

# Disaster risk Preparedness in Jamaica



Earlier this month, the **Working Group II** published its contribution to the IPCC Sixth Assessment Report, which assesses the impacts of climate change, looking at human communities and the associated vulnerabilities. It projects these risks in different timeframes and under different conditions and notes that the commitments from the Paris Agreement to stick to 1.5 degrees Celsius of temperature increase are increasingly out of reach. One of its critical high-confidence conclusions is as follows:

Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability. Some development and adaptation efforts have reduced vulnerability. Across sectors and regions, the most vulnerable people and systems are observed to be disproportionately affected. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt

p. 13 of Summary for Policymakers

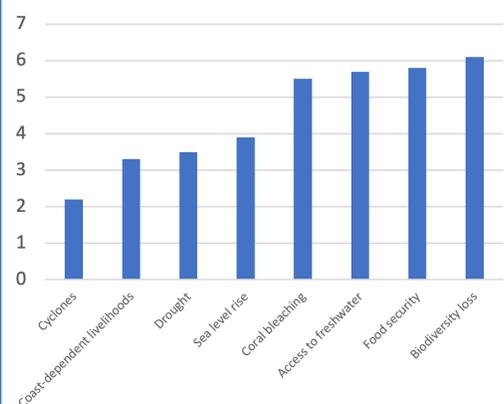
In a separate section on small islands, including Jamaica, the report confidently points out that the increasing intensity of tropical cyclones already poses a substantial risk. Amongst the projected risks, the report takes a broader view and looks beyond tropical cyclones. Among the significant risks it identifies, risks to marine and terrestrial ecosystem services are highlighted, coral bleaching, freshwater stress and coastal area habitability. In the long run, the report argues that small islands may be so vulnerable that the hazards exceed their capabilities to adapt.

This month's Jamaican Economy Panel (JEP) Discussion focuses on the risks climate change poses to Jamaica and how Jamaica is prepared for disasters, whether caused by climate change or not. This issue is crucial considering that the Hurricane Season starts on 1 June.

## Hazard level in Jamaica

The IPCC report discusses several specific risks without addressing Jamaica in particular. The members of the JEP were asked which of the climate-related hazards they consider most relevant for Jamaica. The panellists ranked the eight given options to spotlight Jamaican-related risks, with a lower average rating considered a higher priority.

Potential impact of climate-related hazards in Jamaica (average ranking)



Unsurprisingly, the JEP views cyclones (hurricanes) are the most significant climate-related hazard in Jamaica, followed by the increased vulnerability of the population whose livelihoods are coast-dependent, drought and sea-level rise. There is a large gap between those four and the other four options, clearly seen as less immediate threats in Jamaica. Dr. Christine Clarke, Lecturer, Department of Economics at UWI Mona, explains the challenge in comparing the disparate threats:

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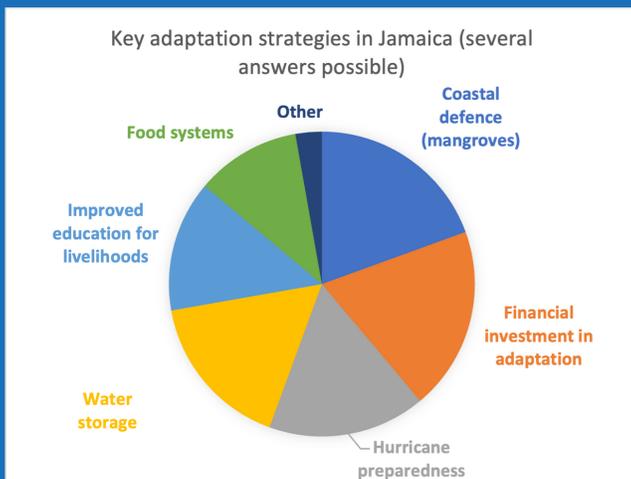
It is particularly difficult to rank some of these dichotomously. Especially given the fact that these hazards tend to affect different groups of persons some of whose vulnerabilities may not be totally understood and on the radar of social protection/social safety net systems. As a result, it could very well spell a major unplanned-for disaster



**DR. CHRISTINE CLARKE**  
Lecturer, UWI Mona

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While the IPCC continues to argue that climate change mitigation is the most critical tool in humanity's arsenal to keep the increase in temperature below 1.5 degrees Celsius, it is becoming increasingly clear that this may not be realistic. In addition to mitigation, it is also necessary to carefully consider different adaptation strategies. These are unique to different parts of the world, considering the variations in circumstances and opportunities.



In this case, the panellists were asked to identify the most crucial adaptation strategies to be pursued in Jamaica. The two most important (and strongly related) ones were improving coastal defences, specifically through the care for mangroves, and attracting more significant financial investment in adaptation. The panellists also believed that strengthening hurricane preparedness is essential, as is the improvement of water storage systems to counter droughts. Dr. Nekeisha Spencer, Senior Lecturer, Department of Economics at UWI Mona, believes that climate financing is crucial:

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Climate financing is now the most important strategy to consider. Empirical evidence shows that Jamaican households engage in informal insurance schemes based on a recent economic study published in the Department of Economics. Nevertheless, there needs to be exposure to more formal approaches to climate finance.



**DR. NEKEISHA SPENCER**  
Lecturer, UWI Mona

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Dr. Patrice Whitely, Lecturer, Department of Economics at UWI Mona, on the other hand, focuses on the seeming contradiction of a country that suffers both devastating floods and droughts:

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The average annual rainfall in Jamaica is around 82 inches, yet every year significant portions of the population are subjected to water "lock-offs." We need more efficient ways to store the ample water we receive each year.



**DR. PATRICE WHITELEY**  
Lecturer, UWI Mona

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## MITIGATION VS ADAPTATION

**Mitigation** means making the impacts of climate change less severe by preventing or reducing the emission of greenhouse gases (GHG) into the atmosphere.

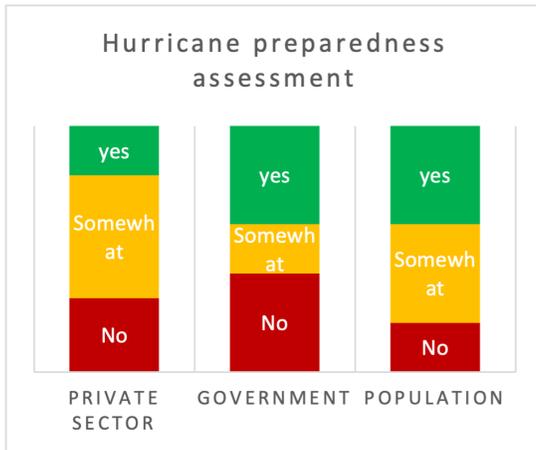
**Adaptation** means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise.

Source



## Hurricane season preparedness

The Hurricane Season starts on 1 June. Jamaica has been lucky for several years since the impact of Sandy in 2012. This streak of luck may cause some people to be less well-prepared for the potential impact of a hurricane this year. The JEP panellists were thus asked whether they thought Jamaicans were prepared for a potential hurricane to impact the country.



On the one hand, most respondents believed that the population was either well prepared or somewhat well prepared. On the other hand, regarding government preparedness, those who believed it was fully prepared equalled those who did not believe so. Finally, asking about the level of preparedness of the private sector, the majority of respondents assess that it is "somewhat prepared." Dr. Olaf J. de Groot, Economist at the United Nations Resident Coordinator's Office, is one of those who believes that Jamaica's luck over the past years may have contributed to relaxation in hurricane preparedness amongst all groups:

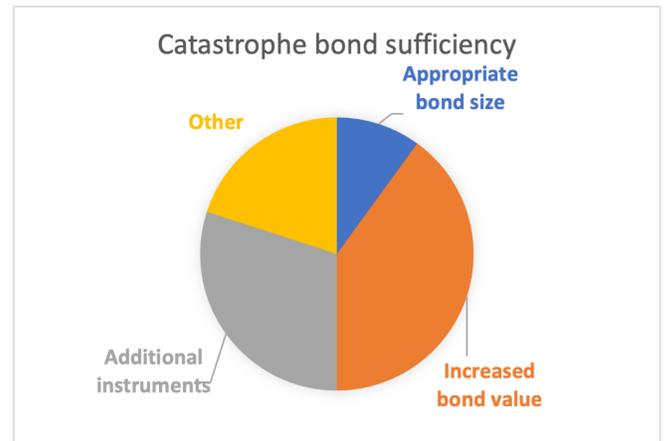
“ People who are not acutely exposed to hazardous events will need routine exposure to preparedness information to really stay on top of their own security. The private sector, in particular, seems to do relatively little contingency planning and many Jamaicans seem to believe that Jamaica is simply out of harm's way. This is a risky attitude to have. The Government continues to provide good access to shelters, but messaging to encourage hurricane preparedness is not as prevalent as it needs to be. ”



**DR. OLAF J. DE GROOT**  
Senior Economist, UNRCO

Last year, the Government of Jamaica became the first Small Island Developing State (SIDS) to issue what is known as a catastrophe bond, which provides Jamaica with up to USD 185 million of protection against losses caused by a named storm over three hurricane seasons. Upon the emission of the bond, Dr. The Hon. Nigel Clarke, Minister of Finance and the Public Service, **stated**, "The Government of Jamaica has strategically prioritized Disaster Risk Financing to mitigate the adverse fiscal impact of tropical cyclones and natural disasters, thereby strengthening Jamaica's economic resilience."

The catastrophe bond is an essential tool for Jamaica to mitigate the impact of a potential hurricane strike, but other instruments could be available. The panellists were asked if they believed that other instruments should be pursued and whether they believed the catastrophe bond was of sufficient size. The panellists endorsed the usage of the catastrophe bond as an appropriate innovative financing tool. However, a substantial majority would have liked to see a larger bond size and the inclusion of other instruments.



One respondent points out that a hurricane like that of Hurricane Gilbert (1988) would be estimated to cost up to USD 1.3 billion if it were to happen today. A possible suggestion could be to have a tiered risk system that allows for larger pay-outs in the case of high-impact, low-probability events. Wendel Ivey, Economist, points out that a disaster bond is a good initiative, but that disaster preparation continues to be crucial:

“ In the aftermath of a disaster strike, the Bond is a good initiative. However, through the lens of resilience to natural disasters, it is insufficient by itself and should be complemented with other strategies. Jamaica needs to be proactive, especially in enforcing strict building codes and zonal laws. A disaster strike could easily cause damages and claim significant lives in a setting where building codes are not followed correctly and amplify the effect of a natural disaster. ”



**WENDEL IVEY**  
Economist, Bank of Jamaica

## Conclusion

The latest IPCC report leaves little doubt that SIDS are facing more significant exposure to climate-related disasters in the future. Jamaica is not an exception, with cyclones (hurricanes) and droughts a particular hazard, especially for those vulnerable communities whose livelihoods depend on coastal activities.

Jamaica will need to access more financing to invest in climate adaptation, especially concerning coastal defences and water storage. Opportunities exist worldwide to attract such investments through private and public funds. Some examples include the **Pilot Programme for Climate Resilience (PPCR)** and the new **Finance Strategy** of the Nationally Determined Contributions Partnership, as launched by Prime Minister, the Most Hon. Andrew Holness. Jamaica is also one of **five pilot countries** selected by the Taskforce on Access to Climate Finance, which came out of the COP26 summit that took place in 2021.

The panellists have mixed perceptions about different segments of Jamaican society's preparedness for a potential hurricane. Their views can be attributed to the lucky streak the country has enjoyed with no significant impacts in almost a decade. Nevertheless, Jamaicans must prepare for acute disasters. The Government's initiative to establish a catastrophe bond is seen as a good step toward preparing for the potential financial impact of a hurricane. However, the panellists indicate that a larger bond size may be desirable and additional instruments to mitigate risk.