

SAINT VINCENT AND THE GRENADINES

Impact of Hurricane Beryl

CRISIS IMPACT OVERVIEW

On 1 July, Hurricane Beryl made landfall in Saint Vincent and the Grenadines (SVG) as a Category 4 hurricane, later evolving into a Category 5 hurricane boasting maximum sustained winds of 270km/h (MOFA 08/07/2024; IFRC 06/07/2024; OCHA 09/07/2024). Although all areas of SVG reported damages, **the hurricane caused the most extensive damage in the southern Grenadines Islands of Canouan, Mayreau, and Union, where it affected 90–100% of homes** (IOM 10/07/2024). There was less severe damage assessments on Saint Vincent island and in the northern Grenadines islands, where assessments were ongoing as of 11 July (CDEMA 12/07/2024).

Roughly **36% of the total estimated population (110,872) of Saint Vincent and the Grenadines have been potentially affected by the hurricane.**

Table 1. Post-Hurricane Beryl impact across Saint Vincent and the Grenadines

	NATIONAL	CANOUAN ISLAND	MAYREAU ISLAND	UNION ISLAND	BEQUIA ISLAND
Hurricane-related deaths	8	1	2	4	1
Hurricane-related injuries	28	1	6	21	0
Population in emergency shelters (11 July estimates)	1,021 (733 in Saint Vincent; 288 in the Grenadines)	130	0	103	55
Population potentially affected	40,000	-	-	-	-

Sources: OCHA (09/07/2024); IOM (10/07/2024); MapAction (11/07/2024 a); MapAction (11/07/2024 b); ECHO (10/07/2024); PAHO (08/07/2024) and (12/07/2024)

Islands with most reported damage from hurricane beryl



Source: ACAPS using CDEMA 12/07/2024 and UNICEF 05/07/2024

Information gaps

- There is limited granular pre-crisis information for Saint Vincent and the Grenadines, as the most recently available census was conducted in 2012. Therefore, it is difficult to have a comparative understanding of the impact of Hurricane Beryl across each affected area in SVG.
- There is limited information on specific population groups that may be particularly affected by the impacts of the hurricane.

Anticipated scope and scale

- In May 2024, NOAA predicted a very high (85%) probability of above-normal hurricane activity in the Atlantic Basin, including the Caribbean, during the 2024 June–November hurricane season. **An estimated 8–13 storms were projected to become hurricanes, four to seven of which will be ‘major’ (Category 3 or above).** This is partly attributed to La Niña conditions, which have a moderate (60%) chance of occurring from June–September 2024 and which lessen wind shear (changes in the speed and direction of wind). Higher wind shear can ‘tear apart’ a hurricane, while lower wind shear during La Niña can allow more powerful symmetrical storms to form (NOAA 23/05/2024; WMO 03/06/2024; SA 23/05/2024). **There is a risk for one or more of these predicted hurricanes to affect SVG, compounding the damage and needs from Hurricane Beryl and slowing recovery.**
- The World Meteorological Organization and Columbia University’s International Research Institute both predict **a moderate (40–50%) probability of above-normal precipitation and a very high (70+%) chance of above-normal temperature in SVG during the August–October 2024 period** (WMO accessed 15/07/2024; IRI accessed 15/07/2024). This may increase the intensity of the May–October rainy season, aggravating the water-related damage from Hurricane Beryl, including water contamination and shelter damage (WB accessed 10/07/2024). **This will expose people in unrepaired shelters to rainfall, high heat, and associated health conditions, including the increased spread of dengue, as hot and wet conditions are ideal for mosquito breeding.**
- On 10 July, the number of people displaced or living in damaged homes outside emergency shelters was unknown, largely because of access constraints and disrupted telecommunications (IOM 10/07/2024). A clearer picture of the number of displaced people, the conditions in which they are living, and the number and extent of damaged homes will emerge in the coming weeks.

Humanitarian constraints

- **Canouan Island:** on 4 July, satellite imagery detected five blocked roads in southern Canouan, on the outskirts of Charlestown. There was no visible damage to the airfield or heliport (EC 04/07/2024 a). Until 10 July, there was no capacity to unload boats arriving on the island (OCHA 09/07/2024). The hurricane completely destroyed electricity and telecommunications services, which were still unavailable by 9 July, preventing needs and damage assessments (CDB 09/07/2024; OCHA 09/07/2024). On 13 July, the Prime Minister announced that electricity would be restored to the main road and main village in Canouan (Charlestown) by around 28 July. While electricity will be available from this period, however, it may take longer to connect buildings, which are still undergoing damage inspections (St. Vincent Times 15/07/2024).
- **Mayreau Island:** on 2 July, satellite imagery detected the destruction of two-thirds of berthing structures (for mooring boats and loading/unloading cargo and passengers) in Mayreau (EC 03/07/2024 a). The docking capacity following this destruction is unknown. Until 6 July, there were no vehicles on the island (AP 05/07/2024). By 9 July, the only way to access Mayreau was through a two-hour boat journey, and telecommunications disruptions prevented needs and damage assessments (OCHA 09/07/2024). On 13 July, the Prime Minister announced that electricity would be restored to Mayreau by the first week of August. While electricity will be available from this period, however, it may take longer to connect buildings, which are still undergoing damage inspections (St. Vincent Times 15/07/2024).
- **Mustique Island:** on 4 July, satellite imagery indicated possible damage to a coastal road on northeastern Mustique Island. There was no visible damage to the airfield, airfield runway, or heliport (EC 04/07/2024 b).
- **Union Island:** on 2 July, satellite imagery detected damage to the airfield and heliport but no visible damage to the airfield runway. The imagery also identified the destruction of and damage to roads in and around Ashton, Big Sands, and Clifton towns, as well as the destruction of or possible damage to all berthing structures around Clifton (EC 05/07/2024). By 9 July, the airport runway was operable, but the control tower remained damaged (OCHA 09/07/2024). On 9 July, there was still no power and limited telecommunications throughout Union Island (ETC/WFP 10/07/2024; CDB 09/07/2024). On 10 July, there was still no capacity to unload boats arriving on the island (OCHA 09/07/2024).
- **Mainland St. Vincent:** by 11 July, ships were able to enter the mainland port (CDEMA 12/07/2024). Responders have installed a satellite-based Starlink data connectivity device in Kingstown city to improve internet connectivity and facilitate the humanitarian response (ETC 10/07/2024).
- SVG’s digital infrastructure is relatively weak. In June 2022, only 21% of the population used the internet, and less than 60% had active mobile broadband subscriptions.

Access to the internet and communications was highly limited in most rural areas (UNDP 06/2022). This may affect humanitarian responders' efforts to communicate with affected communities, particularly those in the southern Grenadines Islands, who are not in emergency shelters and/or have not yet been evacuated to Saint Vincent.

CRISIS IMPACTS

Shelter

The hurricane damaged or destroyed 90–100% of buildings on Canouan, Mayreau, and Union Islands in the southern Grenadines (IOM 10/07/2024).

Table 2. Destroyed, damaged, and potentially damaged buildings in SVG based on satellite imagery from 2-4 July

ISLAND	RESIDENTIAL BUILDINGS DESTROYED	RESIDENTIAL BUILDINGS DAMAGED	RESIDENTIAL BUILDINGS POTENTIALLY DAMAGED	TOTAL AFFECTED RESIDENTIAL BUILDINGS	TOTAL RESIDENTIAL BUILDINGS ON THE ISLAND, PRE-HURRICANE
Union Island	869	553	30	1,452	1,473
Saint Vincent Island	600 (damage and loss not disaggregated in reporting)		-	-	-
Canouan Island	243	229	250	722	722
Mayreau Island	136	54	43	233	249
Mustique Island	0	0	0	8	855

Sources: EC (05/07/2024, 04/07/2024 a, 03/07/2024 a, and 04/07/2024 b); PAHO (10/07/2024)

- **The reported occupancy of emergency shelters differs daily, with significant access constraints limiting accuracy, particularly in the Grenadines Islands.** It is also possible that people are moving in and out of shelters, with some returning to homes despite the damage. **Estimates from 10 July indicate that there were 1,021 people in emergency shelters, including 733 on Saint Vincent Island and 288 on some of the Grenadines Islands (i.e. Bequia, Canouan, and Union)** (PAHO 12/07/2024).
- The number of people outside emergency shelters is unknown. There are reports of people staying in their damaged homes or moving to other private homes that are also damaged, where they face overcrowding, exposure to rainfall, damaged WASH facilities,

and physical hazards from damaged buildings. People in damaged homes require shelter materials, repair materials, and NFIs (IOM 10/07/2024).

- **In the southern Grenadines, the hurricane damaged pre-existing emergency shelters.** By 14 July, affected communities on unspecified smaller islands were creating makeshift shelters in churches and schools (OCHA 16/07/2024). Improvised shelters require weather-proofing (e.g. with tarpaulins) and improved privacy in sleeping quarters (IOM 10/07/2024).
- According to the most recently published census from 2012, over 90% of houses in SVG had metal sheet roofs, which are highly susceptible to damage from strong rain, wind, and other natural hazards (UNDP 03/12/2021). **As a result of this underlying weakness in construction materials, the damaged and destroyed homes on Canouan, Mayreau, and Union Islands will likely require extensive repairs, ideally with more robust materials.**

WASH

- **By 5 July, the hurricane had destroyed most latrines and outhouses in the affected islands. The lack of running water requires affected communities to boil water or drink bottled water** (PAHO 08/07/2024).
- **By 14 July, there were reports of animals decomposing under debris across SVG** (OCHA 16/07/2024). This may contaminate water sources and pose health risks.
- Union Island: by 14 July, most island residents were without water because of destruction to rainwater harvesting structures. The hurricane also destroyed nearly all latrines and outhouses (OCHA 16/07/2024). By 10 July, the two emergency shelters on the island, in Clifton and Ashton, had running water and toilets flushed using buckets. Several cisterns were in use, but there was a need for chlorination. Water was contaminated at the main hospital (PAHO 10/07/2024). On 12 July, the contaminated water storage tank on the island was already being drained and cleaned (PAHO 12/07/2024).
- Saint Vincent: until 6 July, four emergency shelters on Saint Vincent Island had no water supply (Calliaqua Town Hall, New Testament Church – Lodge Village, Barrouallie emergency shelter, and Georgetown Primary School) (MapAction 06/07/2024 a). A rapid assessment of five emergency shelters in Saint Vincent on an unspecified date prior to 10 July identified the need to improve or maintain the bathrooms and create gender-segregated WASH facilities with working locks (IOM 10/07/2024).
- **Prior to Hurricane Beryl, WASH access in SVG was relatively extensive.** In 2018, WHO and UNICEF estimated that 98% of SVG's total population (98% urban, 97% rural) had access to improved water sources, and 92% of the population (95% urban, 88% rural) used improved sanitation services (WHO/UNICEF accessed 10/07/2024). **Water access was more limited in the Grenadines Islands, which are drier than Saint Vincent and have fewer streams and rivers, leading to more frequent water shortages.** In 2021, people

in the Grenadines harvested rainwater as their primary water source using public and private catchments, with a minority using wells (UNDP 03/12/2021). Hurricane Beryl has likely contaminated rainwater catchments, streams, and rivers, compounding these challenges.

Health

- **Damage to WASH facilities, the contamination of water sources, and overcrowding in shelters increase the likelihood of waterborne and vector-borne disease transmission.** Dengue fever is endemic in SVG and usually peaks during the May–October rainy season, with an average of 12–20 laboratory-confirmed cases reported annually (IFRC 13/09/2021; WB accessed 10/07/2024). The Ministry of Health, Wellness and the Environment's Epidemiology Unit reported a total of 16 cases of dengue fever from January–June 2024, one case more than the total reported in 2023 (Loop 21/06/2024). By 12 July, mosquito infestations had been reported in several emergency shelters. Displacement, telecommunications disruptions, and poor healthcare access continued to prevent adequate disease monitoring and surveillance, increasing the likelihood of uncontrolled outbreaks (PAHO 12/07/2024).
- **Prior to Hurricane Beryl, the most significant health challenges in SVG were non-communicable diseases and HIV/AIDS** (UNDP 03/12/2021). Hurricane-related displacement and damage to healthcare facilities may temporarily interrupt treatment for these conditions.
- **Hurricane-induced damage to health facilities will limit the capacity to cope with disease outbreaks and other health challenges** in the coming months. **Until 5 July, none of the five health facilities in the southern Grenadines were operating because of damage.** These included Canouan Clinic on Canouan Island, Mayreau Health Centre on Mayreau Island, and Ashton Clinic, Clifton Smart Hospital, and Clifton Clinic on Union Island, where there were nine other damaged hospitals and clinics (PAHO 08/07/2024; MapAction 06/07/2024 b; MapAction 06/07/2024 c). 38 (78%) of the 49 health facilities across SVG remain operational, but the majority have sustained damage that requires immediate repair (PAHO 08/07/2024). By 6 July, these included six damaged clinics in Saint Vincent: Park Hill clinic, Diamonds clinic, Biabou clinic, Calder clinic, Levi Latham Health Complex, and Kingstown health clinic (MapAction 06/07/2024 b; MapAction 06/07/2024 c).
- Prior to Hurricane Beryl, SVG had a relatively accessible and functional health system, providing free primary healthcare and mental health services.

Livelihoods and food security

Hurricane Beryl caused significant damage to the agriculture and fishery sectors, which provide livelihoods for many Vincentians (WFP 11/07/2024). Hurricane damage to berthing structures in the Grenadines has likely affected fisheries, a particularly important source of livelihood in the islands. Crops have also likely sustained extensive damage (EC 05/07/2024 and 03/07/2024 a; UNDP 03/12/2021). In August 2021, the fishing industry directly or indirectly employed an estimated 2,500 people (around 2% of the 110,000-strong population), and an estimated 10,500 (around 10% of the population) were registered as farmers (UNDP 03/12/2021). In 2017, the agriculture, forestry, and fishing sectors collectively employed around 15% of Vincentians (21% of men, 8% of women) (MOFP accessed 12/07/2024 b).

The hurricane will also decrease tourism, which accounts for nearly 40% of (mostly informal) employment in SVG. Women and youth, in particular, often work informally in the accommodation and tourism subsectors, which employed around 55% of women in the labour force in 2022. People employed in the informal sector rarely benefit from social security and have fewer protections from work disruptions, including natural hazards (UNDP 03/12/2021 and 06/2022).

The hurricane damaged SVG's main commercial port in Kingstown (St. Vincent Times 04/07/2024). This may affect food imports, on which SVG is highly reliant. Global food price fluctuations have a significant effect on local food prices, contributing to high inflation since the beginning of 2022 (CARICOM/WFP 08/2023).

An August 2023 estimate based on a survey of 386 respondents (73% women, 27% men; location within SVG not reported) found that 30% of Vincentians experienced severe food insecurity and 38% experienced moderate food insecurity. Contributors included only eating a few times of food and a lack of nutritious food, all of which were more common among women, youth, and lower-income respondents (CARICOM/WFP 08/2023).

DRIVERS OF THE CRISIS

Hurricane season and climate change

SVG is vulnerable to hurricanes, tropical cyclones, droughts, landslides, and volcanic eruptions (WB accessed 10/07/2024). The hurricane season in the Atlantic Basin normally runs from June–November. Historically high Atlantic Ocean temperatures are contributing to an intense 2024 hurricane season by allowing storms to collect more energy from the ocean surface, causing higher wind speeds. Warmer water also takes up more space and contributes to rising sea levels by melting glaciers and icebergs, increasing coastal flooding. A warmer atmosphere holds more precipitation, allowing heavier rainfall (NOAA 23/05/2024; BBC 01/07/2024).

SVG's climate is tropical, with a May–October rainy season. El Niño brings warmer and drier-than-average conditions between June–August, while La Nina brings colder and wetter-than-average conditions (WB accessed 10/07/2024).

Between 2000–2021, natural hazards directly affected approximately 65,000 people in SVG. These hazards included Hurricane Tomas, which affected 6,100 people in October 2010; the 2013 floods that affected 17,400 people in December; the 2016 floods that affected 25,000; and the 2021 volcanic eruptions that affected 13,300 (OCHA 20/09/2022; UNDRR 16/01/2014; IFRC 27/12/2011). These recurrent hazards have decreased community coping capacities. In an August 2023 survey of 386 Vincentians from unspecified locations, 29% of the respondents identified as having low resilience to natural hazards, with a higher proportion (36%) among low-income respondents (CARICOM/WFP 08/2023).

COMPOUNDING/AGGRAVATING FACTORS

Unemployment and economic downturn

SVG experienced an economic downturn resulting from COVID-19 and disruptions to global markets between 2020–2021. However, a 4.9% growth and a decrease of year-end inflation to 2% are projected in 2024. Despite SVG's economy having strengthened from 2022–2023, employment has not fully recovered, with persistent unemployment among young men in particular. Employment opportunities remain vulnerable as the highly tourism-based economy remains exposed to frequent shocks, particularly natural hazards (IMF 08/05/2024).

FUNDING AND RESPONSE CAPACITY

- By 10 July, there were 25 organisations (UN agencies, INGOs, and national NGOs) present on Saint Vincent Island and 15 present on Union Island. No organisations maintained a presence on Canouan and Mayreau Islands (OCHA 10/07/2024).
- On 18 July, the Government is scheduled to request parliament approval of the use of ECD 140 million (USD 51.8 million) for hurricane recovery (St. Vincent Times 14/07/2024).
- On 12 July, the Government hired three companies for heavy-duty cleaning across SVG (PAHO 12/07/2024).
- On 10 July, a Samaritan's Purse emergency medical team was established on Union Island, where no healthcare facilities were operational (PAHO 10/07/2024).

Table 3. Pre-hurricane statistics on Saint Vincent and the Grenadines

	NATIONAL	BEQUIA ISLAND	CANOUAN ISLAND	MAYREAU ISLAND	UNION ISLAND
Total population	110,872 (2022 estimate)	4,946 (2012 census)	1,683 (2012 census)	271 (2012 census)	2,096 (2012 census)
2022 estimated population under 15 years old	27,340 (25%)	-	-	-	-
2022 estimated population over 65 years old	10,140 (9%)	-	-	-	-
2022 population density (people/km ²)	285	-	-	-	-
Population with disabilities	-	-	-	-	-
2016 estimated poverty rate	30%	-	-	-	-
August 2023 estimated food insecurity rate	68% (30% severe, 38% moderate)	-	-	-	-
2018 access to improved water sources (estimate)	98%	-	-	-	-
2018 access to improved sanitation sources (estimate)	92%	-	-	-	-

Sources: MOFP (accessed 10/07/2024); MOFP (accessed 12/07/2024 a); CIA (accessed 10/07/2024); UNICEF (07/2021); WHO/UNICEF (accessed 10/07/2024); CARICOM/WFP (08/2023)