Climate adaptation in the Caribbean: Climate data

CDKN-funded research has provided decision makers in the Caribbean with access to climate data specific to the region

The CARIWIG online data portal provides open access to Caribbean climate data including:

- Historical climate data
- Future climate projections
- A 'weather generator' tool
- A tropical storm model
- A drought tool

1 Users can access historical climate data

44 +

Weather stations provide historical data for two 30-year time periods. Climate variables include...

- Rainfall
- Sunshine duration and number of dry days
- Temperature
- Vapour pressure
- Wind speed

2 The portal also provides future projections

Data from 2 Global Climate Models (GCMs) is downscaled...

to drive a Regional Climate Model (RCM) that provides climate projections at a 25km resolution across the Caribbean

3 The portal provides data simulations that can help decision makers better understand climate risks to the region

Weather Generator (WG)

This tool provides daily weather time series that can be used in impact assessment. Projections can be generated at single locations at the site of available weather stations

In Belize the tool was used to assess how climate change might affect dengue fever

18˚C

Research found that the number of days where minimum temperatures exceeded 18˚C is likely to increase. This suggests conditions for dengue fever could become more favourable

Tropical Storm Model (TSM)

The TSM allows users to run simulations of tropical storms over pre-defined storm tracks. The model generates precipitation rates and wind speeds on grids at 15 minute intervals

In Jamaica the model was used to assess river discharge in the event of a category 5 hurricane

14 hours

The study found that peak discharge of the river is likely to occur around 14 hours after the onset of the storm. Different tracks and storm strengths yield different discharge rates

The CARiDRO drought tool

CARiDRO allows users to process observed and modelled climate data to assess both atmospheric and hydrological drought

In Cuba the model was used to assess the frequency of drought under climate change

12-18

According to the research, Cuba's Las Tunas province can expect between 12-18 moderate to extreme droughts between 2011 and 2050

4 Climate projections are a useful tool for decision makers, but uncertainty over the nature of climate impacts is inevitable. CDKN-funded research provides guidance on how to make decisions under uncertainty

As climate projections are uncertain Caribbean decisions makers should focus on identifying and implementing adaptation actions that perform well over a wide range of conditions experienced now and potentially in the future

The Caribbean Climate Online Risk and Adaptation tooL (CCORAL) is a web-based tool designed to help integrate climate change into policy and practice

To learn more and access the Caribbean research on which this infographic is based visit: www.CDKN.org/caribbean

Climate & Development Knowledge Network

The CARibbean Weather Impacts Group (CARIWIG) is composed of Newcastle University (UK), the Caribbean Community Climate Change Centre (Belize), University of East Anglia (UK), University of the West Indies (Jamaica) and the Institute of Meteorology (Cuba)

To access CARIWIG data and simulations visit: cariwig.caribbeanclimate.bz and caridro.caribbeanclimate.bz. To access CCORAL visit: ccoral.caribbeanclimate.bz
References for the data and information in this infographic can be found in the related policy brief at https://cdkn.org/2017/03/feature-climate-data-caribbean

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