

NATURAL DISASTERS

Exposed: Why Vanuatu is the world's most 'at-risk' country for natural hazards

Vanuatu is the world's most at-risk country for natural hazards, according to a UN University WorldRiskIndex. And it's not just storms, earthquakes, volcanoes or tsunamis that are the Problem.



Some saw it coming: For four years running, Vanuatu has been ranked the world's most disaster-prone country in an [annual WorldRiskReport](#) published by the United Nations University's Institute for Environment and Human Security (UNU-EHS).

The country's 2014 ranking of 36.5 percentage points places the country well ahead of second place Philippines (28.3), as well as South Pacific neighbor Tonga (28.2), or Guatemala (21). Germany, by comparison, ranks 147th at 3 percentage points, with Qatar last (or best, in this case) at .08 percentage points. The industrialized world's most at-risk nation (17th place) is Japan, at 13 percentage points.

But just what is it that makes life on Vanuatu so dangerous?

1. Natural disasters

Name a natural hazard, and Vanuatu likely knows it. In a country of roughly 250,000 people, earthquakes place on average 90,000 per year at risk.

Then again, what's "yearly risk" with regard to rising sea levels or (infrequent) earthquakes?

The exposure figure is an average: A quake affecting a million people once a decade places 100,000 per year "at risk." The same holds true for storms. Future rising sea levels of one meter will put about 30,000 people at risk.



Destruction from a 7.4 Vanuatu earthquake in 2002 for which no official death toll was ever published

This means 64 percent of Vanuatu's citizens are exposed to natural hazards every year. It's significant in that nearby Tonga comes in at just 55 percent and that both volcanoes and tsunamis - risk factors for both countries - were not in the global analysis.

"Vanuatu is unique," said the scientific head of the WorldRiskIndex, Professor Jörn Birkmann, in an interview with DW.

Storms affect the small island nation far differently than, say, Indonesia, the Philippines or US.

"You might have Hurricane Sandy going through the east coast, but the other parts of the country are not exposed," Birkmann says.

When a storm hits tiny Vanuatu, the entire country is affected - including the capital.



Vanuatu's Mount Yasur - a part of the plate tectonics that lead to many earthquakes

2. Coping

This is another way of saying, "Will relief efforts actually get to the people who need them?"

With eighty-one percentage points on the index, Vanuatu lacks coping capacities.

Quake victims in Haiti had it worse, with 91 percentage points lacking coping capacities, and Afghanistan topped the list at 94 percentage points.

First, this reflects a government's inability to help citizens in distress. Second, it's a deeper problem of corruption and poor governance.



The UNU-EHS' index uses data from the US-based Fund For Peace and Transparency International

For example, the UNU-EHS' index bases its numbers on data in the Failed State Index by the US-based Fund For Peace, as well as the Corruption Perception Index by Transparency International.

One of point of comparison: Manila was better able to "cope" with Typhoon Haiyan since the Philippine capital was not struck severely by the storm. Porta Vila, Vanuatu, however, was struck as fiercely as its outlying islands.

Helicopters were unable to conduct immediate search and rescue operations on its 65 inhabited islands.

3. Susceptibility

On susceptibility, Professor Birkmann cites sanitation as a proxy indicator: In good times, just 57 percent of Vanuatu's citizens enjoying access to sanitation and sufficient sewage disposal.

"This might sound high - it's more than half - but here in northern countries you have 98, 99 percent. Or compare it to the Philippines, and problems with Typhoon Haiyan, where access to sanitation is still much higher at 74 percent. So Vanuatu has severe deficits and challenges," he says.

Other contributing factors: Roughly ten percent of the country lives in extreme poverty, with eight percent of people chronically undernourished.

4. Adaptation

"Usually the Red Cross looks at a months-long recovery process. But for us it was important to look ahead, 50 years, at the capacity to change," says Birkmann.

Factors include adult literacy rates, school enrollment, gender equality, investment, public health expenditures, life expectancy, and others. Importantly, it also includes a factor which some countries can change, but Vanuatu mostly cannot: Where its citizens live.

"In the US or UK you could prohibit construction in flood areas. But here, you don't have too many places that are not exposed to hazards," Birkmann says.



The chances they will go through this again are high

Professor Birkmann says politicians often fail to address - or intentionally avoid - social and governmental failings when addressing disaster prevention and relief.

WorldRiskIndex

To arrive at Vanuatu's overall WorldRiskIndex number of 36.5 percentage points, the UN University researchers took the number of citizens potentially exposed to natural hazards and multiplied it by an overall "vulnerability" - an average based on susceptibility, lack of coping capacities and a lack of adaptive capacities.

Birkmann cites Japan as an example.

"Japan is highly exposed with the number of people exposed to earthquakes, but disaster risk is lower due to a higher level of preparedness with regard to building codes and infrastructure there," he says.

"The question of whether an extreme impact is a catastrophe heavily depends on the vulnerability."

Jörn Birkmann is the scientific head of the WorldRiskIndex and director of the University of Stuttgart's Institute of Spatial and Regional Planning. He has just returned from the World Conference on Disaster Risk Reduction in Sendai, Japan (14-18 March) - at which the president of Vanuatu, H.E. Baldwin Lonsdale, appealed for international help after Cyclone Pam.

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