

Nancy Daneau, February 14, 2022
Global Health Disaster Preparedness and Response

Assignment: Threat and Hazards Assessment Table for [Vanuatu](#)

Vanuatu: The world’s most ‘at-risk’ island nation (36.5 on the [WorldRiskIndex](#)) for environmental disasters. Vanuatu is most vulnerable to the world-wide effects of climate change with high likelihood, high vulnerability/susceptibility and poor resilience/coping capacity yet Vanuatu argues they are a negligible polluter/contributor to human causes of climate change such as greenhouse gases and carbon emissions. Economic costs of disasters may be quantifiable but other losses from disaster forced migration including tradition, culture, and identity are immeasurable.

Natural	Technological	Human-caused
<p>Resulting from acts of nature</p> <ul style="list-style-type: none"> • Cyclones: 2-3 cyclones impact Vanuatu each season (Nov-April). <ul style="list-style-type: none"> ○ Cyclone Covi (this week/ 2022 caused evacuations, opening of shelters for hundreds and shut-down of businesses and schools), Cyclone Harold (2020) affected more than 40% of the population, some isolated without aid for weeks. ○ Cyclone Pam (2015)-one of the worst natural disasters in Vanuatu history with 250 mph winds. 166,000 impacted, uncountable deaths, thousands injured. 50%-90% of shelters on some islands completely wiped out. Destruction totaled at least 60 percent of the country’s gross domestic product. • Earthquakes: over 2,000 seismic events reported each year (tremors and quakes of over 5 on the Richter scale occur on a regular basis) • Volcanic Eruptions- 9 active volcanoes (7 on land, 2 beneath the sea). 	<p>Involves accidents or the failures of systems and structures</p> <p>Infrastructure: In good times, just 57 percent of Vanuatu's citizens have access to sanitation and sufficient sewage disposal. Infrastructure affects recovery time. For Vanuatu, recovery from disasters is decades long; estimated cost of building capacity is \$1.7T in investment/international aid and it will take Vanuatu 50 years*.</p> <ul style="list-style-type: none"> • Energy: in 2019, 64% of the population had access to electricity; 86% of the country’s electricity comes from fossil fuels and 13% from renewables/low-carbon sources • Water Supply: islands live from rainwater as there are no rivers. High risk for drinking water contamination. • Food Supply: food security risks are high. Roughly ten percent of the population of Vanuatu lives in extreme poverty, with 8% of people chronically undernourished. Agricultural yields falling due to impacts of climate change disasters-crops that once were plentiful – lettuce, tomatoes, and a sort of spinach called island cabbage – are now harder or impossible to grow. • Communications and Information tech: (lack of proper connectivity capacity for smartphones, drones, social media for emergency warning and response) 	<p>Caused by the intentional actions of an adversary</p> <ul style="list-style-type: none"> • Corruption and security Vanuatu has granted citizenship to wealthy investors, including suspects wanted by Interpol, so high risk that the EU in Jan 2022 sought in a first across the globe to suspend visa-free travel (“golden passports”) • Poorly enforced regulations Construction standards and building codes not adhered to leads to building collapse increasing the death toll One factor many countries can change (by prohibiting construction in flood areas for example); not a viable option in Vanuatu • Lack of societal and policy adaptation to prevailing environmental conditions Ex: Women of villages hold meetings to voice their concerns, and discuss how to share dwindling resources to avoid conflict. Food supplies, rising costs, and lost farming income are a constant concern. Women from farming families can’t send their kids to school because they can’t afford the equivalent of \$170 in yearly school fees. The women cover the costs as a group – the community stepping in to

<ul style="list-style-type: none"> ○ Manaro Vouï volcano made the record books in 2018: injected 600,000 tons of sulfur dioxide into stratosphere (3 x's what was released from all combined worldwide eruptions the prior year) • Droughts making staple crops harder to grow, and food more expensive; lost income is driving migration away from land that had supported families for generations • Floods • Tsunamis • Rising sea level <ul style="list-style-type: none"> ○ By 2030, temperatures will increase in Vanuatu by up to 1° Celsius (33.8° Fahrenheit) per year. The sea level has risen by 6 mm (0.2 inches) per year since 1993, and will continue to rise to reach up to 18 cm (7 inches) <p>64% of Vanuatu's citizens are exposed to natural hazards every year because most of the population lives along the coast of the eight largest islands.</p>	<ul style="list-style-type: none"> • Sanitation and air pollution management are lacking. • Transport and traffic-lack of paved roads and vehicles; access by air limited. During Typhoon Haiyan, helicopters were unable to conduct immediate search and rescue operations on Vanuatu's 65 inhabited islands • Public health: Lacks basic societal functions including access to EMS basic and advanced life support, medical services/health care, police and fire rescue, military support. Lack of ability to address and provide care for long term impacts of infectious disease, respiratory illness, etc. Faith-Based Organizations (FBO) such as Churches, Community-Based Organizations (CBO) and Non-Government Organization's (NGO) provide a minimal level of support to many rural villages. The entire country of Vanuatu (65 inhabited islands) have a total of 5 public hospitals and 1 private hospital with 27 health centers located across the islands. There are 200 aid posts in remote areas. <p>Susceptibility and coping/recovery ability, adaptability to meet the challenges of climate change effects: where the Red Cross looks at months-year(s) long recovery processes, Vanuatu expects a 50 year-long effort to change*.</p>	<p>provide because the land can no longer.</p> <ul style="list-style-type: none"> • Governance structure not self-sufficient; reliant upon demand driven internationally supported disaster response. <p>*Vanuatu Humanitarian Team (VHT) established in 2011 as a collaboration between Vanuatu based NGOs, the Red Cross, UN and government agencies. Government line ministries act in cluster lead roles in emergencies and VHT members act as co-leads. Country Preparedness Package created Nov 2017. Legal and political battles 2020-current.</p>
--	---	--

Notes and sources:

- 1) For 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). Vanuatu is the country with the highest risk of disaster (index value: 36.28) among the 171 countries included in the World Risk Index 2016. Sources: <https://www.dw.com/en/exposed-why-vanuatu-is-the-worlds-most-at-risk-country-for-natural-hazards/a-18319825>
- 2) Population growth: since becoming an independent republic in 1980 (from France and UK "management"), the population of Vanuatu and it's 80 islands has more than doubled (115,000 in 1980 to over 320,000 in 2022) Source: <https://worldpopulationreview.com/countries/vanuatu-population>
- 3) Energy access, consumption and composition: <https://ourworldindata.org/energy/country/vanuatu?country=~VUT>
- 4) Corruption and security: <https://www.dw.com/en/eu-looks-to-suspend-vanuatu-from-visa-free-travel-list-over-citizenship-for-sale-scheme/a-60402520>

- 5) United Nations Office for the Coordination of Humanitarian Affairs: <https://www.unocha.org/office-pacific-islands/vanuatu>
- 6) Volcanoes on Vanuatu: Yasur is most accessible (see episode 1 of Will Smith's "[Welcome to Earth](#)" series on National Geographic)
- 7) 2018's biggest volcanic eruption of sulfur dioxide was in Vanuatu: <https://www.sciencedaily.com/releases/2019/02/190228113547.htm>
- 8) <https://www.thenewhumanitarian.org/news-feature/2020/12/1/pacific-vanuatu-disappearing-island-climate-change-cyclone-lawsuit-migration>