INTEGRATING THE EARLY WARNING SYSTEM FOR VOLCANIC HAZARDS IN ST. VINCENT & THE GRENADINES

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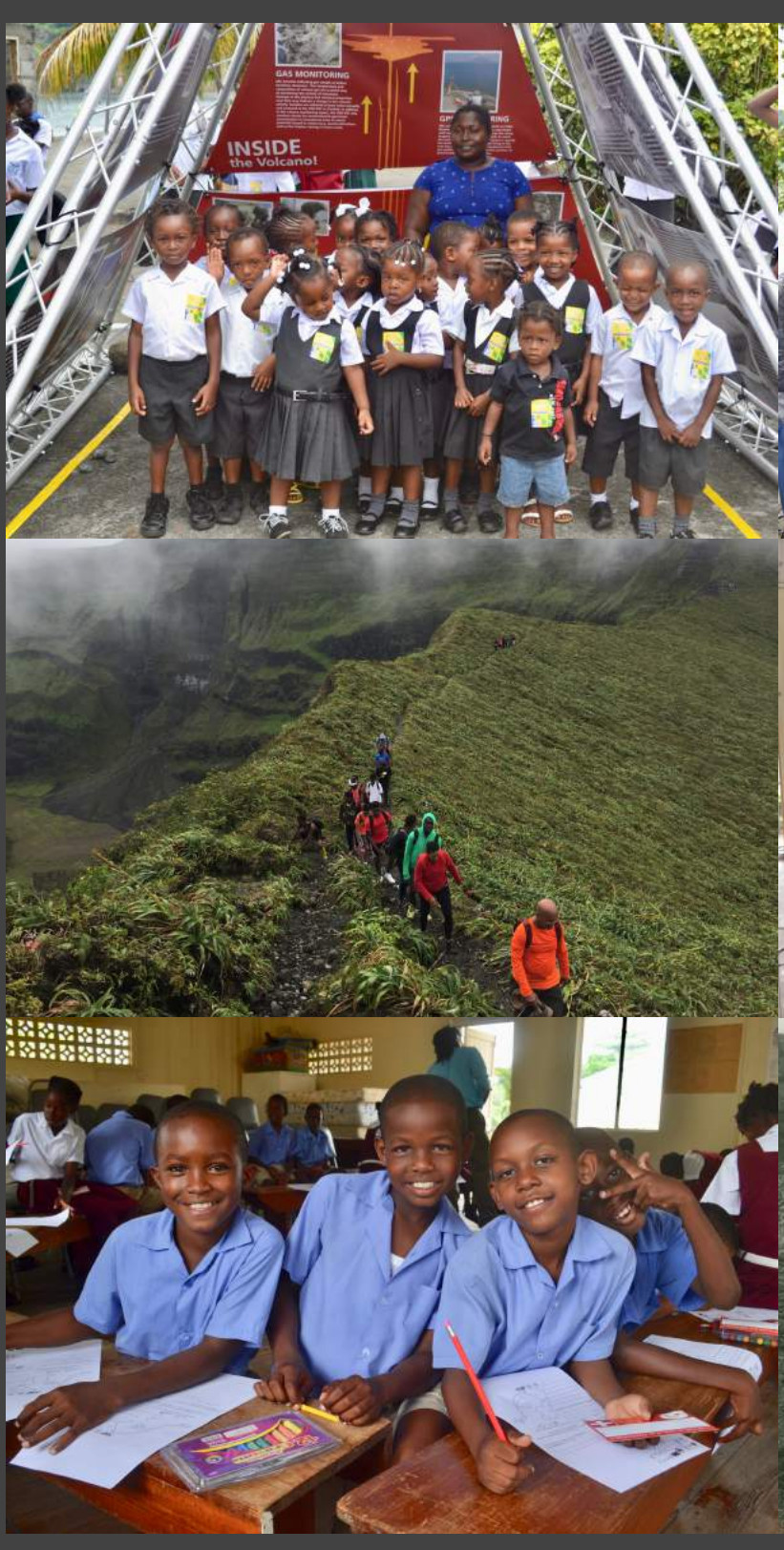
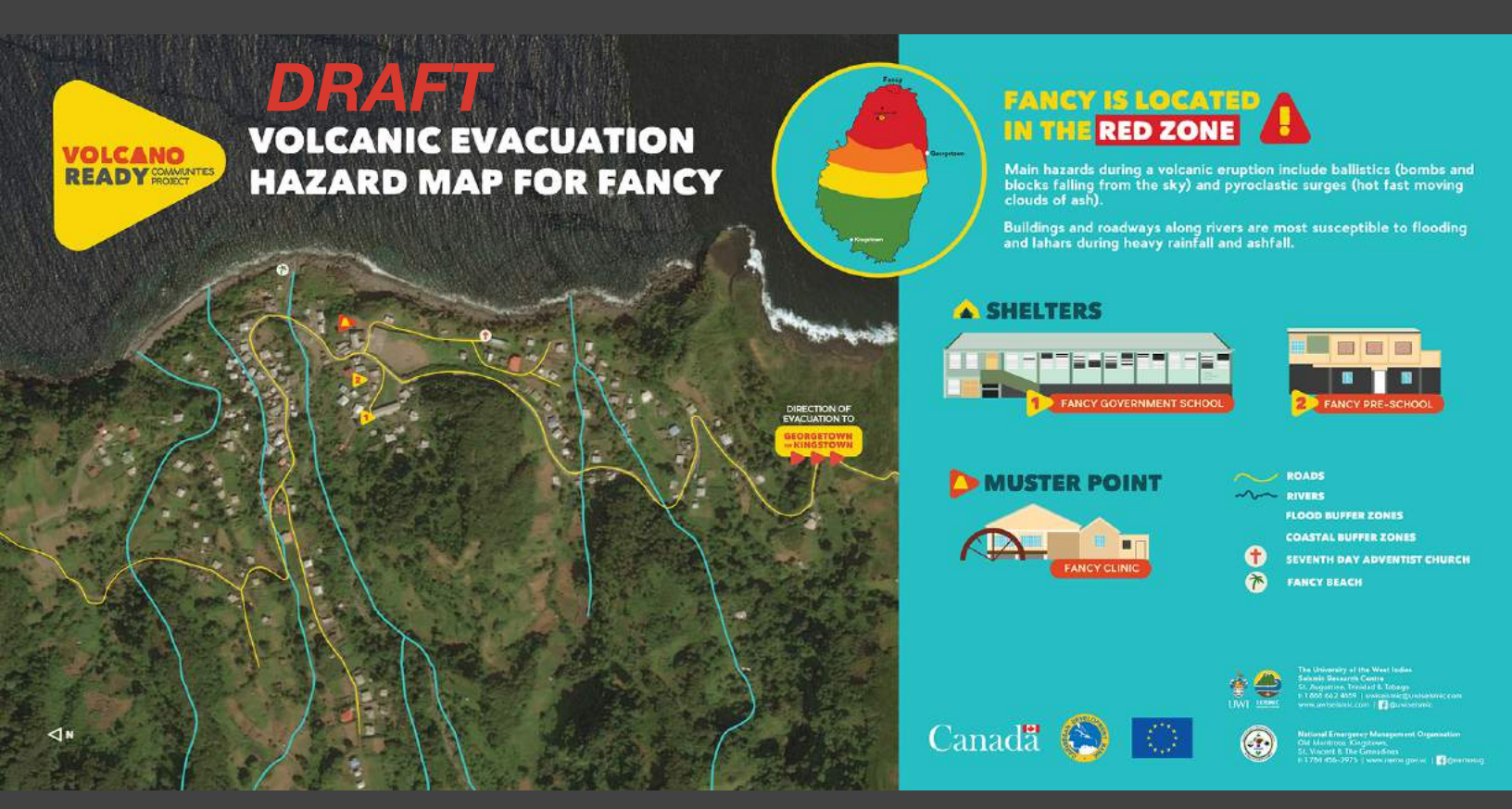
A recent definition of Early Warning Systems (EWSs) provided by the UNISDR (2017) emphasises that to become "end-to-end" and "people centered" EWSs need to include preparedness at all levels to respond to the warnings received".[1] There is growing recognition that current EWSs are on the wrong side of the scale because their progress has been assumed to be in the scope of disaster impact reduction as opposed to disaster risk reduction.[2] In addition to the high level of dependency on external scientific sources for instrumentation and monitoring, which carry their own cost-related limitations for Caribbean SIDS, the lack of formal risk management is still driven by social, economic, cultural and political forces with historical trajectories.[3]

St. Vincent and the Grenadines is among the most disaster-prone territories in the world, and is affected on a regular basis by the negative impacts of natural hazards such as volcanoes, earthquakes, hurricanes, landslide, rainfall events, storm surge and drought. The Volcano Ready Communities Project (VRCP) in St Vincent and the Grenadines being implemented by The UWI Seismic Research Centre seeks to reduce vulnerability to the multi-hazard environment of the islands' active La Soufriere Volcano. The Project targets the northernmost communities of SVG in the red and orange hazard zones and combines activities designed to enhance community early warning procedures, increase adaptive capacities, strengthen awareness, and response capacities.



Clockwise from top left: 1. Pre K students gather under the Soufriere Blow Exhibit as part of Volcano Awareness Week (VAW) 2018 one of the Public Awareness Campaigns supported but the VRCP. 2. Students of Petit Bordel Secondary School being led on a field tour during VAW 2018. 3. Mrs Dora James, Former President of SVG Red Cross Society engages with north leeward community members to discuss their experiences with natural hazards in a VRCP led community meeting. 4. Archival photo of the Pre eruption Crater Circa 1971 taken by M. Barnard, which will form part of a travelling photo exhibition of the 1902 and 1971/79 eruption of the volcano later this year. 5. Primary school boys enjoying their activities during VAW 2019. 6. Upper Secondary Students being led around the crater of the volcano by SRC Director, Prof. Robertson as part of VAW 2019 Public Awareness & Education Campaign activities



Protocols to alert men, women, children, the elderly, disabled and other vulnerable populations, about volcano and other related natural hazards and their potential impacts are being developed with the target communities. A number of gender-sensitive multi-hazard, public awareness and education materials are also being developed and programmes implemented through community campaigns. Information on best practices are being captured through audio visual media. Among these include animation of a poem on someone's experience during the 1979 eruption and a traveling exhibition depicting photos of the 1902/71/79 eruptions.

Community level volcano emergency plans for the 12 communities in the high-risk zones of the Soufriere Volcano are also being prepared. This includes vulnerability assessments and development of community hazard maps, resource and identification of vulnerable persons mapping and training and equipping of Community Emergency Response Teams (CERTS). CERT teams will also be targeted for risk assessment training and other capacity building activities. The stakeholders (government, civil society, private sector) are being engaged to assist communities with the development and identification of resources for the implementation of the volcano plans.

Clockwise from top left: 1. Members of the Beneficiary Communities Action Group (BCAG) from Fancy participate in a community mapping exercise to identify the location of vulnerable persons (elderly/disabled), transportation and human resources in their community as part of the Vulnerability and Capacity Assessment (VCA). 2. Members of the BCAG from Fitz Hughes participate in the mapping exercise for the VCA in their community. 3. Volunteers participate in first responder first aid, search and rescue activities as part of the Community Emergency Response Teams (CERT) Training for Windward communities. A total of 12 new CERT Teams will be trained under the project. 4. Primary school students evacuated from Fitz Hughes are registered at an emergency shelter in Barroulie as part of Exercise Tradewinds 2019 - volcano emergency simulation activity to test community response and readiness. 5. Community volunteers being assisted in a simulated evacuation by sea from the Chateaubelair Pier - part of Exercise Tradewinds 2019. 6. CERT Teams participate in a tabletop emergency response exercise as part of their training.

The scope of the VRCP provides an opportunity with some additional research to broaden the focus of the existing EWS for volcanic hazards in SVG. The effectiveness of the VRCP in addressing the challenges with EWSs for the community will be assessed through a micro level case study on residents perception of the project and its risk reduction effectiveness. The exploration of social, cultural and economic decisions and historical trajectories that have created disaster risk in SVG can provide the basis for how risk can be addressed through the redefinition and integration of the EWSs.

[1]UNISDR (United Nations International Strategy for Disaster Reduction). 2017. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Geneva: UNISDR. https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf Accessed 14 Sept 2019.
[2]Alcantara-Ayala I. and A. Oliver-Smith, 2019. Early Warning Systems: Lost in Translation or Late by Definition? A FORIN Approach. International Journal Disaster Risk Science. https://doi.org/10.1007/s13753-019-00231-3 Accessed 14 Sept 2019
[3]Barclay, J., Wilkinson, E., White, C.S. et al. Int J Disaster Risk Sci (2019) 10: 149. https://doi.org/10.1007/s13753-019-0215-z