La Soufrière Volcano

St. Vincent & the Grenadines

Situation Report #7















Office for Barbados and the Eastern Caribbean Countries

15 April 2021

General Overview

- La Soufrière volcano Saint Vincent and the Grenadines (VCT) active since **December 29, 2020**. Started with effusive eruption activity, formation of a volcanic dome, changes to crater lake and seismic activity.
- Activity increased since **April 8, 2021** 3:00 am. Prime Minister, VCT gave the order to evacuate the red zone on April 8, 2021 at 4:00 pm and declared the red alert. Explosive eruptions commenced at 8:42 am on April 9, 2021.
- On April 11, 2021 at 1:00 am another eruption occurred, followed by a power outage in the NE part of the Island. Power was restored at 6:00 am in Green zone.
- On April 12, 2021, NEMO reported that at approximately 4:15 am, the dome had collapsed, and pyroclastic flow occurred along the valleys on the eastern and western coasts.
- Seismic activity at La Soufrière, St Vincent continued in the pattern established on April 12, 2021. with short bands of continuous seismic tremors interspersed with long-period earthquakes.
- Another explosive event occurred at 6:30 am on April 13, 2021
- Seismic activity continued until another episode of explosive activity started at 8:30 pm on April 13, 2021.
- This generated continuous seismic tremor which lasted for four to five hours.
- After the tremor had died down, small, long-period earthquakes were again recorded, slowly growing in numbers.
- The explosions which occurred pulsed for more than 40 minutes and produced pyroclastic density currents (PDCs) which, appear to have gone down valleys that drain towards the Rabacca River on the east coast of the island.
- PDCs are hot (200°C-700°C), ground-hugging flows of ash and debris.
- Lahars (mudflows) were reported in the Sandy Bay Area on April 13, 2021.
- The volcano continues to erupt explosively and has now begun to generate pyroclastic density currents.

- Its current pattern of explosions appears to be episodic (stop-and-go).
- Over the past 24 hours the time between each explosion has increased.
- Explosions and accompanying ashfall, of similar or larger magnitude, are likely to continue to occur over the next few days impacting St. Vincent and neighbouring islands such as Barbados, Grenada, Saint Lucia.
- The volcano is at alert level Red
- The HEOC is currently finalizing its operational structure through internal discussions. It is anticipated that between 1-2 days, the tangible and human resource needs will be concretized, and support through PAHO and other actors be more formalized.

HIGHLIGHTS	
Estimated # of affected	16,000-
persons/evacuees	20,000
# of village evacuated	30
# of shelters	89
# persons in public shelters	4,021
446 families hosting over 2,042 persons	
# Missing persons	0
# Injured persons	0
# Deaths	0
# medevacs	0
# evacuated health facilities	18
# COVID-19 isolation centres	1
Capacity (beds) on main island¹, at least	200
Capacity (beds) in the Grenadines ² , at least	21

¹ Total capacity of beds, not # of available beds based on occu-

² Total capacity of beds, not # of available beds based on occupancy

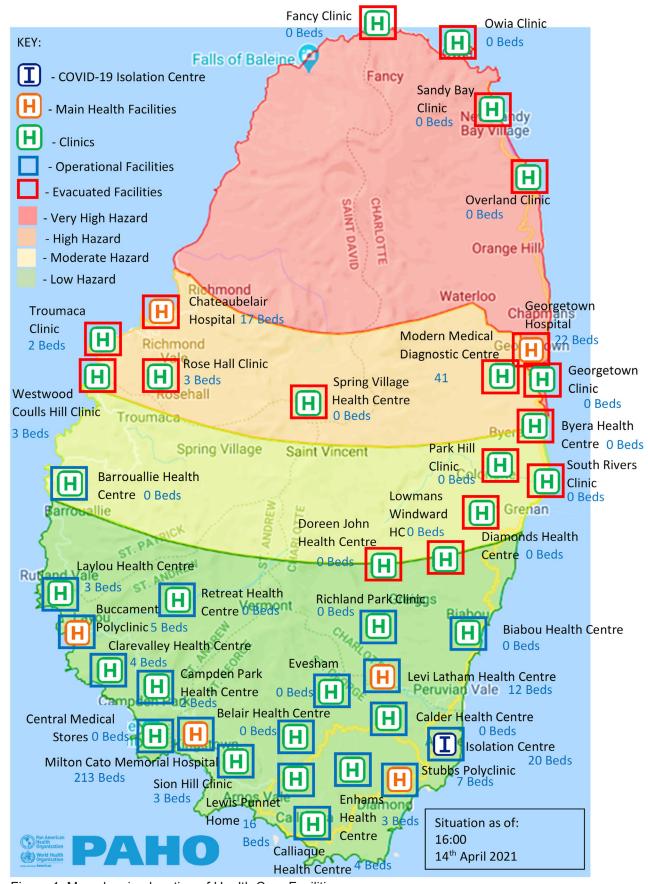


Figure 1. Map showing location of Health Care Facilities

General Challenges

- Still persons to be evacuated from the red zone.
- Explosive eruption/gas/ashes/tremors hampering ongoing evacuations (to the south of VCT but also to neighboring member states) and humanitarian efforts
- Extensive damage/disruption to infrastructure; facilities and services (incl. airport closure)
- Extensive damage to assets and livelihoods (fisheries; agriculture)
- Insufficient/inadequate hygiene/WASH facilities at

- shelters to cope with # of evacuees
- Limited/temporary accommodation available to host evacuees
- Insufficient food supplies to address needs for an extended response
- Insufficient capacity of host countries to provide support to evacuees for medium-, long-term support
- Airport SVG closed and airport Barbados also closed till noon Friday 16-4-2021.

Health related challenges











- Ash impact on the regional neighboring Islands. Montserrat reports little ash and smell of sulfur from La Soufriere eruption
- Reported increase in respiratory systems at the Accident and Emergency Department
- Insufficient storage capacity for supplies
- Heightened risk of COVID-19 transmissions. On average only 6-8 persons per shelter have been vaccinated on entry
- Insufficient water supply
- Water contamination could result in outbreak of water-borne illnesses
- Identify difference between COVID-19 and asthma symptoms

- Increased respiratory issues, including risk of asthma, especially in children
- Treatment of burn victims. Possibility for medevac to Guadeloupe.
- Infection prevention control (in shelters)
- Need for safe water and food in shelters
- Need for Oxygen Cylinders and PPEs
- Need for public information in shelters and cleaning of the ash, see guidelines: https://www.ivhhn. org/
- Access to health for evacuees in neighboring countries
- Mental Health and Psychosocial Support urgently needed.

Mental Health Situation

- The eruption of La Soufriere in Saint Vincent and the Grenadines and the current Covid pandemic, present complex challenges for individuals, families, communities and the entire population. These problems are likely to adversely affect the mental health and psychosocial wellbeing of the residents of Saint Vincent and the Grenadines.
- Immediate initial needs identified include the importance of delivering psychosocial communication to combat stress and fear caused by the eruptions, displacement, and limited access to services.

PAHO Priority Responses

- 1. Damage assessment of health facilities including assessing structural and functional integrity of facilities;
- 2. Conducting water quality assessments
- 3. Strengthening of Health Emergency Operation Center, including support to establish alternative medical care sites
- 4. Support to MoH for coordination of international health response
- 5. Assisting with coordination of personnel for provision of mental health and psychosocial support
- Maintenance of essential health services, including in coordination with Primary Health Clinics
- 7. Support with shelter management including assisting with set up in line with shelter management guidelines in context of COVID-19
- 8. Infection prevention control through provision of PPEs and masks
- 9. Provision of health communication materials
- 10. Support potential deployment of EMT's including Barbados Defence Force
- 11. Facilitating the coordination of Mental Health and Psychosocial Support, and provide guidance on protecting the wellbeing of front line workers and the vulnerable groups.
- 12. Protecting and promoting mental wellbeing, improving stress management, particularly in shelters.
- 13. Promoting appropriate public service announcements
- 14. Support provision of Mental Health and Psychosocial Support.

Water Sanitation and Hygiene (WASH)

Current Water Supply

- Central Water and Sewerage Authority (CWSA) restored 60-65% of water supply and is working to restore the rest, moving into orange zones.
- The water supply system relies on mountain stream intakes and gravity supply mains therefore no pumping is required.
- Treatment plants are being cleaned of ashes so that they can be put into operation and more remote plants in the northern part of the green and yellow zone are reached.
- Presently the supply is intermittent, typically 2 hrs in the green zone, but the CWSA is increasing its level of service.

Water quality

- CWSA is concerned of chemical contamination of water from ash. Water samples have been sent to Trinidad for testing of 10 parameters, results expected by Friday.
- Streams and rivers are self-cleaning and turbidity is reducing over time. However, eruptions are expected to continue and intakes might be temporarily closed
- The PAHO WASH advisor together with Ezekeal Trimmingham (Senior Environmental Health Officer) visited three shelters (Lodge Village School Shelter, Kingstown Government School Shelter and Church of Jesus Christ of Latter-Day Saints Shelter. He conducted basic sanitary assessments and performed residual chlorine tests. Some of the needs for shelters include drinking bottled water, personal hygiene kits, hygiene education, hand sanitizers, and masks.

Action points

- Provide updated health needs lists in coordination with MoH VCT
- Provide container with 60,000 masks, 7,000 N95 and 60,000 gowns for the Barbados Defence Force (BDF) Emergency Medical Team (EMT).
- Provision of 50,000 masks, cleaning materials and PPEs to VCT MoH and 50,000 masks to Ministry for National Mobilization (for families in shelters). Transportation tonight with BDF Coast Guard, coordination with UNICEF and CDEMA. ETA VCT April 15, 2021 at 6.00 am.
- Deployment of CDEMA assessment team, including 2x PAHO staff for Detailed Damage Sectoral Analysis (DDSA) with BDF Coast Guard. ETA VCT April 15 at 6.00 am
- Prepare for health sector coordination meeting on Friday April 16, 2021

Information Management

- 1. PAHO situation reports and donor alert
- 2. The International Volcanic Health Hazard Network (IVHHN): a protocol for ash collection, IVHHN ash protection pamphlet, leaflet

CONTACT INFORMATION

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ANNEX

Available Supplies PAHO

The following items will be provided/ purchase by PAHO (based on health needs list of the Ministry of Health (MoH)):

ITEM	QUANTITY
Generator	1
Streamline High-Wall Split NC System, DC Inverter 9000 BTU, 2.6KW (Installed) (OM)	4
Streamline High-WallSplit NC System, DC Inverter 24000 BTU, 7.0KW (Installed) (OM)	2
3M Dual Cartridge Respirator (Me dium) (C12)	14
3M Pre-Filter for 51P71 & 52P71 Respirator (pack of 10)	177
3M Multiple Gas Cartridge (Multi-Acid Gas/Organic Vapour) For 6200 1/2 Mask - Pair (B30)	10
3M Filter Retainer for 51P71, 52P71, 53P71(B20)	20
Bladder tank 10m3, distrib ramp, repair kit, cover	1
Jerry cans	1,000
Bladder tank 5m3 w/accessories, 6 point distrib. Ramp	2
Bladder tank 10m3 w/accessories, 6 point distrib. Ramp	1
Respirators	200
Oxygen cylinders	100
1000 Gallon water tanks	50
Water pumps	50
First responders trauma back packs	39
Wildfire Kits*	10
KN95 Respirator Masks*	2,000
Wildfire Medical Relief Corps Back Packs*	14
Mosquito nets	100
Oral Hydration Salts (boxes)	3
Aquatabs	40,000
Aquatabs 8.68g	24,480
Water testing kits	6

ITEM	QUANTITY
Aquatabs 67 mg for 10 liters, box of 1,600 blister x 10 tablets	30
Aquatabs 8.68 gr for 1,000 liters, bottle, x60 tablets	100
Aquatabs 33 mg for 5 liters, box of 10,000 tablets	15
Mosquito nets	100
Masks	100,000
Gas Masks	15
Masks	60,000
Gowns	60,000
N95 Mask	7,000
3M Half Face Mask W/O Cartridges (EA) (B24)	10
Surgical Mask	100,000
Face Shield	5,000
Goggles	200
Sets working gloves	50
Helmets	80
Boots	50

H-EOC and Shelters NEEDS LIST from Chief Medical Officer St. Vincent & the Grenadines (9-4-2021)					
	St. Vincent & the Grenat	iines (9-4	Cost in EC Dollars		
Item Name	Item Description	Quantity	Price per Item		
A/C Units		8	-	-	
Water Storage	1000 Gallon	10	-	-	
Refrigerator	1500 cubic meters	1	\$3,200.00	\$3,200.00	
Freezer		1	\$2,600.00	\$2,600.00	
Washer		1	\$2,600.00	\$2,600.00	
Stove	4 burner	1	\$1,200.00	\$1,200.00	
Generator		1	-	-	
Folding Table	6'	4	\$350.00	-	
Folding Table	4"	4	\$450.00	-	
Cots		350	\$395.00	\$138,250.00	
Shelves		20	\$800.00	\$16,000.00	
Kettle		20	\$120.00	\$2,400.00	
Blender		10	\$120.00	\$1,200.00	
Bath towels		150	\$20.00	\$3,000.00	
Disposable plates Disposable Forks		1,000 2,000	-	-	
Disposable Porks		2,000	-	-	
spoons		2,000	_	-	
Gowns	Disposable impermeable	5,000	-	-	
Alcohol Pads		20,000	-	-	
Face masks		20,000	-	-	
Vaccine Flasks		20	-	-	
Garbage Bins	Large with cover and peddle	20	2	_	
Garbage Bags		40	-	-	
Antigen kits		20,000	-		
Sanitizer	hand sanitizer	50 cases	-	-	
Washing Detergent		3	\$70.00	\$210.00	
Face shields		20,000	-	-	
Caps (Buffet) Shoe covers		40,000 40,000	-	-	
Hospital		40,000	-	-	
mattresses		30		-	
Sheets	white	_	121	-	
Pillowcases	white	-	-	-	
Bed pans		500	-	-	
Urinals		500	-	-	
Water pumps		10	(-)	-	
Water hose		20	-	-	
Shovels		20	- 1	-	
Water boots		50 pairs	15.	7.	
Raincoats		200	-	-	
O2 cylinders		100			
Industrial Vaccum		4	-	-	