Climate Change and Health in the Caribbean



Caribbean
Public Health
Agency

CARPHA

Launch of the 2019 Lancet Countdown on Health and Climate Change Report December 19, 2019

Dr. Joy St. John Executive Director, CARPHA

CLIMATE DRIVERS

- · Increased temperatures
- Precipitation extremes
- · Extreme weather events
- Sea level rise

ENVIRONMENTAL & INSTITUTIONAL CONTEXT

- Land-use change
- Ecosystem change
- · Infrastructure condition
- Geography
- Agricultural production
 & livestock use

EXPOSURE PATHWAYS

- Extreme heat
- · Poor air quality
- Reduced food & water quality
- Changes in infectious agents
- · Population displacement

HEALTH OUTCOMES

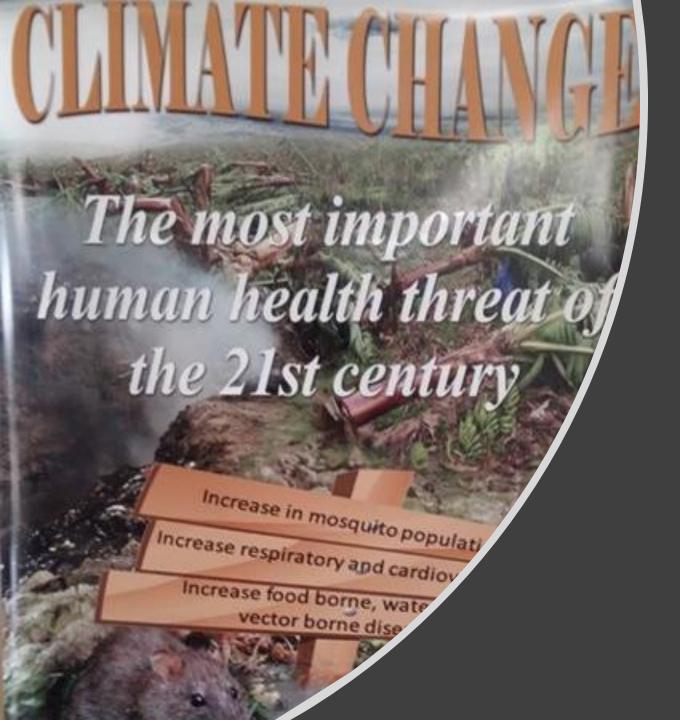
- Heat-related illness
- Cardiopulmonary illness
- · Food-, water-, & vector-borne

SOCIAL & BEHAVIORAL CONTEXT

- · Age & gender
- Race & ethnicity
- Poverty
- · Housing & infrastructure
- Education
- Discrimination
- Access to care & community health infrastructure
- Preexisting health conditions

Source: The Impacts of Climate Change on Human Health in the United States, US Global Change Research Program

https://health2016.globalchan ge.gov/





WHO 2015:

Climate change is the greatest threat to global health in the 21st century

Poster by the Environmental Health Department, Dominica

Food Security and Nutrition



Effects

- Shortage of fresh foods as indigenous agricultural production ceased
- In first few days, hygienic conditions in shelters are sub optimal with no potable water, little fresh food and challenges with toilet facilities
- 80 to 90% reduction in forest coverage and shade of watersheds



Actions

- Some assistance in monitoring environmental conditions which challenge health –stagnant water, shelter conditions, gastrointestinal illnesses
- Regulation and inspection of agricultural vendors, supermarkets and food establishments



Safe drinking water and sanitation

- Cuts in water supply and risk of exposure to sewage, as water and sewage pipes can be compromised
- Accumulation of waste: garbage collection vehicles, equipment and roadways damaged/ destroyed
- Stagnant water resulting from damaged infrastructure: risk of vector-borne disease
- Need for Water, Sanitation and Health: Mass distribution of water, sanitation tablets and clean-up supplies
- Community mobilisation, education
- Testing of water quality with CARPHA (EHSD)



Study Findings

- Following Hurricanes Irma and Maria, cases of gastroenteritis increased more rapidly in the countries that were struck by the hurricanes at Category 4 or 5 than in those that were not
- fever cases in the countries struck at Category 4 or 5 strength after the hurricanes
- Fever cases rose rapidly for two weeks after Hurricane









Algal Blooms





Source: https://www.cdc.gov/habs/index.html

Harmful Algal Blooms Affect

- Marine life
- Human health

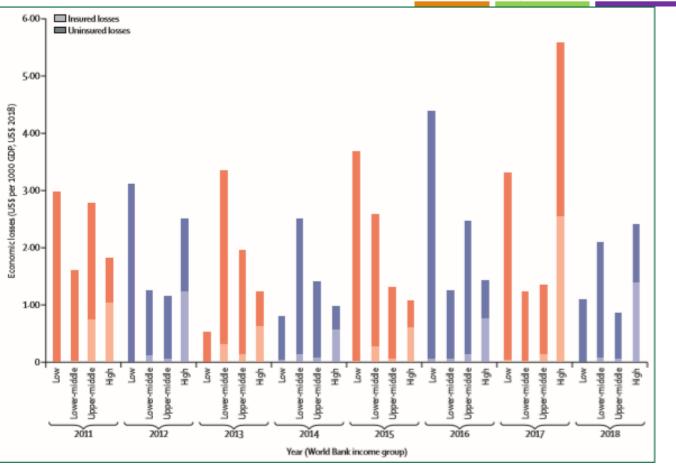
Health Exposure pathways e.g.

- Water Sports
- Air Quality
- Food and water quality

Economic Impacts

Economic losses from climate-related events relative to GDP





Source: Lancet 2019; 394: 1836-78

file:///C:/Users/gasparja/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/TK8KUXX7/Lancet%20Countdown%20in%20health%20and%20climate%20c hange.pdf

Organizations working with Climate Change in the Caribbean Region

- CARPHA
- Pan American Health Organization (PAHO)
- Climate Studies Group, (CSG) University of the West Indies (UWI), Mona, Jamaica
- Caribbean Meteorological Organization (CMO)
- Caribbean Institute for Meteorology and Hydrology (CIMH)
- Caribbean Regional Climate Centre (Caribbean RCC)
- Caribbean Community Climate Change Centre (CCCCC)
- Regional Coordinating Mechanism on Health Security (RCMHS)
- 1 CARICOM Implementation Agency for Crime and Security (IMPACS)
- Centre for Resource Management and Environmental Studies (CERMES)
- Caribbean Agricultural Research and Development Institute (CARDI)





- Barbados Programme of Action (BPOA)
- SAMOA Pathway
- Liliendaal Declaration (2009)
- Caribbean Regional Framework for Achieving Development Resilience to Climate Change (2009-2015)
- Caribbean Cooperation in Health IV (CCH IV)
- One Health, One Caribbean, One Love Project
- Third Global Conference on Health and Climate Change: Special Focus on SIDS, 16-17 October 2018, Grenada
- Caribbean Action Plan on Health and Climate Change





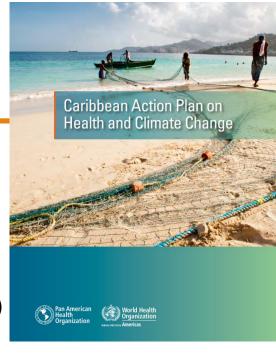
















Damage to Princess Margaret Hospital Laboratory, Dominica

La Plaine Health Centre Post SMARTING Project, Dominica

Health Climatic Bulletin



Climate-smart tool developed and disseminated by the CARPHA, PAHO and CIMH



Key Messages until February 2020

- Caribbean dry season: Increased potential for wildfires
- Short and long-term drought
- Potential extensive crop damage due to crop damage or loss (Food Insecurity)
- Increased humidity may promote mould growth

CARPHA's Role

- Environment monitoring
- Environmental assessments and environmental auditing
- Emergency response
- VBD management







Launched in June 2019

CARIBBEAN PUBLIC HEALTH AGENCY

STATE OF PUBLIC HEALTH IN THE CARIBBEAN 2017-2018

Climate and Health: Averting and Responding to an Unfolding Health Crisis

http://carpha.org/Data-and-
Publications/Publications/Publications

SOMETIMES LATER BECOMES NEVER.