

## St. Vincent and the Grenadines

### La Soufriere Volcano

#### Donor Alert #1

10 April 2021



20,000+ People living in the volcano red zone



4,500 Evacuated<sup>1</sup>

3,950 People w/o shelter accomodation

### Highlights

- La Soufriere volcano, located in Saint Vincent and the Grenadines (VCT), has been active since 29 December, 2020. The volcanic activity started with effusive eruption, formation of a volcanic dome, as well as changes to crater lake and seismic events. The activity rapidly increased on 8 April 2021 at 3:00 am, local time.
- On 8 April 2021 at 4:00 pm, the Prime Minister issued an order to evacuate the volcano red zone (over 20,000 individuals) due to an imminent explosive eruption. On 9 April, evacuations of the orange zone started as the volcano entered in a phase of active explosive eruptions.
- The National Emergency Management Organization (NEMO) of VCT has rapidly activated a network of 76 emergency shelters. However, due to community spread and asymptomatic spread of COVID-19 in the island, public health risk involved in gathering in a shelter is significant.
- Rapid response operations have started with the pre-positioning of 4 cruise ship to shelter affected individuals in the island, and the offer of Antigua, Grenada and St Lucia to accommodate about 2,600 evacuated individuals.
- PAHO has mobilized essential medical and biosafety supplies and equipment from its reserve centre in Barbados to increase the surge capacity of the local health sector network. Support provided also includes emergency coordination, technical cooperation, and mobilization of experts in the areas of logistics and WASH.

### Health Sector Impact



40% Percentage of hospitals located in the red and orange zones

2 Hospitals evacuated



1591,85 COVID-19 Cumulative Incidence Rate (per 100,000)

0.57% COVID-19 Case Fatality Rate

### Funding Needs



1,701,300 US\$ Requested

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<sup>1</sup> As of 10 April (2pm), approximately 4.500 had been evacuated via road and sea transport. However, it is estimated that about 20,000 persons (18% of the island population) will have to be relocated. Source: PAHO's situation update #1 issued on 9 April 2021.

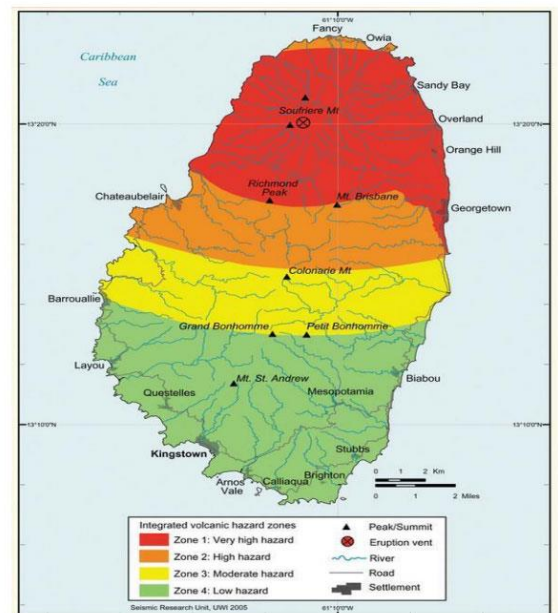
## Background of the crisis

La Soufrière Volcano became active with effusive eruptions on 29th December 2020. It is the largest but youngest volcano on St. Vincent and occupies the northernmost third of the island.

The current seismic activity began on 8 April 2021, the first since 1979. The National Emergency Management Organization (NEMO) confirmed on the same date that the volcano has 'moved into an explosive state' with plumes up to 20 feet heading east. Immediate evacuation of all residents in the red zone commenced on the afternoon of 8 April. On 9 April 2021 the UWI Seismic research confirmed that at 8:41 am EST, an explosive eruption began at the La Soufrière volcano, which may continue over several days and weeks.

The first historical eruption of the volcano took place in March 1718, and then again, on 30th April 1812. A destructive event then began on 7th May 1902 which was within 24 hours of the eruption of Mt. Pele in Martinique. Much of the northern end of St. Vincent was devastated by this major eruption and approximately 1565 lives were lost. The next eruption occurred in 1971 and then again on the 12th April, 1979. Evacuation of people living in the red zone took place during 1979 and explosions heralded two weeks of vigorous activity that peaked with an 18 km (nearly 60,000 ft) high plume on April 17, and ended, with the reduction of measurable seismicity on April 29. After this, the eruption switched to the quiet extrusion of lava, slowly forming the dome that sat in the centre of the crater for some 42 years. This was until the current buildup of extruded lava began in late 2020 that surrounded much of the 1979 dome.

FIGURE 1: SVG VOLCANO HAZARD ZONES MAP



## Situation overview & risk assesment

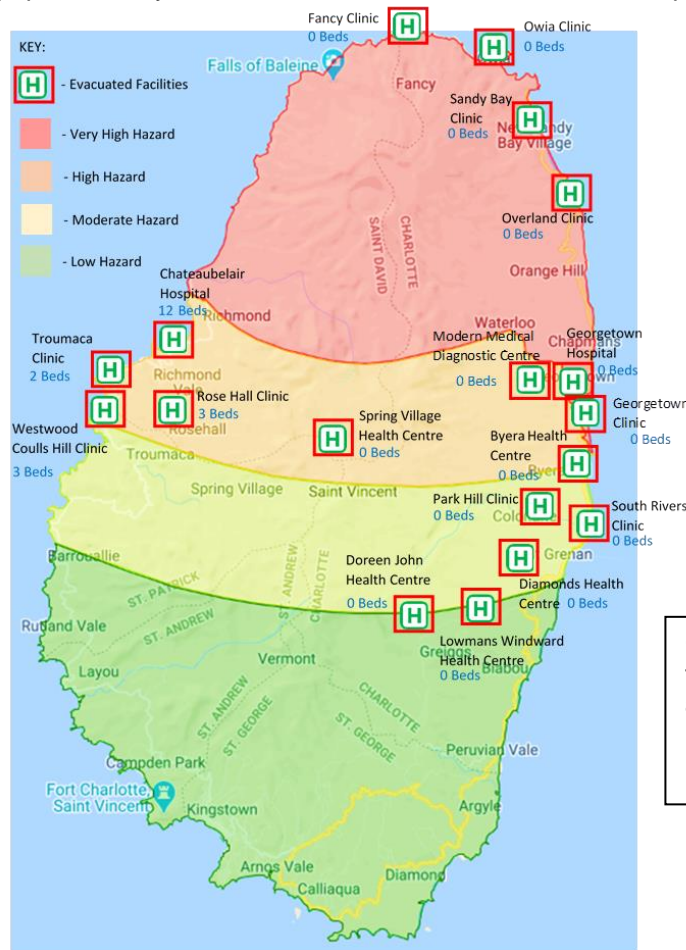
On 8 April 2021, NEMO fully activated the National Emergency Operations Centre after the Prime Minister issued a Disaster Alert Declaration which was later followed by an evacuation order issued at 4:30pm. All persons in the Red Zone were asked to evacuate and moved to family, friends or emergency shelters. The explosive eruption began the morning of 9 April 2021 at 8:00 am and everyone in the Red Zone was asked to evacuate immediately. Evacuation of persons located in the orange zone have also commenced. A team of scientists from the Seismic Research Unit confirmed the explosive events involved ash fall as far as the Argyle International Airport. Heavy ash fall has resulted in extremely poor visibility and created a challenge with the evacuation. Both the Saint Vincent and Grenadines airport and the Barbados airport have closed.

The volcano has now entered the explosive eruptive phase that may last over weeks or months, with continued explosions that are expected to be of similar or larger magnitude. Risks from the volcano include the production of pyroclastic flows, dome collapse and the formation of pyroclastic flows, surges, and lava flows posing a significant threat to the lives and wellbeing of local individuals. Volcanic emissions (ash and gas) may impact food and water supplies as well as affecting livestock and domestic animals, crops and the environment. They may also impact basic services (water, transport, communications) and access to health services. The accumulation of ash on roofs can cause damage or collapse of buildings, both immediately and after the event, during the cleaning-up phase. Accidents, with multiple injuries, due to roof collapse are common.

It is estimated that about 20,000 persons will have to be relocated. This represents approximately 18% of the 110,589 (2019) island population. Of that amount 12,000 will be able to get accommodation in shelters and the remaining 8,000 with family and friends. The Island has the capacity to accommodate 5,000 in emergency shelters, including the offer from Grenada to accommodate 1,800, Antigua 500, Saint Lucia 300 and with others pledging support pending details. There is a shortfall of 3,950 persons who will need shelter. As of 10 April (2pm), approximately 4,500 persons had been

evacuated via road and sea transport. 62 shelters with at least 2,318 hosted individuals are currently occupied. Due to the Community Spread of Asymptomatic Spread of COVID -19, persons entering or leaving for nearby countries should be vaccinated with at least one dose. The risk involved in gathering in an emergency shelter in the context of the COVID-19 pandemic is significant.

Significant disruption and restriction of access to health services is anticipated due to the impact of the eruption of transportation as well as expected damage to health facilities. As of 9 April 2021, no specific damage to health facility infrastructures has yet been reported. However, health facilities located in danger zones (red and orange) are closed and their services are being moved to safe districts. This includes the two (2) district hospitals – Chateaublair and Georgetown – that have been evacuated (including the medical center with attached dialysis unit). Health services have been redirected towards the Milton Cato Memorial hospital in Kingstown while the Barbados Defence Force has been asked to provide a field hospital. The potential surge in demand for health services following the eruption of La Soufrière Volcano may overwhelm the capacity of the health services to provide emergency and essential care to the affected populations by both this natural event and the COVID-19 pandemic.



### Urgent health needs and gaps

Current urgent health needs and gaps revolve around ensuring safe and adequate sheltering for the evacuated persons and strengthening the health system surge capacity to ensure continued access to essential and emergency care for potential victims in the aftermath of the eruption. Essential items such as cots, blankets, peripheral water tanks, and hygiene kits, as well as biosafety supplies and equipment, have been identified as critical to pre-position to mitigate the risk of losing beds and having inoperative services.

Continuity of essential healthcare delivery to the most vulnerable groups, including children, pregnant women and persons with chronic diseases, is a concern due to the anticipated extent of damages to health infrastructure located in the volcano red and orange zones and the overstretching of the health networks in the yellow, and green zone. Health services continue to face substantial pressure to manage influx of COVID-19 cases and may not have the capacity to attend a surge demand of health services after the volcano eruption. Elective procedures at the Milton Cato Memorial Hospital,

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for instance, are already being suspended to allow for any increased admission of persons impacted by the eruption.

Building up readiness and surge capacity of operational health services and rapid recuperation of health infrastructures that may become damaged in the near future is a priority to ensure timely and efficient medical attention to victims of the event as well as continuity of basic services for COVID-19 severely ill patients, pregnant women, children and individuals with chronic diseases. Based on the initial risk assessment, and the combined experience of PAHO and the national authorities responding to these events, the following essential supplies and equipment have been identified as critical to be sourced and delivered: water tanks – 800 and 1,000 gallons (1,000 units each), 5-gallon buckets (5,000 units), folding cots (10,000 units), portable toilets (150 units), blankets (30,000 units), field tents -20ft x 20 ft and 10 ft x 10ft (50 units each), 2 field kitchens, sleeping mats (3,000 units), respirators (1,000 units), goggles (25,000 units), reflective vests (2,000 units), rolls of caution tape 100 ft (100 units), hygiene kits (10,000 units), COVID-19 masks (150,000 units), and other essential health and emergency supplies and equipment for healthcare delivery. In addition to the procurement of medical and health supplies and equipment as well as the mobilization of medical teams and surge health professionals is paramount.

Intensified epidemiological surveillance for early detection and timely response to disease outbreaks is critical in emergency shelters as post-disaster conditions are favourable for increase in water-borne diseases, in addition to the inherent risk of a spike in COVID-19 transmission and other respiratory illnesses resulting from the deterioration of air quality. There is a strong potential of increased incidence of foodborne and waterborne diseases in impacted municipalities, due to the interruption of electrical services, reduced access to safe water and deteriorated sanitary conditions in the affected communities. In that context, procurement of surveillance, testing and diagnosis supplies and equipment, water analysis equipment, etc. along with the deployment of technical experts to support health surveillance and disease prevention are among the main priorities at this time.

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## Health partners action

NEMO rapidly activated a network of emergency shelters and started holding National Emergency Council meetings. Communities in the northern part of the island have been ordered to evacuate. The Prime Minister has initiated coordination of humanitarian support with his counterparts in the United States, Venezuela, and Cuba to mobilize assistance and secure transportation arrangements for the affected population. A major roadblock in the ongoing talks for international cooperation and relocation efforts is the requirement that all people leaving and entering the island must be vaccinated. The requirement was also extended to the cruise ships that have pledge support for accommodations. Barbados is mobilizing the Emergency Medical Team (EMT) from the Barbados Defense Force (BDF) to provide surge capacity as field hospital in the disaster areas.

Since December 2020, PAHO has been closely monitoring the situation and providing technical assistance to the country to prepare and ensure a level of readiness to a potential eruption. After the most current events have unfolded, PAHO is now supporting the coordination of the health cluster to organize the humanitarian aid. Specific actions that are under implementation include the channeling of EMT support, articulation of efforts with WASH sector and UNICEF for a comprehensive response, intensified syndromic surveillance of COVID-19 and other pathologies, provision of psychosocial support at community level, structural assessment of healthcare facilities, health services evacuation, strengthening the national Health EOC, coordination of the shelter management with IOM, and securing logistics arrangements with WFP.

As of 9 April 2021, and in response to this emergency, PAHO had already delivered 60,000 masks, 7,000 respirators, and 6,000 gowns to the BDF to support the deployment of its EMT. In addition, PAHO is supporting the Ministry of Health (MOH) with the development and broadcasting of public health messages and established permanent coordination between the PAHO country program specialist and the Health Disaster Coordinator from the MOH. Experts in logistics, water and sanitation, emergency coordination and health systems who form part of PAHO's Regional Health Emergency Response Team are currently on standby and ready for deployment to Saint Vincent and the Grenadines to support health authorities in their response efforts.

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## Identified priority actions

Urgent actions are required to ensure continued access and delivery capacity of essential areas throughout the island, strengthen the prevention, timely detection and control of infections and support comprehensive needs assessments, coordination and operational logistics to facilitate an agile and evidence-based response.

Based on limited information available as of 10 April 2021 and the unpredictable evolution of the situation, the main priorities identified for the health sector are:

### 1. Ensure continued operation and surge capacity of essential health services island-wide

- Procurement of essential medical and health supplies and equipment to replace items destroyed by the volcano eruption and scale-up care delivery capacity in operational facilities
- Implementation of rapid repairs in damaged health facilities (roof collapse repairs, etc.)
- Procurement of essential health and biosafety supplies to mitigate the risk of the COVID-19 surge transmission
- Procurement of personal protective equipment, biosafety and medical and health supplies to support safe care delivery in emergency shelters
- Mobilization of medical teams and surge public health professionals to scale-up care delivery capacity to affected communities, including mental health
- Rolling out of risk communications strategies and activities for affected communities

### 2. Strengthen local capacity for the prevention, timely detection, and control of infections

- Procurement of epidemiological surveillance and laboratory supplies and equipment to improve rapid detection of diseases outbreaks in emergency shelters and affected communities
- Support to water quality monitoring in the areas affected by the eruption through procurement of water quality control supplies and equipment and recruitment/deployment of environmental health technicians and WASH experts
- Procurement of personal protection equipment as well as personal care and hygiene kits to shelters individuals
- Procurement and distribution of water treatment and storage solutions (filters, water disinfection tabs, water tanks, etc.) to families in shelters and affected communities
- Support cleaning operations of ashes in affected communities
- Dissemination of information, education and communication (IEC) materials on infection, prevention and control, good hygiene practices, safe management of water and vector control, among others.

### 3. Ensure operational logistic support and efficient coordination of health emergency response operations

- Deployment of experts of the regional health emergency response teams to support needs assessments and response efforts in the areas of emergency coordination, water and sanitation, health systems, epidemiological surveillance, logistics and supply chain management, mental health, laboratory, IPC, etc.
  - Provision of equipment and technical support to activate and strengthen operational coordination mechanisms (health situation rooms, CICOM, etc.)
  - Sectorial evaluation of needs and damage assessment, including analysis of the health and environmental impact of the eruption
  - Participation in sectorial and intersectorial coordination platforms with national authorities, subregional organizations and national and international humanitarian partners
  - Establishment of logistics hubs, in partnership with WFP and CDEMA
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## Financial needs

*Below are the financial requirements for the next 3 months to carry out the urgent priority actions identified to support response efforts to the volcanic eruption emergency in Saint Vincent and the Grenadines*

<b><u>Priority Lines of Action</u></b>	<b><u>Cost US\$</u></b>
Continuity of operation and surge capacity of essential health services island-wide	710,000
Scaling-up of prevention, timely detection and control of infections (COVID-19 and volcano eruption related)	630,000
Operational logistic support and efficient coordination of health emergency response operations	250,000
Indirect costs (7%)	111,300
<b>Total</b>	<b>1,701,300</b>