

When it rains, the soil flows

Indeed! November rains in Dominica are wreaking havoc in vulnerable East coast rural communities. Petite Soufrière, San Sauveur and surrounding communities were battered by extreme rains causing land slides and destruction of property, infrastructure and at least one lost life.



Aerial view of the impacts of heavy rains in Dominica over the weekend using drone provided by the EbA project and flown by a community pilot trained under the EbA project (Photo: Amos Benjamin)

Over the weekend, residents of these east coast communities are reeling from the effects of what the United Nations describes as ‘*extreme weather on the rise, with up to a billion people at risk of losing their homes as storm intensify*’. This, while across the globe, world leaders and institutions are gathered in Egypt for COP27. The Inter-American Institute for Cooperation on Agriculture (IICA) and its international partners have set up ‘The House of Sustainable Agriculture of the Americas’ pavilion at COP27 under the slogan ‘*feeding the world, nurturing the planet.*’ Ensuring soil health and using nature-based solutions for climate action are essential to this planet nurturing imperative.

The landslides in the vulnerable mountainous rural communities in Dominica paint a clear picture of impacts from extreme weather events in a ‘ridge-to-reef’ topography and why planet nurturing climate actions are so important.

Residents of Petite Soufrière, San Sauveur and surrounding communities on Dominica’s mountainous East coast are living through these global climate talks, in loss of landscape, infrastructure, livelihoods and lives, from landslides caused by heavy November rains over the weekend. Since Hurricane Maria (September 2017), Dominica has, so far, been spared of major hurricane impacts. But the frequency of more extreme rainfall associated with global climate change is creating havoc for persons living in both upland and low-

lying coastal areas. Extreme weather events have gotten worse due to global climate change. Exposed and vulnerable communities in small island developing states can ill afford to suffer the consequences of mostly others, developed countries, industrial actions and lagging climate inactions.

Petite Soufrière is among “*the most vulnerable communities, in that, it’s not that you’re at a disadvantage as a human being to say, but because of where you choose to put your house, and have your farm and have your land, the topography, the slopes, they’re a little more steep ... you don’t really have much flat lands, so when you have all the elements of the weather mixing with our own action, sometimes it makes us a little more vulnerable and we become at a higher risk for landslides and those sorts of things*”. So stated Miranda Laurent-Stephenson, Extension Team Leader, Eastern District, Dominica. It is this combination of natural mountainous topography, human settlements and vulnerability that tipped the scales for including Petite Soufrière and San Sauveur as beneficiary communities in the project to ‘Strengthen Coastal and Marine Climate Resilience through Upland and Coastal Ecosystem Based Adaptation (EbA) and Community Engagement’.

This EbA project is funded under the EbA Facility of the Caribbean Biodiversity Fund (CBF) and implemented by IICA and partners. Core activities are (a) to use the deep-rooted vetiver grass promoted by Trinidad and Tobago-based NGO, IAMovement, to stabilise vulnerable slopes and control soil erosion, and (b) to monitor changes in the vetiver-amended project slopes using drones equipped with LiDAR sensors and pre-set flight plans. These drones were provided to the communities by the project and community pilots were trained by project partner, the University of Florida.

Troy Shillingford and Amos Benjamin from the Petite Soufrière community, were both trained as drone pilots in late September. The training and access to the drone were indeed timely. They found themselves taking an unscheduled but critical flight – to get a bird’s eye view of the damage – a first in immediate disaster assessment response capacity for the community. Multiple landslides not only damaged or blocked roads, but cut off some residents completely from the community and the rest of the island, with others destroying homes and other infrastructure.



More drone views of the impacts of heavy rains in Dominica flown by community drone pilot trained under the EbA project (Photo: Amos Benjamin)

Topsoil, precious to the landscape, poured off collapsed slopes all the way down to the coast, with negative impacts for the marine environment. According to one community resident, Vansley Vigilant, a farmer and beneficiary of the EbA project, “boy, the vetiver save me; if it wasn’t for the vetiver, all the loose soil the machine put one the side of the road, the water would have just carried away and make landslide on the land. The vetiver saved me”. He was referring to the soil removed after fresh cutting of a roadway.



Kent Copiel, IICA Technical Specialist in Dominica pointed out the vetiver hedgerows (encircled in yellow) recently planted on the slope by the EbA project team, unaffected by the landslides which followed a true ridge-to-reef flow, as it made its way all the way down to the coast. (Photo: Amos Benjamin)

The IICA-CBF EbA project is just one relatively very small intervention in four Caribbean countries in support of nature-based solutions for climate resilience. There needs to be more, with wider participation and committed resources.

Access to financing and technical support to enable continuous actions to adapt is critical to enable vulnerable communities and countries to recover from devastating impacts and systematically build resilience to global climate change. This is one of the three critical areas at COP27 - cementing progress on the critical workstreams of mitigation, adaptation, finance and loss and damage, while stepping up finance notably to tackle the impacts of climate change.

Whatever comes out of COP27 can't be too soon for vulnerable small island states, such as Dominica. According to a COP27 press release, these ‘discussion begin near the end of a year that has seen devastating floods and unprecedented heat waves, severe droughts and formidable storms, all unequivocal signs of the unfolding climate emergency’ and are ‘taking place against the backdrop of inadequate ambition to curb greenhouse gas emissions’. The severe impact of extreme weather events in Dominica is just the latest in a series of examples of why the COP27 vision of putting human needs at the heart of global efforts to address climate change, is critical to vulnerable countries in the Caribbean.