

### CRISIS IMPACT OVERVIEW

- On 17 December, a **magnitude-7.3 earthquake struck near Port Vila, Vanuatu's capital**, on Efate Island in Shefa province. The epicentre was around 60km west of Port Vila. By 18 December, there were between 10–14 confirmed deaths, over 200 injuries, and an unknown number of people missing. Casualties are expected to increase as search and rescue efforts and assessments progress (IB 18/12/2024; UNICEF 18/12/2024 a; OCHA 19/2/2024; IFRC/Vanuatu Red Cross 19/12/2024; ECHO 18/12/2024).
- On 18 December, there were several subsequent tremors, including one measuring 5.5 on the Richter scale, in the same area. A tsunami warning was also issued after the earthquake, but was lifted on 18 December (The Conversation 18/12/2024).
- **The earthquake and aftershocks affected around 80,000 people**, about 23% of Vanuatu's population, including at least 14,100 children. Port Vila, which has a population of over 49,000 according to the 2020 census, experienced the most severe impacts (UNICEF 18/12/2024 a; OCHA 19/2/2024; City Population accessed 19/12/2024). Landslides also occurred in nearby villages on Efate Island (UN RC Fiji 18/12/2024). By 19 December, the extent of damage in different municipalities across Efate Island and Shefa province more widely remained unknown.
- **The earthquake and aftershocks caused widespread structural damage**, including collapsed buildings and bridges, and **triggered landslides** that further obstructed rescue efforts (UNICEF 18/12/2024 a). By 18 December, landslides had made Port Vila's downtown area inaccessible (CARE Australia 18/12/2024).
- The Vanuatu Government declared a seven-day state of emergency, effective from 17 December, and a 18:00–06:00 public curfew has been instated for Port Vila's Nambatu neighbourhood, except for essential services (OCHA 18/2/2024).

### ANTICIPATED SCOPE AND SCALE

- The earthquake's extensive damage to buildings and infrastructure suggests that the **number of fatalities is likely to increase** as assessments continue (UN 18/12/2024; US News 17/12/2024). By 17 December, many people remained trapped under collapsed buildings (AP 17/12/2024).
- Following a magnitude-7 earthquake, **aftershocks can persist for weeks or months**, with the intensity and frequency of tremors gradually decreasing over time (The Conversation 18/12/2024). Such tremors may cause further casualties, damage, and hinder relief operations (The Times 18/12/2024).
- On 19 November, a **low-pressure system moving towards Vanuatu was expected to bring heavy rainfall**, with an estimated 10-60% likelihood of developing into a cyclone (Reuters 19/12/2024). Vanuatu's tropical cyclone season runs from November–April. Cyclones, or associated heavy rainfall, in the coming weeks will increase humanitarian needs and complicate the response (Vanuatu Meteorology and Geo-Hazards Department 25/10/2024).
- By 19 December, an earthquake-induced power outage had damaged submarine internet cable equipment, leading to a **severe acid leakage and potential ecological disaster**. Personal protective equipment to facilitate repairs and environmental assessments were urgently required (OCHA 19/2/2024).

### HUMANITARIAN CONSTRAINTS

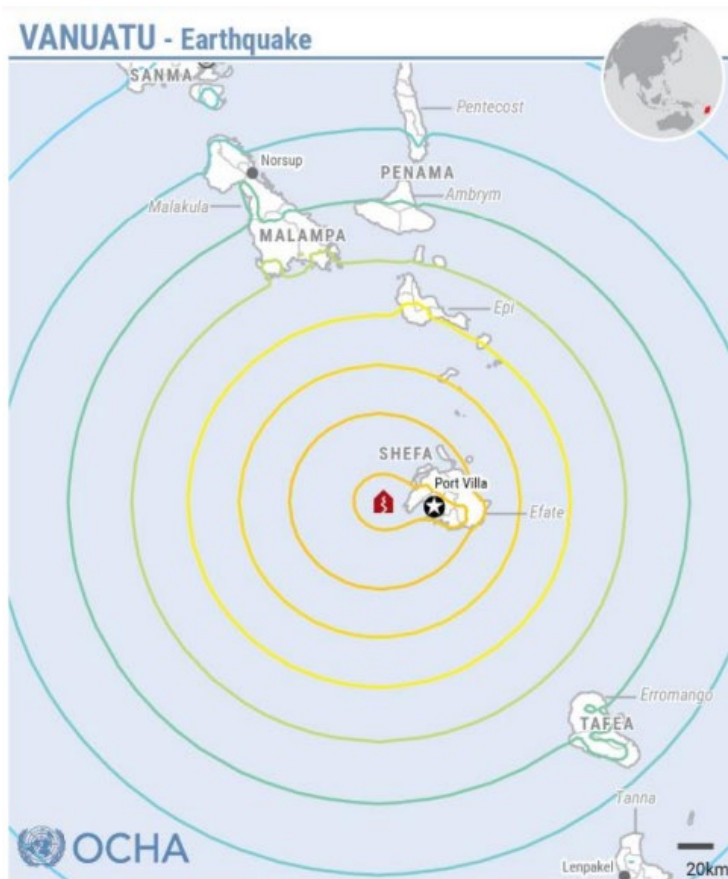
The earthquake and subsequent landslides have caused the collapse of many buildings and significant damage to infrastructure, including bridges, such as the Tagabe, Teouma, and Black Sand bridges (Caritas 18/12/2024; UN 18/12/2024). Damaged infrastructure impedes access to affected areas, delaying the delivery of essential services and supplies (AP 17/12/2024). By 18 December, fuel shortages had led to long fuel lines, potentially complicating the transport of supplies (CARE Australia 18/12/2024).

Disrupted communications delayed initial response efforts. By 18 December, Vodafone and Digicel phone networks had been reactivated for voice calls and SMS, but communications in many areas still had yet to be restored (UNICEF 18/2/2024 a; Reuters 17/12/2024; UN 18/12/2024; OCHA 18/12/2024). Internet remained down across Efafe by 19 December (OCHA 19/2/2024).

ATMs are non-operational, disrupting banking services and potentially affecting the availability of cash for humanitarian operations and people's access to essential items (OCHA 18/2/2024).

By 18 December, landslides were blocking access to the international seaport, likely delaying the transport of emergency aid to the island (UN 18/12/2024; ECHO 18/12/2024). By the same date, commercial flights to the main airport had been suspended because of damage to the terminal building and road network (OCHA 18/2/2024). By 19 December, the Pacific Humanitarian Aviation Service was being activated to transport humanitarian personnel and supplies from Fiji to Port Vila (OCHA 19/2/2024)

Map 1. Earthquake-affected areas of Vanuatu



Source: OCHA (18/12/2024)

## CRISIS IMPACTS AND PRE-CRISIS CONTEXT

### Shelter

The earthquake damaged an unknown number of homes (Reuters 17/12/2024; AP 17/12/2024). On 19 December, the Disaster Evacuation Centre Management Cluster confirmed that around 950 people were displaced, although this estimate is likely to rise as assessments are ongoing. Displaced families were sheltering in evacuation centre sites in Manples, Britano, and Kaweriki, or with host families (OCHA 19/2/2024). The conditions in evacuation centres are unknown.

By 18 December, an unknown number of people were also sheltering on football fields without protection from the elements, urgently in need of tarpaulins and other shelter materials (IFRC/Vanuatu Red Cross 19/12/2024).

In Port Vila, shelters were vulnerable to earthquakes and other hazards, as a long-term lack of urban planning and limited land availability had led to informal urbanisation, characterised by large, overcrowded 'squatter' settlements (ADB 11/2011; Komugabe-Dixson et al. 23/07/2019). Traditional thatch housing in Vanuatu is also vulnerable to damage from climate hazards (IFRC 03/07/2024).

In Vanuatu, where around 97% of land is under customary tenure, the response to past climate hazards involving displacement and evacuation revealed the importance of incorporating traditional systems and knowledge into management of displacement sites (ANU 11/07/2024).

### WASH and health

The earthquake significantly affected Port Vila's water supply infrastructure, with reports of severe damage to two major water reservoirs (UNICEF 18/12/2024 a; Caritas 18/12/2024). By 18 December, people were buying stocks of water, which were running out (CARE Australia 18/12/2024). By 19 December, water and power had been restored to some areas, including the Vanuatu Central Hospital (OCHA 19/2/2024). Pre-crisis access to WASH in urban areas of Vanuatu was relatively high, with 99% access to improved water and 99% access to improved sanitation facilities in 2023 (WHO/UNICEF 03/2023).

Damage to water reservoirs and supply systems, and the associated contamination of water, has increased concerns about waterborne disease transmission, emphasising the need for immediate WASH interventions (UNICEF 18/2/2024 a; Reuters 17/12/2024). Efate Island, where Port Vila is located, recently experienced a rise in watery diarrhoea cases, which peaked from the beginning of October until mid-November. Cases had decreased by the last week

of November (17 reported) compared to first week (around 250 reported). By 6 December, however, water samples collected from five rainwater tanks and four water systems in north Efate still contained E.coli bacteria (Govt. Vanuatu 06/12/2024). Earthquake-induced damage to and contamination of water systems may cause a renewed increase in cases. This will have a particularly severe impact on children under five, who comprised the majority of watery diarrhoea cases in Vanuatu in 2024 and for whom WASH-related diseases are a leading cause of death across the Pacific (Govt. Vanuatu 06/12/2024; UNICEF 01/06/2024).

Damage to WASH infrastructure may also increase the transmission of vector-borne diseases by promoting mosquito breeding in contaminated water. Malaria and dengue are both endemic to Vanuatu, with large-scale dengue outbreaks in 2016 and 2017, and malaria outbreaks in 2022 and 2023 (UNDP accessed 18/12/2024; World Mosquito Program 06/2023).

It is also likely that the earthquake will have a significant impact on the mental health and psychosocial wellbeing of affected communities. Adverse mental health and psychosocial impacts were reported among communities affected by recent climate hazards in Vanuatu, including Cyclone Lola in October 2023 and cyclones Judy and Kevin in February–March 2023 (IFRC 03/07/2024 and 01/07/2024).

Earthquake-induced damage to health facilities will decrease treatment options for people with health needs. The main hospital in Port Vila has suffered structural damage, resulting in the temporary suspension of certain services (Caritas 18/12/2024). By 18 December, operating theatres remained non-functional and some medical services had been moved to the capital's main military base (OCHA 18/12/2024; CARE Australia 18/12/2024). Eight other health facilities in unspecified locations were affected but remain operational (OCHA 19/2/2024). Prior to the earthquake, Vanuatu's health system was already overburdened, as rates of non-communicable diseases, health threats from climate change, and illnesses from communicable diseases had been increasing (WHO 01/01/2017).

### Livelihoods and food insecurity

The destruction of infrastructure and markets has interrupted economic activities, affecting livelihoods, particularly in urban centres such as Port Vila (Govt. of Australia 18/12/2024; UN Water accessed 18/12/2024). The impact of market destruction will be particularly high for women, who made up around 80% of local market vendors in Vanuatu in mid-2021 (UNDRR 08/07/2024; Water for Women Fund 09/07/2021). Disruptions to tourism and associated services following the earthquake will also hinder income generation for the many inhabitants of Port Vila who rely on wage-based income from the tourism sector (Urban Resilience Hub accessed 18/12/2024). By 19 December, tourists were leaving Port Vila on military evacuation flights and several cruise ships had changed their itineraries to exclude Port Vila (Reuters 19/12/2024; Travel Weekly 18/12/2024).

Prior to the earthquake, frequent climate hazards and development challenges had led to high livelihood needs in Vanuatu. A September–October 2023 WFP survey of around 1,280 households across Vanuatu (15% urban, 85% rural) found that over 26% employed crisis or emergency livelihood coping strategies, including begging and reducing health expenses. This indicates low capacity to cope with shocks, including climate hazards (WFP 11/02/2024).

Disrupted access and damage to markets is likely to increase food insecurity for the 20% of the Vanuatuan population based in urban areas, including Port Vila, who are reliant on local markets for access to food (PAFPNet accessed 18/12/2024).

## DRIVERS OF THE CRISIS

### Vulnerability to earthquakes

Vanuatu's location on the Pacific 'Ring of Fire', a belt of seismic activity surrounding the ocean, makes the country highly prone to earthquakes. Since 1990, there have been 11 earthquakes with a magnitude of 7 or higher within 200km of the 17 December event (Govt. of Australia 18/12/2024; The Conversation 18/12/2024). The last magnitude-7+ earthquake in Vanuatu occurred in January 2023, near Espiritu Santo Island, around 400km north of Port Vila. This quake did not cause significant damage (VOA 08/01/2023).

## COMPOUNDING/AGGRAVATING FACTORS

### Frequency of cyclones

Vanuatu is among the countries most vulnerable to climate hazards. Between 2016–2023, the country experienced ten such events, including cyclones, earthquakes, and volcanic activity (WB 07/06/2024). Cyclones Judy and Kevin hit Vanuatu (including Shefa province, where Port Vila is located) in late February and early March 2023, affecting nearly 197,500 people, over 66% of Vanuatu's population. The cyclones disrupted the livelihoods of nearly 39,000, particularly farmers growing temporary and seasonal crops, those employed in the informal economy, and micro-entrepreneurs. The cyclones also damaged or destroyed over 19,000 homes, WASH infrastructure, and around 60 health facilities (IFRC 01/07/2024). By December 2024, the extent of repair of this damage was unknown, but it is likely that repair and reconstruction efforts have decreased affected communities' resources and capacity to cope with the 17 December earthquake.

## FUNDING AND RESPONSE CAPACITY

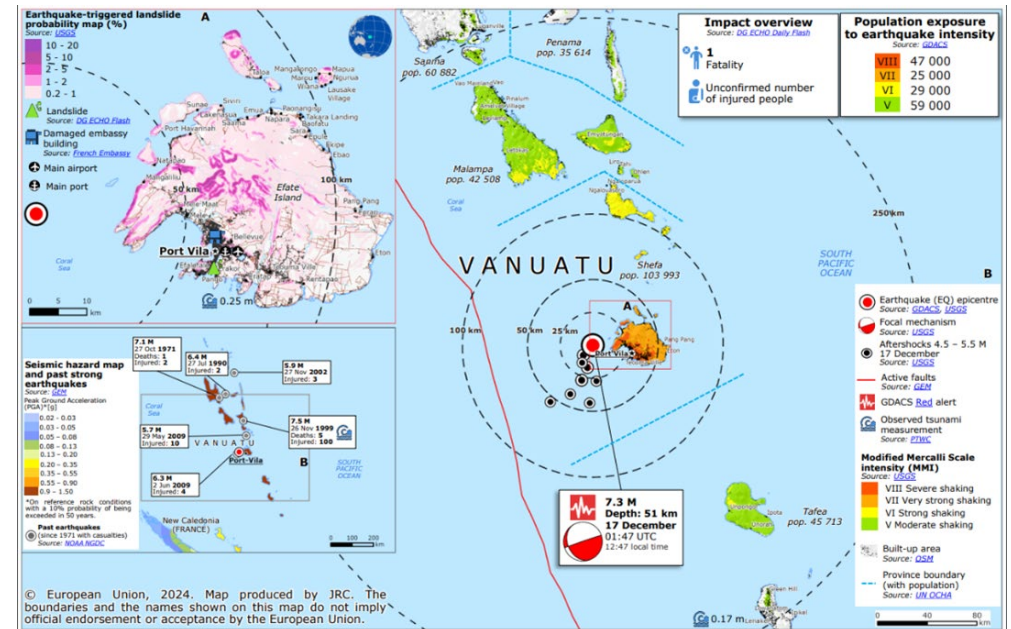
The Government of Vanuatu is leading the response and has requested international assistance from the UN (OCHA 18/2/2024; IFRC/Vanuatu Red Cross 19/12/2024). By 18 December, the Government had activated the National Emergency Operations Centre and a national cluster response (OCHA 18/12/2024). The Government generally leads coordination mechanisms in response to climate hazards. Response and recovery efforts are led by different government offices, with the National Disaster Management Office leading the Emergency Response Plan and the Prime Minister's Office leading the Recovery and Resilience Plan. This separation of responsibilities has previously led to coordination challenges (IASC 21/10/2024).

The Vanuatu Red Cross Society, which supports response and recovery as a government auxiliary, has activated its Emergency Operations Centre and is leading the shelter response (IASC 21/10/2024; IFRC/Vanuatu Red Cross 19/12/2024).

Australia has deployed a AUD 2 million (USD 1.25 million) immediate response package, including a 64-person Disaster Assistance Response Team and two canines for urban search and rescue. New Zealand and France are preparing additional aid, and the Vanuatu Government has declared a state of emergency to coordinate efforts (Govt. of Australia 18/12/2024; UNICEF 18/12/2024 a). By 19 December, emergency medical teams had been deployed from Australia, Fiji, and New Zealand, and search and rescue teams from Australia and New Zealand (OCHA 18/2/2024 and 19/2/2024).

By 19 December, the Emergency Relief Coordinator made available USD 1 million from the Central Emergency Fund (OCHA 19/2/2024). By 18 December, OCHA had deployed a UN Disaster Assessment and Coordination team to assist with the coordination of supplies. The Pacific Humanitarian Team was coordinating access and support for the Government (UNICEF 18/12/2024 b; OCHA 18/12/2024).

Map 2. Impact of the earthquake (by 17 December 2024)



Source: ECHO (17/12/2024)