

# Risklayer: Understanding and Reducing Risks

## Risk Analytics & Management

Risks increasingly shape our everyday lives and are ever more present in politics and current affairs. Every crisis, whether natural or human-made, challenges our understanding of our individual and societal risk. Risklayer models and analyzes these risks and identifies the solutions to reduce them.

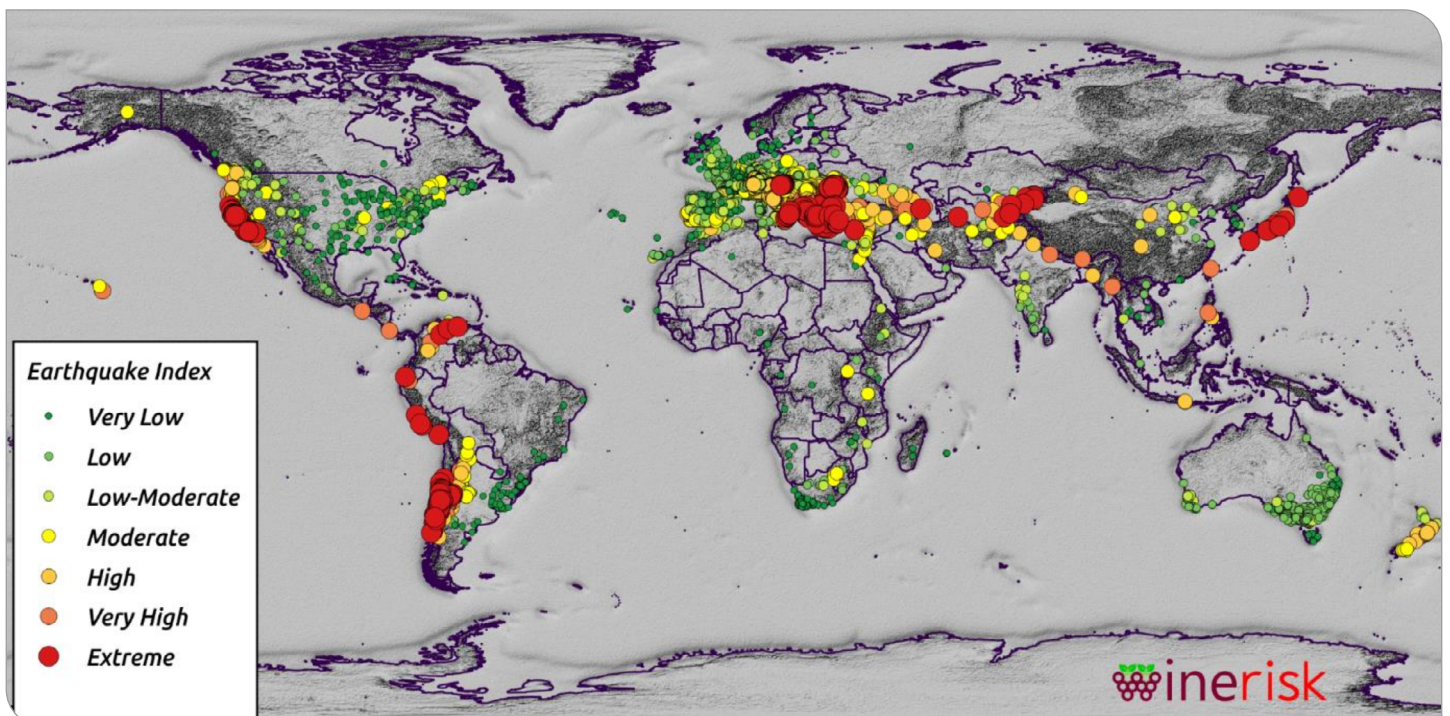
### Risklayer - A Spinoff from KIT

Risklayer GmbH is a spin-off from Karlsruhe Institute of Technology (KIT) and in particular its Center for Disaster Management and Risk Reduction Technology (CEDIM). Risklayer identifies, measures, and analyzes the layers that define our risks. Risklayer addresses all stakeholders representing interests in regions and sectors threatened by natural and human-made risks.

### Understanding Risks

Risklayer combines risk analytics and risk management. Risk analytics is based on years of research experience and practical application. Over the years, risk and hazard models have been developed for different natural hazards: From earthquakes to tsunamis to volcanic eruptions to climatological factors or global pandemic emergencies. The quality of our modeling has been tested and validated many times by industry (e.g. insurance companies). Modeling is complemented by extensive and daily updated catastrophe databases ("CATDAT"), which quickly provide reliable estimates of damage figures for both forecast and acute crisis situations. This methodology also allows for the design of sector-specific products, e.g. for the wine industry ("Wine Risk", see Figure 1), tourism or critical infrastructure. Together with CEDIM, Risklayer maintains an ever-growing online information platform for disaster and risk communication: [www.risklayer-explorer.com](http://www.risklayer-explorer.com). In fact, this platform became a central hub for infection data during the Covid pandemic, which received global attention as part of a Risklayer-led crowd-sourcing project.

Figure 1: Project WineRisk: Earthquake risk index for wineries worldwide. In addition to earthquakes, WineRisk also takes into account volcanoes, weather events, and climate change impacts.



## Sustainable Is Far from Resilient

Sustainability already is a household word in business, while resilience is still rather unknown. Those who know their own risks can prepare themselves better; however, the appropriate catalog of actions usually is not on hand. Risklayer complements the supply of risk analytics information by a comprehensive audit system to strengthen resilience and, for example, reduce future damage and profit loss due to disaster. Thus, a risk assessment is transformed from a simple numerical value into a discrete recommendation for action. Risklayer, for example, offers a variety of audits as part of its "Hotel Resilient" project ([www.hotelresilient.org](http://www.hotelresilient.org)) to familiarize

hotels and other tourism businesses with the concept of resilience. This system is already being applied and continuously expanded, especially in Southeast Asia with strategic partners such as PATA (Pacific Asia Travel Association) and partner countries (Thailand, Philippines, Palestine).

This combination of risk analytics and management to increase resilience is nearly universal and can be applied to other sectors, such as transportation, education, and commercial business.

The screenshot shows the Hotel Resilient Audit web application interface. On the left is a navigation sidebar with the following items: Dashboard, Analytics, Hotel, Auditing, Library (highlighted), Your Audits, Achievements, Archive, Tasks, Standards, E-Learning, and Plans & Pricing. The main content area is titled "AUDIT LIBRARY" and features a "More Info" button in the top right. Below the title, there are several audit cards:

- COVID-READY**: This audit is tailored to the COVID-19 pandemic. Score: 80.0 / 100 %.
- HEALTH & SAFETY**: This audit covers the fundamental criteria to provide a healthy and safe hotel environment. Score: 80.0 / 100 %.
- HOTEL SECURITY**: This audit takes covers the assessment of readiness to safely handle security issues. Includes a "Start Audit" button.
- SAFETY IN THE WORKPLACE**: This audit covers important safe work procedures and safety standards. Includes a "Start Audit" button.

Below these cards is a "Resilience Baseline Audits" section with a progress bar showing a score of 81.7 / 100 %.

Further down are three more audit cards:

- CRISIS & CLIMATE RESILIENCE**: This comprehensive multi-hazard audit covers baseline of Hotel Resilient Crisis Standards. Score: 64.3 / 100 %.
- CLIMATE FRIENDLY**: This audit covers the fundamental implications of climate change for your hotel site and destination. Score: 84.3 / 100 %.
- RESPONSIBLE HOTEL**: This audit addresses issues of social & environmental responsibility in tourism. Score: 93.8 / 100 %.

At the bottom of the main content area, it states: "Developed by Hotel Resilient GmbH in cooperation with Risklayer GmbH. All rights reserved."

Figure 2: Screenshot of the Hotel Resilient Audit web application.

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