

# THE DEVASTATING IMPACT OF TSUNAMIS ON THE TRAVEL INDUSTRY



A risk that can be expected. Again, and again huge waves devastate coastal areas. In addition to threat to humans, this represents a significant financial risk for the tourism industry and travel destinations as well. Simulations of possible impact of tsunamis indicate that an annual cost of several hundred million dollars is expected. Moreover, tourism is flourishing at tsunami-prone beaches, as reported by researches.

A huge wall of water washed away people and hotels. The shocking footage of the 2004 Indian Ocean tsunami is remembered by many. **The worst consequence was human suffering: more than 226,000 people lost their lives.**

In addition, the tsunami caused damage of more than ten billion US dollars. Researches from the Karlsruhe Institute of Technology have now dedicated a study to the financial consequences of tsunamis.

## **Simulated tsunamis devastate tourist beaches**

With their specially developed simulation model “TsuPy”, scientists released several thousand possible tsunamis on around 24,000 beaches. They also analyzed the events in places where no tsunamis have been documented, but they are possible in the future.

Based on the data obtained, they then estimate the economic relevance for more than 1,000 travel destinations. As a result, the Institute compiled a so-called tsunami risk index. “We used the latest and best tourism and hotel data,” says co-author James Daniell.

Researchers came with a list of the ten destinations most prone to economic losses from tsunamis: 1. Hawaii, USA, 2. Lima, Peru, 3. Valparaiso, Chile, 4. Guerrero, Mexico, 5. Bali, Indonesia, 6. Greater Los Angeles, USA, 7. Phuket, Thailand, 8. Southwestern Turkey, 9. Bio Bio, Chile, 10. Puntarenas, Costa Rica.

The results also showed that the bottom line is that every ten years in the industry an economic loss of more than a billion dollars due to the impact of tsunamis can be expected. The research also clearly showed that more travelers are choosing endangered regions of Europe and the world as their destination.

“In relation to the large worldwide revenues from beach tourism, the tsunami risks are rather small. After

all, in some places, decades or centuries can pass between two great tsunamis. However, the losses for individual events in some places can be huge,” says co-author Andreas Schäfer.

### **A billion-dollar tsunami every ten years**

In the Maldives, more than 20% of all beach resorts had to close as a result of the 2004 tsunami. In Phang Nga and Phuket in Thailand, up to two-thirds of hotels closed.

“After past events, such as the Indian Ocean, a significant proportion of the tourists in the whole region stayed away and prices fell due to the loss of beaches, damage to hotels and infrastructure problems,” Schäfer added.

As data show, devastating tsunami waves can reach the shores in many parts of the world. As in the Mediterranean, regions such as Crete and Antalya are also included in the top 100 of the risk index.

“In absolute terms, Hawaii shows by far the biggest financial risk for tourism due to tsunamis,” Schäfer noted. **This is because Hawaii’s location in the middle of the Pacific is surrounded by many tsunami sources**, such as Japan, Alaska, South America and other regions. In this case, however, there is a clear positive aspect. The majority of damage there is purely economical thanks to sufficient early-warning systems on site.

“The best thing that hotels, businesses and communities near beaches can do is prepare themselves appropriately. For example, through emergency services and evacuation plans to protect the lives of residents, employees and guests. We hope that our risk index is a first step in strengthening the perception of possible tsunami risk in some places,” Schäfer concluded.

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