

Climate Resilience



The International Monetary Fund considers Jamaica to be among the "20 countries most vulnerable to natural disasters," and due to the increasing frequency and severity of natural disasters, it places Jamaica at increased risk to perilous positions. Because of the damaging effects of climate change in Jamaica, climate resilience is critical to protect against and predict some of the disasters that will inevitably occur.

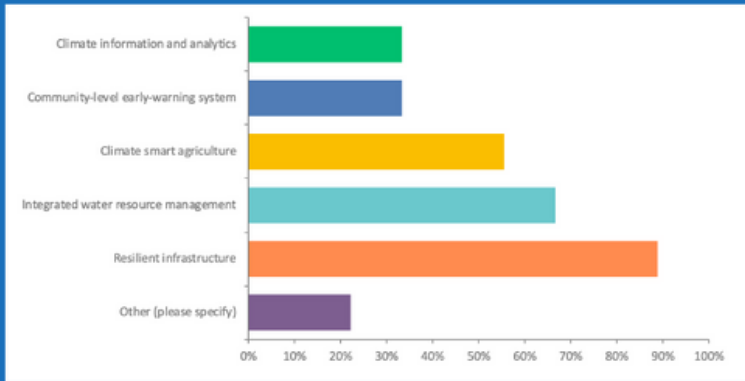
Jamaica has not faced a severe natural hazard crisis over the past two years, but it is unfortunately inevitable. Experience has shown that recovery from severe tropical cyclones can take time and involve massive socio-economic disruption and substantial costs that take many years to repay. Jamaica's vulnerability to hurricanes alone is "particularly high, with average annual losses estimated at US\$67.3 million, or 0.5 per cent of gross domestic product (GDP)." Moreover, as was the case for Dominica in 2017, Caribbean SIDS may not have time between natural disasters to recover, putting them back years on their development paths. The adverse impacts of climate change extend beyond the destructive presence of hurricanes in Jamaica. With more varied patterns and a declining level of rainfall, Jamaica's increasing vulnerability to groundwater resources will be increasingly exposed as sea levels rise and unreplenished water tables decrease the access to and availability of fresh water.

Furthermore, even though Jamaica has not faced a severe disaster recently, it has come up against serious flooding. For example, in October 2020, heavy rain caused deadly landslides and floods, destroying a house in the parish of St Andrew and killing two people. By November 2020, "over 280 roads" were damaged due to floods from tropical storms Eta and Zeta, with the most significant damage in the Bull Bay area. In January 2021, more flash floods caused severe damage to buildings and roads in Montego Bay, with some people in the area sustaining injuries. Further flooding in August 2021 due to Storm Grace impacted Haiti and the Dominican Republic significantly as well as affecting Jamaica.

Environmentally, Jamaica's sustainability has deteriorated over the past two years with losses to trees and acid rain affecting natural habitats and ecosystems, increases in noxious gas and a deterioration in biodiversity. Even as one of the larger Caribbean SIDS, Jamaica faces substantial structural vulnerabilities that limit resources and thus impede its sustainable development. Effective natural resource management to ensure Jamaica's sustainability is crucial if the island is to build resilience to lessen the impacts caused and amplified by its structural vulnerabilities. Additionally, for a country to be climate resilient, it must have the ability to prepare for, recover from and adapt to adverse climate change events like hurricanes, storms, droughts, extreme temperatures, ocean warming, acidification and more.

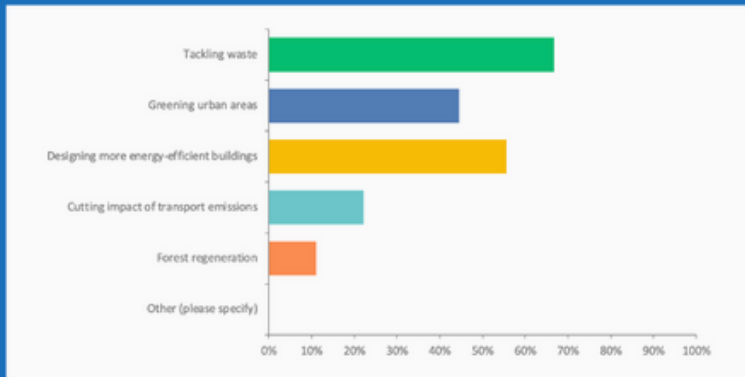
On adaptation, panellists felt that integrated water resource management and resilient infrastructure were crucial. Keenan Falconer, Economist at the Ministry of Finance and the Public Service, explained that "Resilient infrastructure is especially important given the impact of major climate events on the country's fiscal dynamics over the years and the projected impact of future climate-related events. From 2001 to 2012, the total cost of damages from various climate-related events (including hurricanes, tropical storms and floods) amounted to J\$111.8B (US\$745M) or cumulatively 18.7% of GDP (Climate Change Policy Framework for Jamaica, 2015)." However, Wendel Ivey, Economist, emphasised that alone this would not be enough, a complete mindset shift is also required, "there is no panacea for climate adaptation in Jamaica, but a hybrid strategy may be the most effective approach. Climate information analytics are important, but must be presented in a way that will spark the interest of the average Jamaican and not just a subset of the population."

Areas of climate adaptation



In recent years, Jamaica has made substantial progress towards a low-carbon economy, which is widely agreed upon as necessary for the future. The country's long-term strategic development plan, Vision 2030 Jamaica, highlights areas where Jamaica is already making progress, notably on climate mitigation and identifying the current gaps. Key developments include the creation of multi-hazard mapping and risk assessments in several communities across the island.

Areas of climate mitigation



When asked what areas Jamaica should focus on regarding climate mitigation, the panellists felt more could be done on waste management as well as energy-efficiency improvements in infrastructure/ building standards and design. On waste management specifically, panellist Dr Anne Crick highlighted this point, "we are drowning in waste and do not seem to have the capacity to properly manage it."

When asked about the critical obstacles to financing climate resiliency, the panellists viewed Jamaica's high debt situation, elevated by the pandemic and past natural hazards, as a significant player. To create and preserve financing space for resilience, the Government of Jamaica has made significant progress, with the finalisation of a Catastrophe Bond (CAT) in July 2021. The Minister of Finance and the Public Service emphasised the significance of the CAT bond, explaining that it further "strengthens Jamaica's ability to finance the emergency costs of hurricanes and tropical cyclones, thereby increasing our economic resilience."

Considering SDG performance and how it relates to Jamaica's climate resiliency is essential. Jamaica ranks 83 out of 163 for its overall performance. Its rank is considerably higher than the regional average, which is 69.5. For this particular subject area, SDG 12 and SDG 13 are the most applicable to building a climate resilient island; SDG 12 represents "Responsible Consumption and Production," and SDG 13 captures "Climate Action." Presently, Jamaica is on track to meeting SDG12, however, for SDG 13, significant challenges remain. The diagram below breaks down the areas in which Jamaica is advancing and the areas that need improvement to meet the SDGs and Jamaica's Vision 2030.

	Value	Year	Rating	Trend
SDG12 – Responsible Consumption and Production				
Municipal solid waste (kg/capita/day)	1.0	2016	●	●
Electronic waste (kg/capita)	6.2	2019	●	●
Production-based SO ₂ emissions (kg/capita)	21.1	2018	●	●
SO ₂ emissions embodied in imports (kg/capita)	1.5	2018	●	●
Production-based nitrogen emissions (kg/capita)	6.0	2015	●	↑
Nitrogen emissions embodied in imports (kg/capita)	2.3	2015	●	↑
Exports of plastic waste (kg/capita)	2.2	2020	●	●
SDG13 – Climate Action				
CO ₂ emissions from fossil fuel combustion and cement production (tCO ₂ /capita)	2.5	2020	●	↑
CO ₂ emissions embodied in imports (tCO ₂ /capita)	0.6	2018	●	↗
CO ₂ emissions embodied in fossil fuel exports (kg/capita)	0.0	2020	●	●

■ Major challenges ■ Significant challenges ■ Challenges remain ■ SDG achieved ■ Information unavailable
↓ Decreasing → Stagnating ↗ Moderately improving ↑ On track or maintaining SDG achievement ● Information unavailable

Lack of data availability means that not all SDG indicators can be monitored and evaluated effectively. However, the diagram shows that for SDG12, Jamaica still faces challenges in dealing with electronic waste and exporting plastic waste. For SDG 13, challenges remain regarding carbon dioxide emissions from fossil fuel combustion and cement production and carbon dioxide emissions embodied in fossil fuel exports.

Dr Stuart Davies, pointed out:

“ While Jamaica cannot avoid the climate change threat it faces, it can try to minimise the impact by accelerating existing and developing new measures that build resilience now and into the future. A key obstacle will be financing this transition, to which Jamaica is well placed to build on the momentum of its CAT bond to enhance innovative financing that increases the funds available for building climate resilience while enhancing the efficiency and effectiveness of climate financing. On how Jamaica can move forward with the climate-resilience agenda, the other panellists felt that integrating climate risks and opportunities throughout a policy cycle and strengthening governance for greater coherence across development agencies were crucial. ”



DR. STUART DAVIES
Senior Economist

Nadine McCloud, further highlights the precarious situation Jamaica finds itself in and the immediate need for new financing opportunities.

“ One cannot overemphasize Jamaica's vulnerability to climate change. Empirical analyses have not predicted Jamaica will fare well against climate change if we do not execute robust immediacy policies to mitigate its crippling effects. The largely exogenous nature of acute and chronic climate-change events that we will encounter begs the need for expansion and immediate action at all levels of the economy of our climate resilience toolkit. Of course, bankrolling resilience is costly and thus, given our limited resources, requires orthodox and unorthodox financing mechanisms, among other things, for Jamaica to achieve an acceptable level of climate change resilience. ”



DR. NADINE McCLOUD
Head of the Department of Economics, UWI Mona

Conclusion

To conclude, increased cooperation and partnerships between the government and civil society, International Financial Institutions, and the private sector would expedite climate resilience in Jamaica. Also, adopting a multistakeholder approach would further promote collaboration and unity around policies to counteract the effects of climate change in Jamaica.