



# CLIMATE CHANGE AND VULNERABLE CARIBBEAN COMMUNITIES

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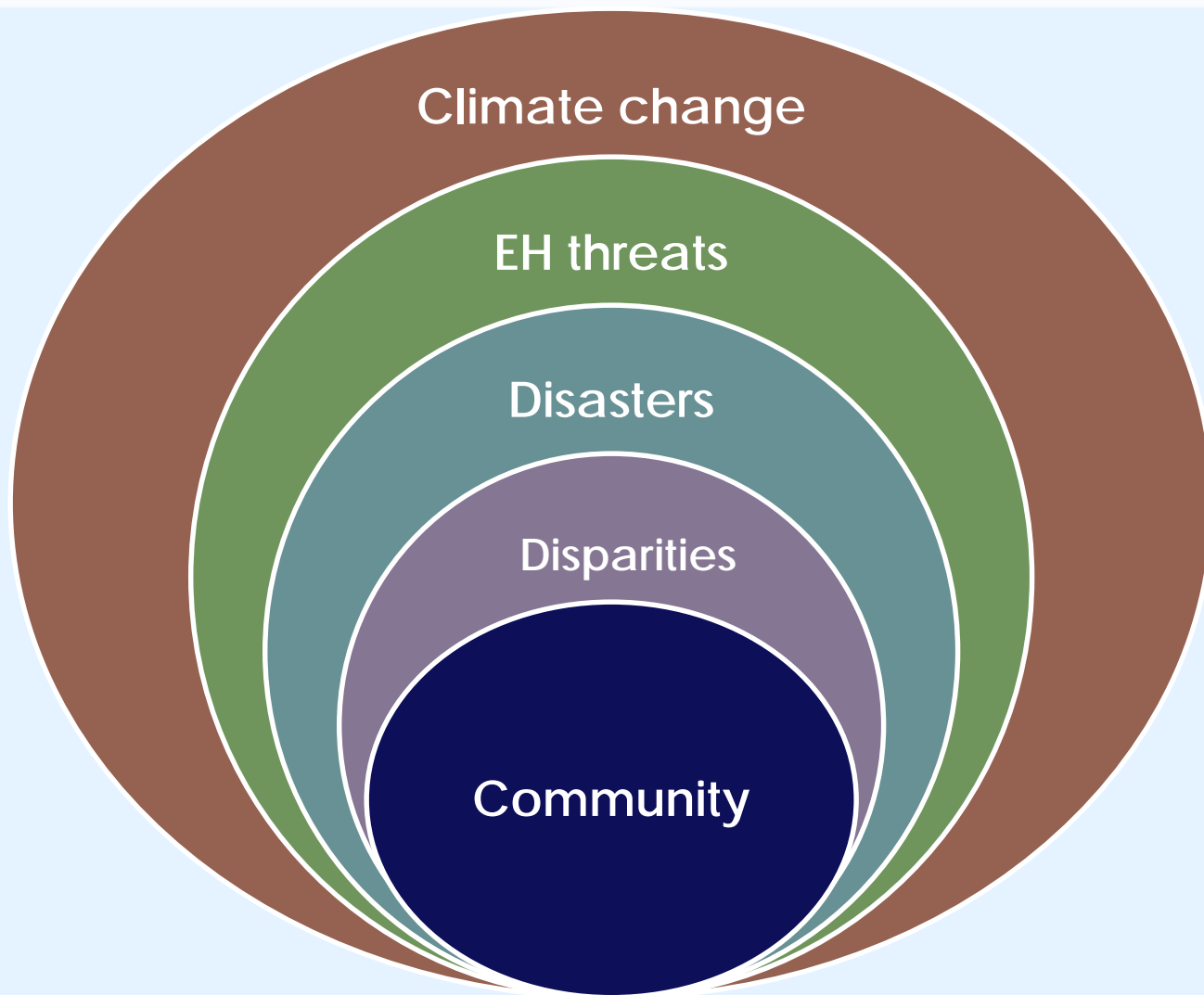


# PRESENTATION OBJECTIVES

- Examine potential impact of climate change and environmental pollution on vulnerable populations in the Caribbean region
- Present key strategic imperatives to achieve climate change resilience
- Identify opportunities for regional policy development to address climate change and health



# CARIBBEAN REGION COMMUNITY VULNERABILITY



# TOP 10 CAUSES OF DEATH LATIN AMERICA & CARIBBEAN (2015)

Rank	Cause	Deaths (000s)	% of total deaths	Cumulative % of total deaths	CDR (per 100 000 population)
0	All Causes	3,705	100.0	100.0	585.8
1	Ischaemic heart disease	534	14.4	14.4	84.5
2	Stroke	280	7.5	22.0	44.2
3	Diabetes mellitus	243	6.6	28.5	38.4
4	Lower respiratory infections	233	6.3	34.8	36.9
5	Interpersonal violence	167	4.5	39.3	26.3
6	Chronic obstructive pulmonary disease	153	4.1	43.4	24.1
7	Road injury	119	3.2	46.6	18.8
8	Kidney diseases	105	2.8	49.5	16.5
9	Cirrhosis of the liver	98	2.7	52.1	15.6
10	Trachea, bronchus, lung cancers	76	2.1	54.2	12.0

# INFECTIOUS DISEASE BURDEN

	Region	Total cases	Incidence rate/ 100,000
<b>Dengue (2017)</b>	Latin Caribbean	2616	10.09
	Non Latin Caribbean	3239	16.47
<b>Zika (2015 – 2018)</b>	Latin Caribbean	42236	349.32
	Non Latin Caribbean	6743	411.03
<b>Chikungunya (2017)</b>	Latin Caribbean	170	1.01
	Non Latin Caribbean	123087	18.27

**Latin Caribbean:** Cuba, DR, Fr. Guy., Guadeloupe, Haiti, Martinique, PR, St. Barth, St. Martin

**Non Latin Caribbean:** Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bonaire, St Eustatius, Saba, Cayman Islands, Curacao, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, St Maarten, Suriname, T & T, Turks and Caicos, Virgin Islands (UK & US). Source : PAHO



# CARIBBEAN REGION CLIMATE CHANGE DISPARITY

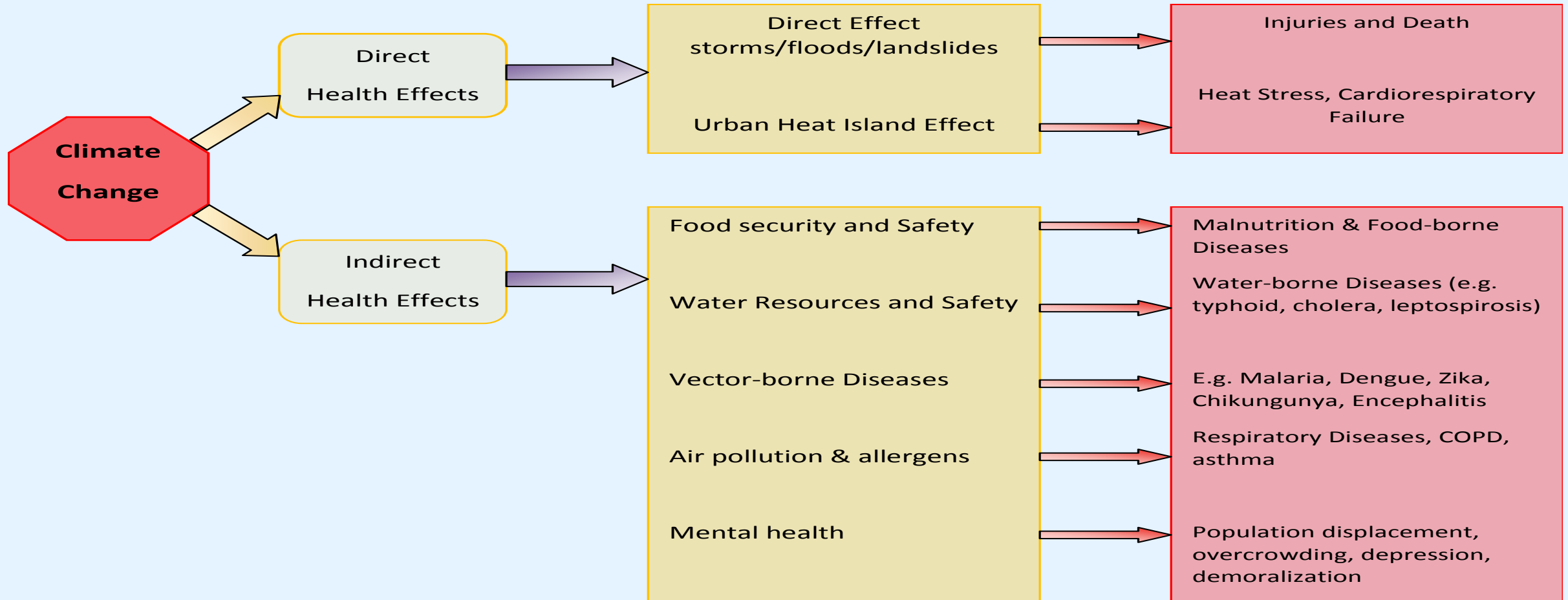
- Intergovernmental Panel on Climate Change: disproportionate health impact on lower income countries predominantly within (sub)tropical regions
- Population: 42M; Surplus trade with the US: \$54.6 B
- Visitors: 50M (US 14M)
- Impact on healthcare system, agriculture, tourism, and economy
  - Lack of comprehensive assessment impact CC on PH and the environment
  - Lack of a region-wide strategy to build sustainability and resilience until recently

## RECIPROCALLY EXACERBATED BY:

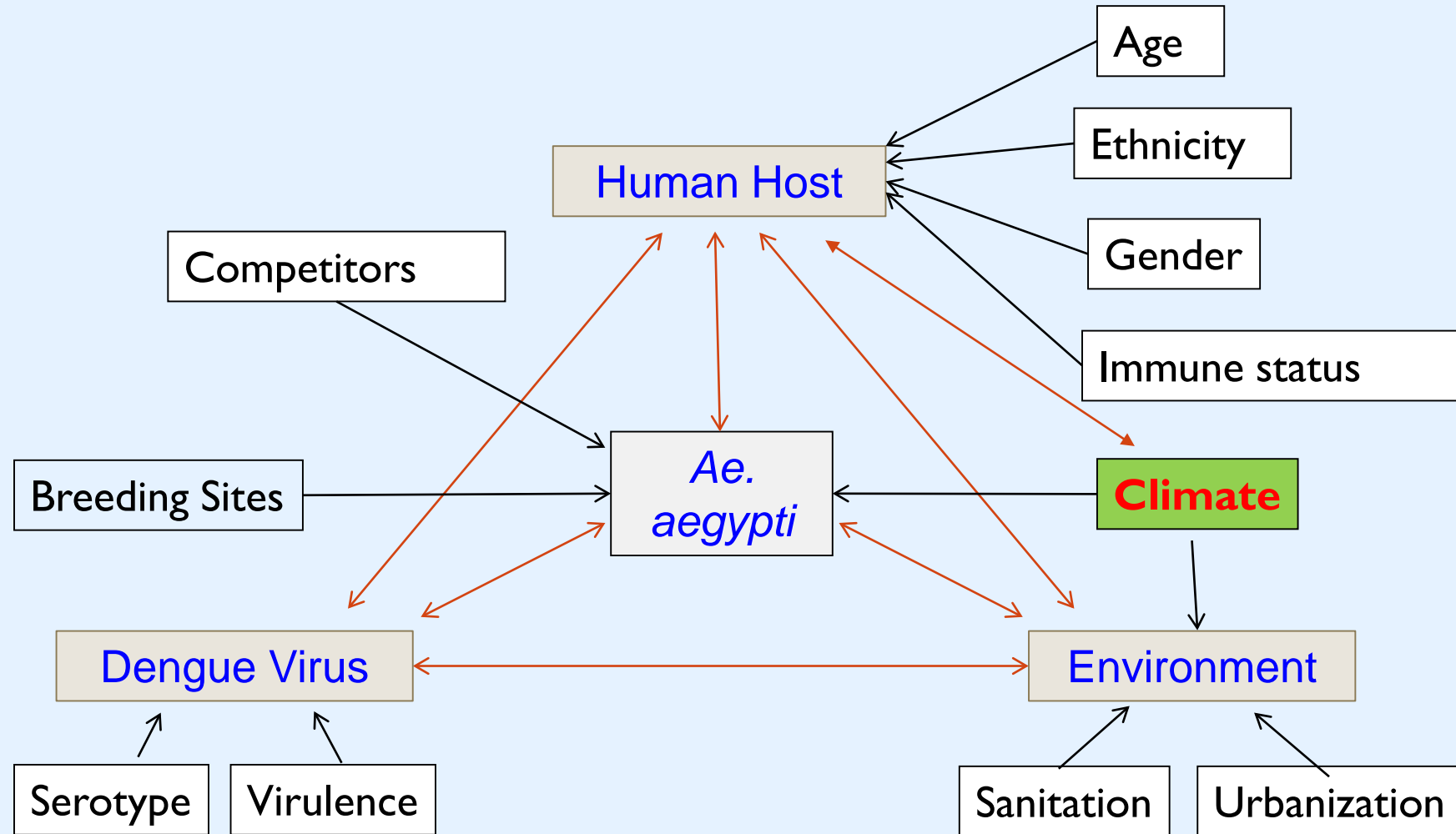
- Existing triple health threat
  - Disproportionate high burden NCDs
  - Epidemic and endemic infectious diseases
  - Fragile health structure



# CARIBBEAN REGION: CLIMATE CHANGE-RELATED HEALTH EFFECTS



# CLIMATE VARIABILITY AND INFECTIOUS DISEASE: TRANSMISSION OF DENGUE, ZIKA, CHIKUNGUNYA

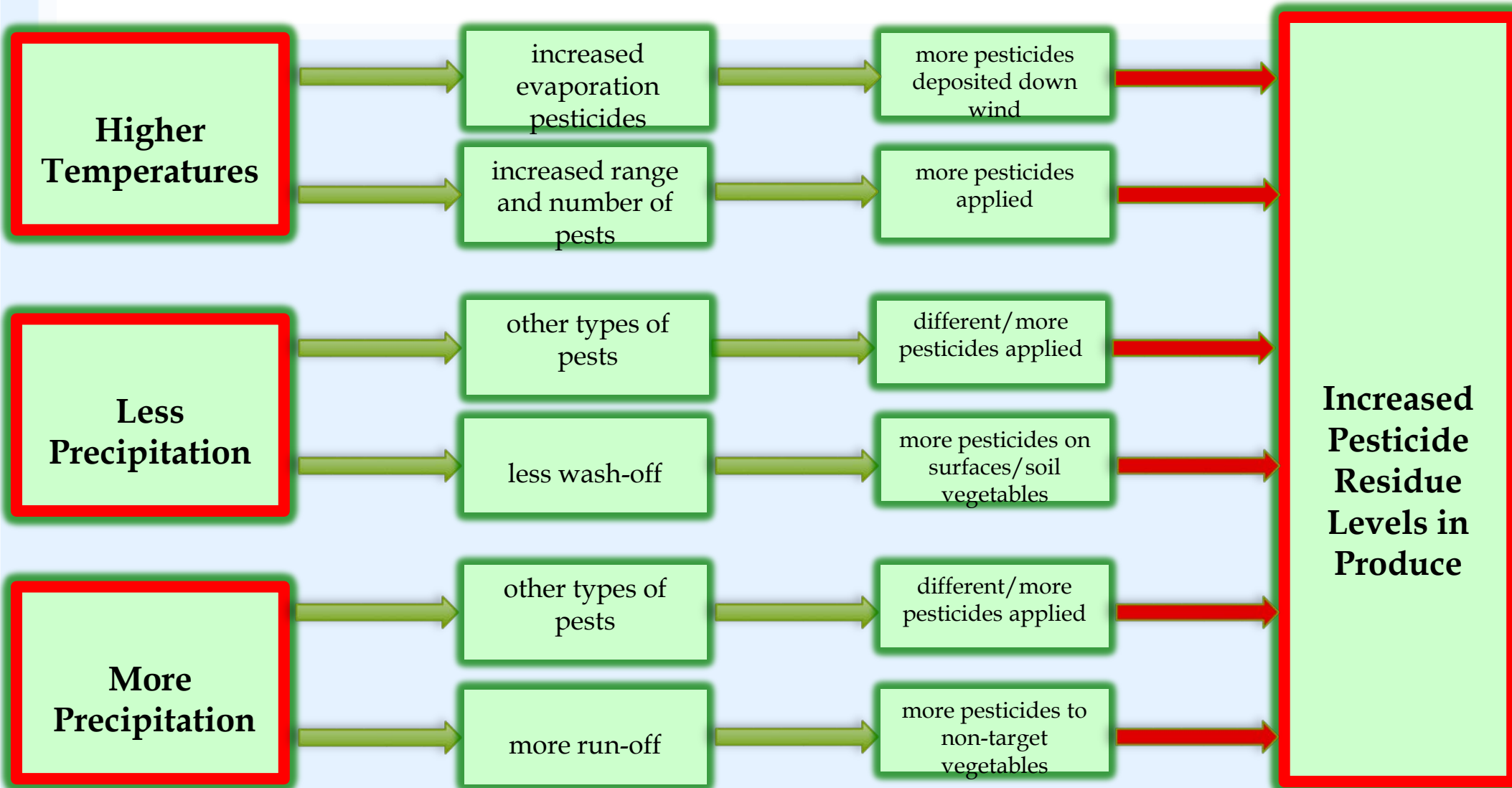


Hamer, D., et al. (2015). A Retrospective Analysis of Dengue Cases in Suriname: Implications for Treatment and Prevention in a Lower Middle Income Country. *Int. J Trop. Dis. and H.*, 7 (4):132-143.





# CLIMATE CHANGE AND FOOD SECURITY



# CLIMATE CHANGE AND THE ENVIRONMENT

- Physical environment
  - Transportation
  - Built environment
- Biological environment
  - Ecosystem (flora, fauna, seafood habitat, wetlands)
- Social environment
  - Neighborhood disruption
- Policy environment
  - Limited /Absence of policies aimed at community protection
  - Lack of enforcement
  - Lack of responsiveness to waiver as part of response and recovery



# CARPHA AND CLIMATE CHANGE

- Overall objective: Foster regional resilience
- Serve as health coordinator for a Caribbean-wide strategic plan
  - Lead development in collaboration with key existing stakeholders such as 5Cs
  - Facilitate implementation
  - Monitor outputs and outcomes
  - Disseminate evidence-based practices



Image: Caribbean News Service

# CARIBBEAN -WIDE CLIMATE CHANGE STRATEGIC PLAN GOAL AND OBJECTIVES

## *Goal*

- Develop a climate change strategic roadmap to analyze, control, and where possible prevent the impact on human health and the environment.

## *Objectives*

- Conduct an *asset assessment and gap analysis* based on existing activities and programs
- Develop proposed *strategic imperatives based* on the results of the asset and gap analysis
- Convene an *expert panel* to inform the proposed strategic imperatives and recommend a guide to implementation



# CLIMATE ROADMAP STRATEGIC IMPERATIVES

1. Raise awareness of Climate Change and health through information dissemination, communication and education
2. Strengthen community- and technology-enabled resilience to address the cumulative threat of climate change and severe weather events
3. Bolster and integrate multi sectoral data and evidence for decision making
4. Enhance regional sustainability and resilience of health facilities
5. Maximize the benefits of the built environment and **Climate Change** resilience



# RAISE AWARENESS OF CLIMATE CHANGE AND HEALTH THROUGH INFORMATION DISSEMINATION, COMMUNICATION AND EDUCATION

Strategic Goal

Strategic Imperatives

Measurable Objectives  
(benchmarks)

Approach

Actions/ Programs/ Best Practices

Reduce the impact of CC on health and the environment

Raise awareness of CC and health through information dissemination, communication and education

# of Member States that implement CC information dissemination, communication and education programs by 2020

Develop a CC and health workforce

Identify human and financial resources

Develop a portfolio of culturally tailored products



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# STRENGTHEN COMMUNITY- AND TECHNOLOGY-ENABLED RESILIENCE TO ADDRESS THE CUMULATIVE THREAT OF CLIMATE CHANGE AND SEVERE WEATHER EVENTS

**Strategic Goal**

**Strategic Imperatives**

**Measureable Objectives  
(benchmarks)**

**Approach**

**Actions/ Programs/  
Best Practices**

**Reduce the  
impact of CC on  
health and the  
environment**

**Strengthen  
community- and  
technology-  
enabled resilience  
to address the  
cumulative threat  
of CC and severe  
weather events**

**# of Member  
States having CC  
community  
resilient programs**

**Mainstream CC  
adaptation  
strategies into the  
sustainable  
development  
agendas of the  
Member States**

**Implement  
adaptation  
measures based  
on assessments of  
CC and health  
vulnerability**



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# INTEGRATE MULTI SECTORAL DATA AND EVIDENCE FOR DECISION MAKING

**Strategic Goal**

**Strategic Imperatives**

**Measureable Objectives  
(benchmarks)**

**Approach**

**Actions/ Programs/  
Best Practices**

**Reduce the  
impact of CC on  
health and the  
environment**

**Integrate multi  
sectoral data and  
evidence for  
decision making**

**# of Member  
States that include  
climate indicators  
in their  
environmental  
health surveillance  
systems**

**Strengthen the  
generation and  
dissemination of  
knowledge on  
health risks  
associated with CC  
and the  
appropriate PH  
response to CC**

**Identify and  
adapt indicators  
of CC for  
inclusion in  
national  
surveillance  
systems,  
including all  
relevant health  
outcomes**



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# ENHANCE REGIONAL SUSTAINABILITY AND RESILIENCE OF HEALTH FACILITIES

**Strategic Goal**

**Strategic Imperatives**

**Measureable Objectives  
(benchmarks)**

**Approach**

**Actions/ Programs/  
Best Practices**

**Reduce the  
impact of CC on  
health and the  
environment**

**Enhance regional  
sustainability and  
resilience of  
health facilities**

**# of Member  
States that have  
completed CC and  
health  
vulnerability and  
adaptation  
assessments**

**Strengthen health  
system capacity to  
design, implement,  
monitor, and  
evaluate  
adaptation  
measures**

**Strengthen PHC  
services,  
including  
primary  
prevention, to  
support the  
capacity of local  
communities to  
become resilient  
to climate-related  
health risks**



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# MAXIMIZE THE BENEFITS OF THE BUILT ENVIRONMENT AND CLIMATE CHANGE RESILIENCE

**Strategic Goal**

**Strategic Imperatives**

**Measureable Objectives  
(benchmarks)**

**Approach**

**Actions/ Programs/  
Best Practices**

**Reduce the  
impact of CC on  
health and the  
environment**

**Maximize benefits  
built environment  
and CC resilience**

**# of Member  
States that have  
adopted building  
codes to protect  
coastal  
infrastructure and  
the built  
environment**

**Promote adoption  
of specific  
adaptation  
measures to  
decrease regional  
vulnerability**

**Implement  
building codes to  
protect regional  
infrastructure**



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# PROTECTING VULNERABLE POPULATIONS IN THE CARIBBEAN

- CARPHA to serve as the coordinating hub for the development and implementation of actions aimed at addressing the implications of CC on PH
- Use the regional strategic plan to develop country and region wide policies on CC and health
- Develop outcome measures to monitor progress in addressing PH implications of CC in the Caribbean region
- Promote transdisciplinary partnerships: for the Caribbean by the Caribbean
- Deploy a holistic approach strengthening science to inform policy and promote evidence based practice
- Tailor actions to protect those most vulnerable
- Prioritize prevention
- Address adaptation AND mitigation.



# *Divided By Water*



# *Together By Culture*

## Caribbean diaspora in NYC

<https://macaulay.cuny.edu/eportfolios/caribbeandiasporaidentity17/art-and-identity-2/>