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Disaster Passed: a singing, flashing and sobering glimpse into coping with volcanic eruptions

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We all experience and understand volcanic eruptions differently; it is at the intersection of these experiences that the most valuable knowledge for effective future disaster risk reduction is generated. On one hand, scientific responses to eruptions have the potential to improve understanding of subsurface magma movement and anticipate volcanic impacts on communities and the environment. On the other, social and cultural responses have the potential to help communities learn, respond and adapt to eruptions. The aim of 'Disaster Passed' is to bring together and celebrate these different forms of knowledge. Here, we demonstrate key aspects of our interactive exhibits designed to convey the lived experience, scientific monitoring and cultural responses to past eruptions on St. Vincent and Montserrat.

The centrepieces are two volcano-shaped mobile exhibits ('Soufrière Blow' and 'MountainAglow') covered with panels that display images and information about past eruptions, together with poetry, calypso lyrics and prose inspired by the impacts of these eruptions. We further embellished MountainAglow with two add-on audio-visual features, 'FLOW' and 'NEST'. FLOW, a ~3m column, encrusted with ~2000 LEDs, has seven audio-visual modes which portray a variety of volcanic phenomena, such as the movement of magma within the volcano and the gentle incandescence of the lava dome, accompanied by songs and recordings of Montserratians sharing their experiences of different phases of the Soufrière Hills eruption. NEST consists of a series of ash-strewn communication devices (a telephone, a walkie talkie and a radio) which play on-demand memories of the eruption as both spoken word and calypso. Soufrière Blow was deployed to St Vincent in 2018 has since been exhibited in multiple sites; MountainAglow was previewed at the Norwich Science Festival before being permanently moved to Montserrat in 2019, where it has been exhibited at the Montserrat Community College, National Trust, and deployed temporarily at primary schools.

Our research on volcanic disaster risk has demonstrated the power of lived experience as a mechanism for improved response in the future. Therefore, a second purpose of Disaster Passed was to entwine critical risk messages with lived experience, and in so doing further enrich everyone's understanding. Our collaborative approach to exhibit design generated and uncovered material with value beyond the physical exhibits, and so a final aspect of Disaster Passed is the creation of a website that shares these histories, songs and scientific data that helped to respond to past eruptions (disasterspassed.com; mountainaglow.com).

Throughout Disaster Passed, the design process has been dynamic, underpinned by collaboration between scientific bodies, governmental organisations and, critically, the wider community. Indeed, at the time of writing, in collaboration with the Montserrat Volcano Observatory, the primary schools of Montserrat are designing new panels and audio-visuais for MountainAglow to reflect their own learning about the volcano. In this presentation we reflect on the challenges and successes of this dynamic design and collaborative approach. Finally, we will share how it influenced our own disciplinary ideas and the outcomes of our evaluation of the process.