely response of occupants and staff during emergencies. The system should alert occupants through both visual and audible signals and provide clear instructions for action. Regular testing and maintenance of these systems ensure proper functioning. Training staff to understand and react appropriately to various emergency warnings is essential.
	What to do:
	• **Monitor hazards:** establish a system to monitor hazard developments in the area, such as forest fire, inclement weather, flooding, heat waves and drought. Install fire/smoke detectors throughout the building to detect fire within the building. • **Install alert system:** install a warning system within the building to alert staff and occupants through both visual and audible means to hazards and give instructions on what to do (e.g., voice command system). • **Test the system:** regularly test the warning system for technical functionality, effectiveness and coverage in all areas of the building and surrounding property and maintain / update as required. • **Train staff:** train staff to interpret weather and emergency warnings from official sources, how to activate warnings and how to respond to different warning alerts.
	Resources:
	Guidelines for European member states and public warning systems: eena.org/knowledge-hub/documents/public-warning-systems-2019-update/ European Early Warning and Information Systems - European Commission European Early Warning Systems: Present and the Future

Criteria 7: Crisis Communication	**Establish a crisis communication plan to reliably communicate with occupants, staff, emergency services and external stakeholders such as news media and the public.**
	Why it is important:
	During and after disaster events, communication may be required with emergency services for life-safety reasons, such as evacuation, search and rescue, medical assistance, or provision of basic human needs like food, water and shelter. In addition, communication between staff and with occupants can ensure their safety before, during and after an emergency.
	What to do:
	• **Establish a crisis communication plan:** outline how staff will communicate with each other, with emergency services and with occupants during different emergency scenarios, including during power outage and communication network disruptions. This could include the identification of a crisis management team, pre-approved messaging templates, and communication channels • **Establish communication systems:** establish communication systems for communicating with occupants including digital (mobile calls/sms, social media apps etc.) and simpler solutions (in-person, written messages, notice boards etc.) for redundancy. • **Establish emergency communication protocols:** ensure protocols are in place for staff to follow when requesting emergency assistance, communicating the status of the property post-disaster and how to respond to questions from the media or public regarding an emergency event that occurred at the property. • **Train staff:** train staff on the crisis communication plan and ensure emergency drills incorporate emergency communication with staff, occupants, emergency services and other external stakeholders.
	Resources:
	Social Media and Crisis Communication in Tourism and Hospitality | SpringerLink Developing an emergency communications plan: A template for business continuity professionals | TechTarget Emergency and Crisis Communications Report 2023

	Special Consideration:
	Hotels ● Hotels will need to communicate with a dispersed group of individuals in a variety of hotel areas, such as individual guest rooms, function rooms, parking garages, pool area, fitness room, public washrooms and restaurants. ● A variety of communication channels is recommended, particularly in large hotels where many guests need to be reached. *Restaurants and cafés* ● Considering a smaller space, restaurants and cafés can put more focus on communicating in person. *Night-life Entertainment Venues* ● Large venues with many occupants will also need multiple forms of communication, including speakers or potentially digital methods (SMS, Venue social media Apps). ● Smaller venues can put more emphasis on in person communication, but in loud noise environments megaphones may be required.

Criteria 8: Preparedness & Management	**Establish disaster management plans and procedures that are informed by a risk assessment and addresses multiple hazards and scenarios.**
	Why it is important:
	Disaster management plans and procedures are needed to ensure an adequate and effective response during an emergency. Adequate planning enables quick decision-making, resource allocation, and ensures the safety of both occupants and staff in emergency situations.
	What to do:
	● **Establish a disaster risk management plan:** ensure the plan addresses those hazards that have been identified through a disaster risk assessment. The plan should outline strategies for mitigating hazard impacts before, during, and after an event. ● **Plan a post-disaster assessment:** create protocols for a post-disaster damage assessment to assess impacts, safety concerns, ensure safe re-entry and identify critical needs.

- **Coordinate with local resources:** coordinate with stakeholders who can assist your response and recovery effort, such as emergency agencies, service providers and local businesses.
- **Document all safety incidents:** establish protocols to document all safety incidents and emergency actions taken during and after emergency events.
- **Establish staff emergency roles:** define staff roles and responsibilities during the different types of potential emergencies and ensure backup personnel are assigned to critical roles.
- **Train staff:** train staff on their roles and responsibilities and conduct emergency drills to test disaster plans.
- **Create SOPs and safety checklists:** having standard operating procedures (SOPs) for hazard events ensures staff know what to do and training staff on SOPs is critical. Safety checklists can also help guide staff in stressful situations requiring quick but reliable action.
- **Update disaster plans:** update disaster plans to account for new information on hazards or vulnerability, experience from disaster events or staff feedback from emergency drills and actual events.

Resources:

Disaster and Emergency Planning and Preparedness in Hotels

Sample Plan for Hotels and Resorts: Hurricane Management Guide for Hotels and Resorts (ncrla.org)

Special Considerations:

Hotels

- Hotels may be sourced for providing accommodations to individuals impacted by a disaster. As such, the hotel should have a efficient procedure to implement a post-disaster damage assessment by a qualified expert to ensure the building is safe to re-enter.

Restaurants and cafés

- Consider common hazards like kitchen fires or gas leaks.
- Develop protocols to manage food safety during power outages or other incidents that could compromise food storage conditions.
- Develop plans to protect critical equipment such as cooking equipment, appliances and ventilation systems.

Night-life Entertainment Venues

- Implement measures for managing large crowds during emergencies, including clear signage and accessible exits.
- Protect sound and lighting equipment and other technical setups from potential damage and have backups available.
- Coordinate closely with security teams to manage emergencies effectively, ensuring they are trained to handle diverse scenarios.

Criteria 9: Business Continuity	**Develop a strategy to continue delivering essential services during and after a disaster situation, including mechanisms to minimize downtime and financial loss.**
	Why it is important:
	Business continuity planning is essential to ensure that essential services can be maintained during and after a disaster, effectively minimizing downtime and financial losses that are critical to a business's survival post-crisis. This involves developing robust protocols to restore critical business functions swiftly, budgeting for significant repairs, and assessing the impact of potential disruptions on vital operations.
	What to do:
	• **Develop a business continuity plan:** establish protocols to continue or recover critical business functions after being impacted by disaster events. • **Budget for repairs:** establish a reserve fund to cover the cost of major repairs and replacement of key business assets. • **Assess business impacts:** identify critical business functions and the consequences of disruptions to them occurring from disaster impacts and estimate the maximum tolerable disruption for each business function. • **Diversify supply chain:** establish backup suppliers in case of supply-chain and service disruptions and develop relationships with local producers to shorten supply chains and reduce vulnerability. • **Redundant power and data:** establish backup power suppliers, invest in alternative energy and establish off-site data backup.
	Resources:
	Business continuity and disaster recovery guide: BCDR_Pillar_PDF_Download.pdf (ttgtmedia.com) What Is Business Continuity and Disaster Recovery? (oracle.com)
	Special Considerations:
	Hotels • Prioritize guest safety and comfort, ensuring operations of critical functions such as emergency lighting, heating/cooling, and front desk operations. • Maintain continuity of all services, including reservation systems, room service, and housekeeping.

	Restaurants and cafés ● Ensure backup power sources for critical equipment like refrigerators and freezers. ● Implement protocols for managing food safety during disruptions affecting refrigeration. ● Maintain a reserve fund to cover loss of perishable goods and unexpected expenses. ● Develop a flexible supply chain with alternative suppliers and backup menu options adaptable based on available ingredients. *Night-life Entertainment Venues* ● Have contingency plans for rescheduling or relocating events with minimal disruption. ● Secure appropriate insurance to cover potential revenue losses from cancelled events and damage to equipment.

These guidelines have been developed as a cooperation between Hotel Resilient and HOTREC. The Hotel Resilient website and platform contain more practical tools/templates/checklists for those wishing to delve deeper into resilience measures. Further information can be found here:

Hotel Resilient:

www.hotelresilient.org
info@hotelresilient.org

HOTREC - Hotels, Restaurants & Cafés in Europe:

www.hotrec.eu
Hotrec@hotrec.eu

Annex 1: Unique impacts and considerations for different hazards

Heatwave	• Health risks for guests and staff due to excessive heat. • Provide places for people to cool down, provide plenty of drinking water, offer hats and sunscreen and provide staff with light clothing. • Evacuation of particularly vulnerable individuals depending on severity of heatwave and capacity of building to provide relief. • Transportation of individuals may be needed with air conditioned vehicles. • Increased demand on cooling systems and potential for HVAC failures. • Increased operational costs due to higher energy consumption. • Food safety challenges in kitchens due to higher ambient temperatures.
Drought	• Water supply limitations affecting sanitation, food preparation, and guest amenities. • Increased costs if alternative water supplies need to be sourced. • Operational challenges due to water conservation measures. • Adjustments to landscaping and outdoor aesthetics may be needed. • Higher forest fire risk in areas surrounded much vegetation.
Flood	• Risk of electrocution if power is not shut down. • Evacuation and transportation challenges due to flooded/damaged roads and bridges. • Risk of water damage, including to interiors, furnishings elevators, equipment and long-term mold issues. • Introduction of contaminated water into interior areas. • Damage to food and kitchen equipment in restaurants and cafés.
Earthquake	• Structural damage to buildings, requiring immediate safety assessments prior to re-entering the building. • Can sever water, electricity and gas lines leading to system disruptions and secondary hazards of electrocution, fire and explosion. • Potential damage to critical equipment and infrastructure. • Seismic bracing is needed throughout the building. • Building inspection by a structural engineer may be needed to ensure the building is safe to re-enter.

Windstorm	• Potential for external and internal damage from high winds. • Reinforcement of windows and doors may be needed to prevent winds from entering and damaging building components. • Special roof to wall bracing is required to prevent sloped roofs from blowing off the building. • Disruption of power and communication lines. • Risk of injury from flying debris. • Maintenance of trees should be carried out regularly to prevent weak branches from falling and injuring people or damaging property. • Prior to strong winds, outdoor areas can be cleared of material such as chairs, tables, and umbrellas, to prevent them from becoming projectiles.
Forest Fire	• Risk of rapid spread near wooded areas, endangering individuals at the property and risking the spread of fire to the building. • Smoke inhalation risk to a wider area, including indoors. • Disruption of utility services such as electricity and water, highlighting the importance of having backup systems in place. • Need fire-resistant building materials. • Need firebreaks, i.e., the removal of flammable vegetation close to buildings. • During fire, monitoring of situation is critical to determine if, when and how evacuation should be carried out. • Evacuation challenges due to blocked or hazardous routes, requiring pre-planned escape paths and communication strategies. • Collaboration and regular and reliable communication with local fire departments and emergency services is critical.
Volcano	• Risk of ashfall leading to respiratory problems and reduced air quality. • Potential roof collapse due ash accumulation, especially on flat roofs. • Disruption to transportation including potential shutdown of airports. • Contamination of water supplies. • If close proximity, potential for evacuation due to lava / pyroclastic flows.

Annex 2: Case Studies

Reference	Summary of key lessons
European Travel Commission (ETC) (2024). *Crises in Tourism: Impacts and Learnings from European Destinations*. ISBN No: 978-92-95107-72-4	Presents several case studies from Europe, including: 1. **Iceland - Eyjafjallajökull Volcano Eruption (2010)**: volcanic ash cloud on European air travel and the broader implications for the tourism industry in Iceland and Europe. 2. **Greece - Economic Crisis (2009-2018)**: economic crisis in Greece and its severe impact on the tourism sector, highlighting measures taken to revive tourism despite economic challenges. 3. **Spain - Barcelona Terror Attacks (2017)**: how they affected tourism, including immediate impacts and longer-term recovery strategies. 4. **France - Paris Terror Attacks (2015)**: impact on tourism and the strategies implemented for recovery and resilience in the aftermath. 5. **Italy - Earthquakes in Central Italy (2016)**: effect on local communities and tourism are analysed, with a focus on disaster response and rebuilding tourism.
Ivkov, M., Blešić, I., Janićević, S., Kovačić, S., Miljković, Đ., Lukić, T., & Sakulski, D. (2019). Natural hazards vs hotel industry resilience: An exploratory study among hotel managers from Europe. *Open Geosciences*, *11*(1), 378-390.	Focuses on the resilience of the hotel industry in Europe to natural hazards, emphasizing the necessity for hotels to maintain operations during and after such events. It highlights how the physical damage and economic risks arising from natural hazards like floods, windstorms, and earthquakes necessitate a resilience strategy to minimize long-term consequences and ensure a swift recovery. The study, based on responses from 63 hotel managers across 12 European countries, reveals that managerial experience, organizational size, and category significantly impact a hotel's resilience capabilities. Managers with prior disaster experience or who operate larger hotels tend to implement more robust disaster resilience measures. The findings highlight the importance of continuous preparedness and adaptive management strategies within the hospitality industry to cope with the challenges posed by natural hazards.
Türkeș, M. C., Stăncioiu, A. F., Băltescu, C. A., & Marinescu, R. C. (2021). Resilience innovations and the use of food order & delivery platforms by the romanian restaurants during the covid-19 pandemic. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(7), 3218-3247.	Discusses how Romanian restaurants adapted to the challenges posed by the COVID-19 pandemic through innovations in food delivery. The study analyses how these innovations influenced restaurant managers' attitudes and intentions toward using online food delivery platforms, incorporating technological, financial, business strategy, and social innovations. These measures were vital in maintaining operations during restrictions, demonstrating the critical role of dynamic adaptation in the hospitality industry during crises.

Kotani, H., Yokomatsu, M., & Ito, H. (2020). Potential of a shopping street to serve as a food distribution center and an evacuation shelter during disasters: Case study of Kobe, Japan. *International Journal of Disaster Risk Reduction*, *44*, 101286.	Focused on a shopping street in Kobe, Japan, this paper explores the viability of using restaurants and shops as food distribution centers and evacuation shelters following a disaster. The study introduces a method for estimating the number of people that can be supported with food and drink using retail inventories and determines how many individuals can be accommodated within these spaces during emergencies.
Ward, V., & Mattern, A. (2019). Sustainability, safety and security: A case for hospitality industry response to natural hazards. *Journal of Tourism, Hospitality & Culinary Arts (JTHCA)*, *7*(3), 1-16.	Discusses the hospitality industry's response to the “Camp Fire” in California and its effects on local businesses. It illustrates how the industry, particularly hotels, played a crucial role in aiding those affected by the disaster. Hotels in and around the affected areas saw a significant increase in demand, offering shelter and basic necessities to evacuees. However, the restaurant sector experienced devastating losses, with many establishments completely destroyed. The paper also highlights the broader impacts on tourism, noting decreased tourist activity due to air quality issues and the destruction of attractions. The paper explores the critical role of the hospitality sector in disaster response and recovery, underscoring the importance of preparedness and community support within the industry.
Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2021). Developing disaster resilience: A processual and reflective approach. *Tourism Management*, *87*, 104374.	Focuses on how local tourism organizations in Northern Queensland managed the impacts of Cyclone Debbie and adapted their operations towards resilience practices. It highlights the significant physical and natural strain on resources caused by the cyclone, which affected tourism heavily due to damaged infrastructure and natural tourism assets like coral reefs. Despite these challenges, most tourism organizations were able to reopen shortly after the cyclone, showcasing adaptive capacity and enhanced resilience practices.
Ngin, C., Chhom, C., & Neef, A. (2020). Climate change impacts and disaster resilience among micro businesses in the tourism and hospitality sector: The case of Kratie, Cambodia. *Environmental research*, *186*, 109557.	Discusses the vulnerability of small and micro enterprises in Kratie, Cambodia, including restaurants and guesthouses to climate change and related natural hazards, particularly floods and storms. The study focuses on how these businesses have been impacted and the adaptive measures they have employed to cope with these challenges. Key findings include: 1) micro businesses are predominantly impacted based on their location, business type, production, and supply chains, 2) most responses to climate-related hazards have been temporary and reactive rather than planned long-term measures, and 3) adaptive infrastructure could significantly improve these businesses' ability to prepare for and manage disaster impacts.
Sydnor-Bousso, S., Stafford, K., Tews, M., & Adler, H. (2011). Toward a resilience model for the hospitality & tourism	Focuses on understanding how natural hazards affect jobs within the hospitality sector. The authors propose a model that incorporates community resilience—measured through social, human, and physical capital—to explain changes in hospitality jobs post-disaster. They find that areas with strong social networks,

industry. *Journal of Human Resources in Hospitality & Tourism*, *10*(2), 195-217.	higher education levels, and robust physical infrastructure can better sustain hospitality jobs after disasters. This resilience framework suggests that enhancing community capital can help mitigate the economic impacts of disasters on the hospitality industry.
Ismiyati, A., & Lestari, F. (2020). Analysis on emergency and disaster preparedness level of hospitality industry in Palu and Gorontalo cities. *International Journal of Safety and Security Engineering*, *10*(5), 671-677.	Explores emergency and disaster preparedness in the hospitality sector of Palu and Gorontalo, which are susceptible to natural and non-natural hazards due to their geographical characteristics. Through surveys, focus group discussions, and interviews, the study evaluates the preparedness of hotels using a resilience and risk management framework. It finds a significant variance in preparedness levels between the two cities, with Palu showing moderate preparedness and Gorontalo showing low preparedness. The paper underscores the need for enhanced collaboration between the private sector and government to bolster disaster risk reduction programs and improve emergency management across the hospitality industry in these high-risk areas.