



CLIMATE CHANGE & YOU:

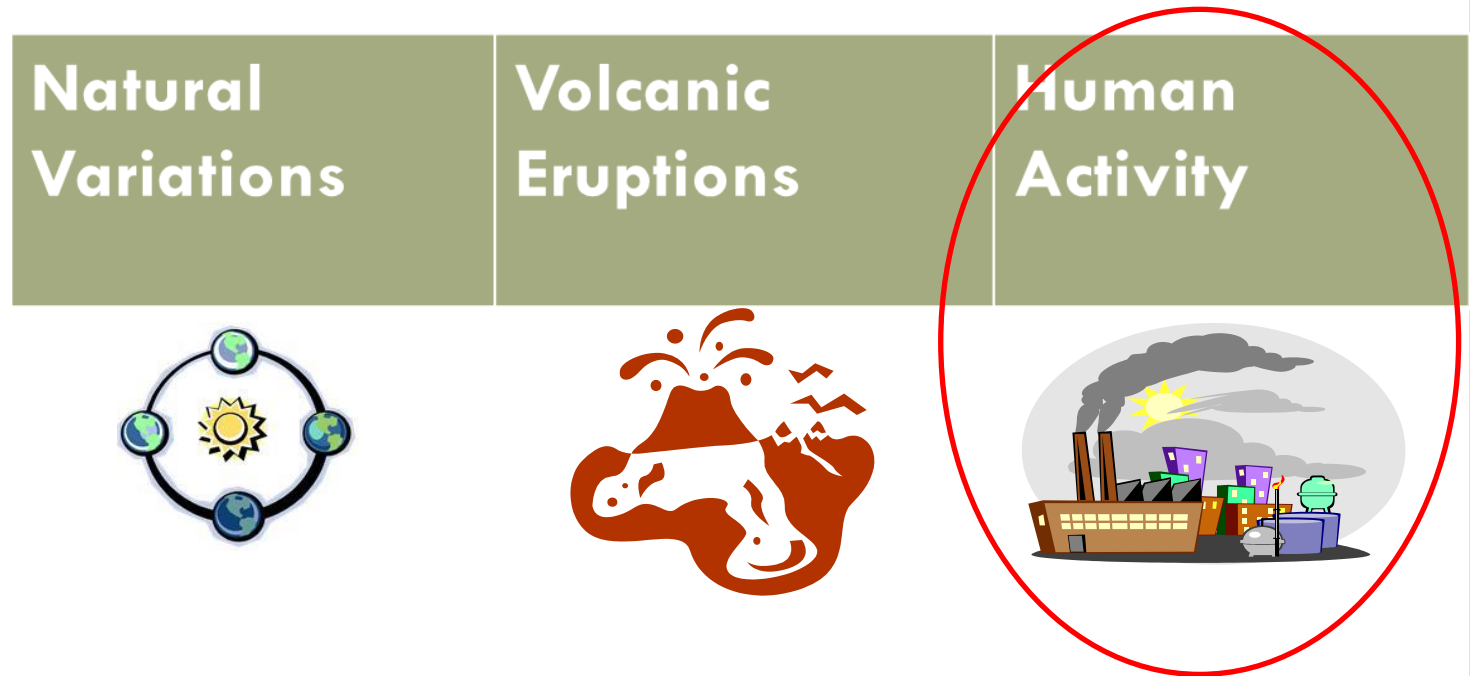
3 THINGS

YOU SHOULD KNOW



Climate Change...

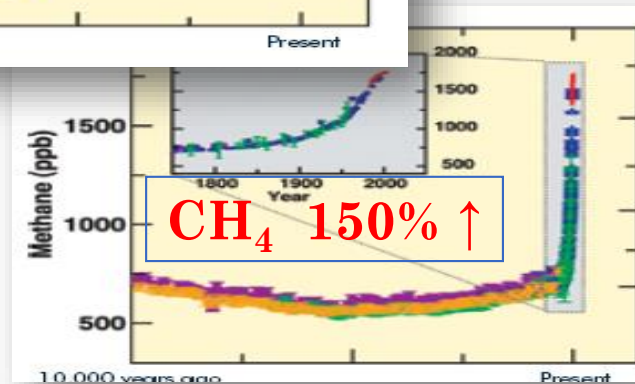
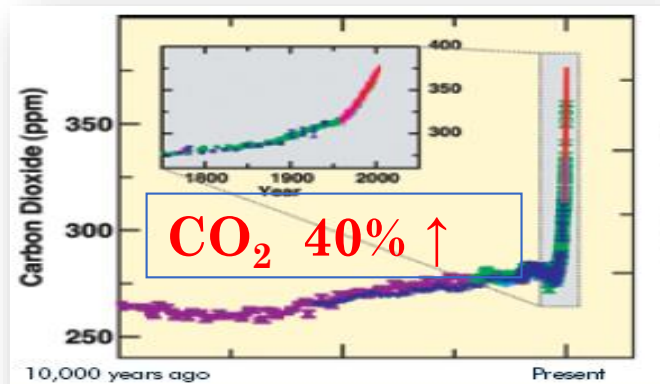
Distinct changes in measures of climate (rainfall, temperature, wind speed, etc.) lasting for a long period of time due to human activities.





Climate Change...

Distinct changes in measures of climate (rainfall, temperature, wind speed, etc.) lasting for a long period of time due to human activities.



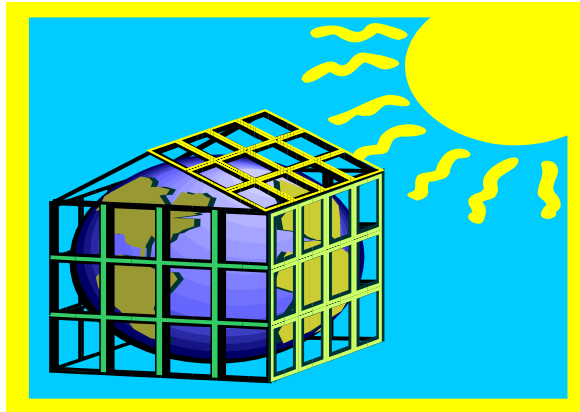
Human Activity





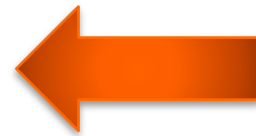
Climate Change...

Distinct changes in measures of climate (rainfall, temperature, wind speed, etc.) lasting for a long period of time due to human activities.



Greenhouse Gases

Water Vapour (H_2O), Carbon Dioxide (CO_2), Methane (CH_4), etc. Blanket earth, keep us warm



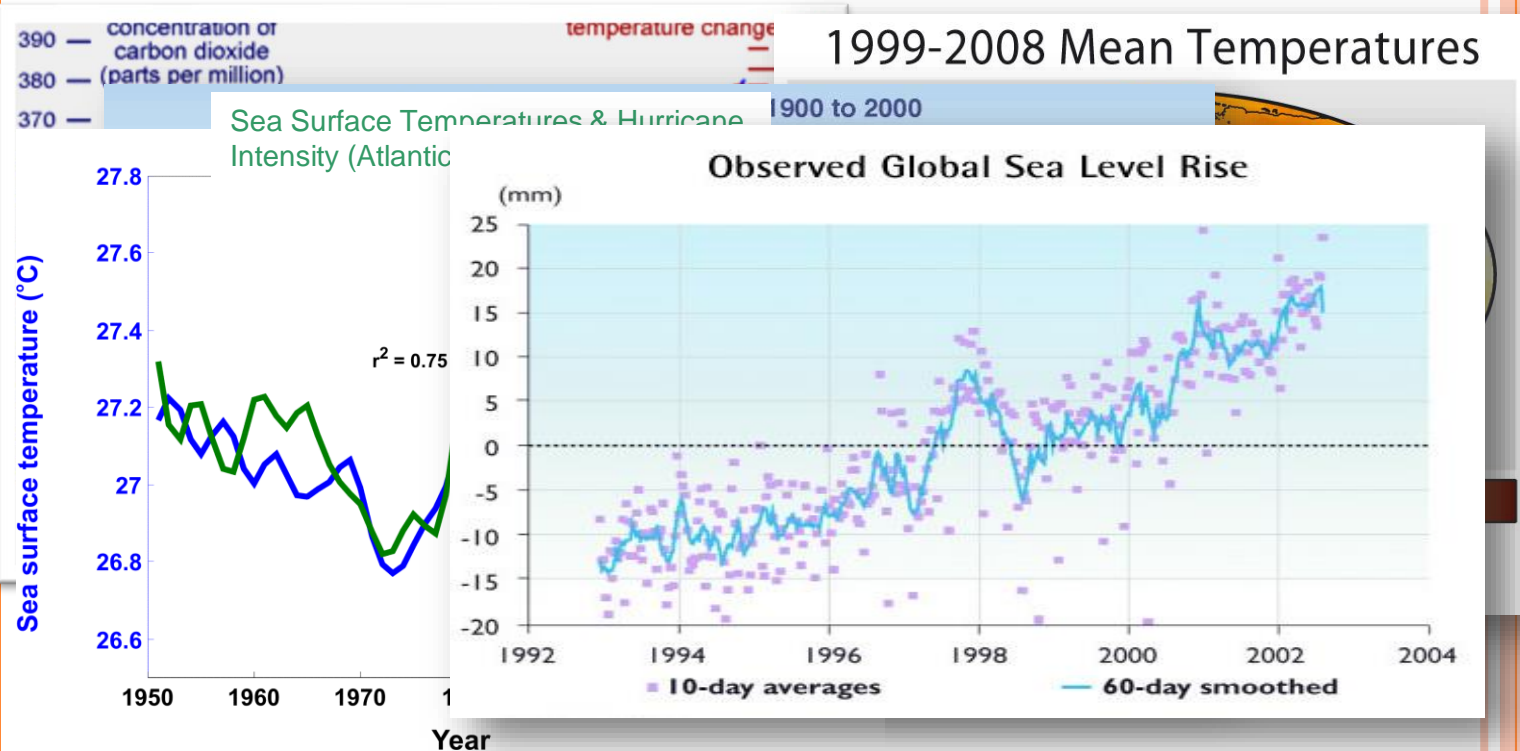
Human
Activity





Climate Change...

Distinct changes in measures of climate (rainfall, temperature, wind speed, etc.) lasting for a long period of time due to human activities.





CLIMATE CHANGE & YOU:

3 THINGS

YOU SHOULD KNOW





1

Our Climate has Changed

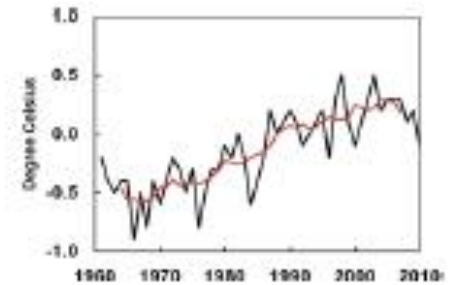
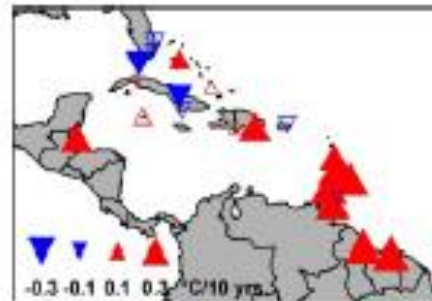
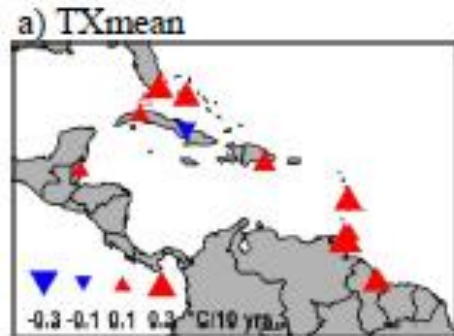




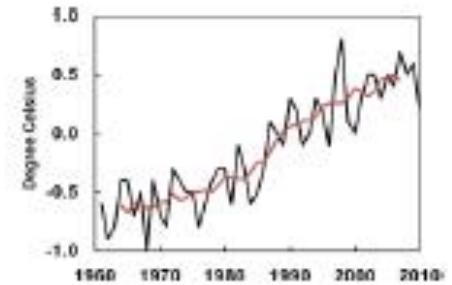
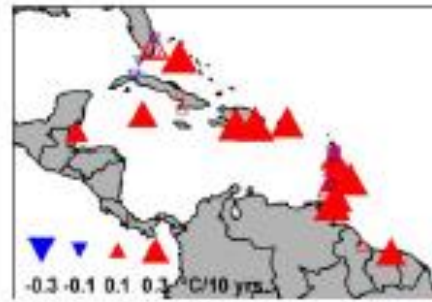
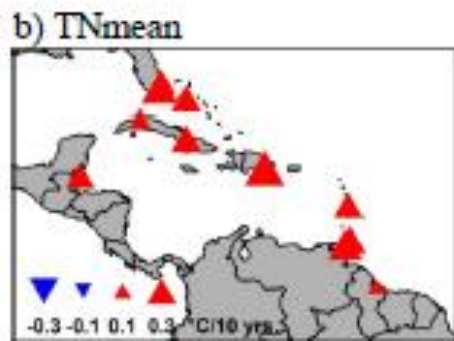
1

Its gotten hotter...

Day time temperatures



Night time temperatures



1961-2010

1986-2010

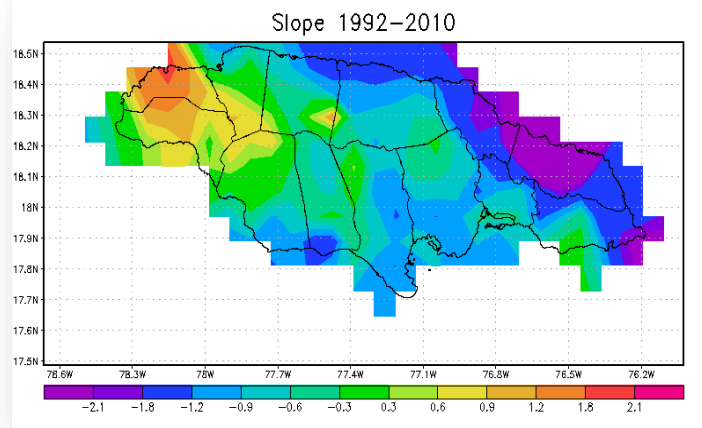
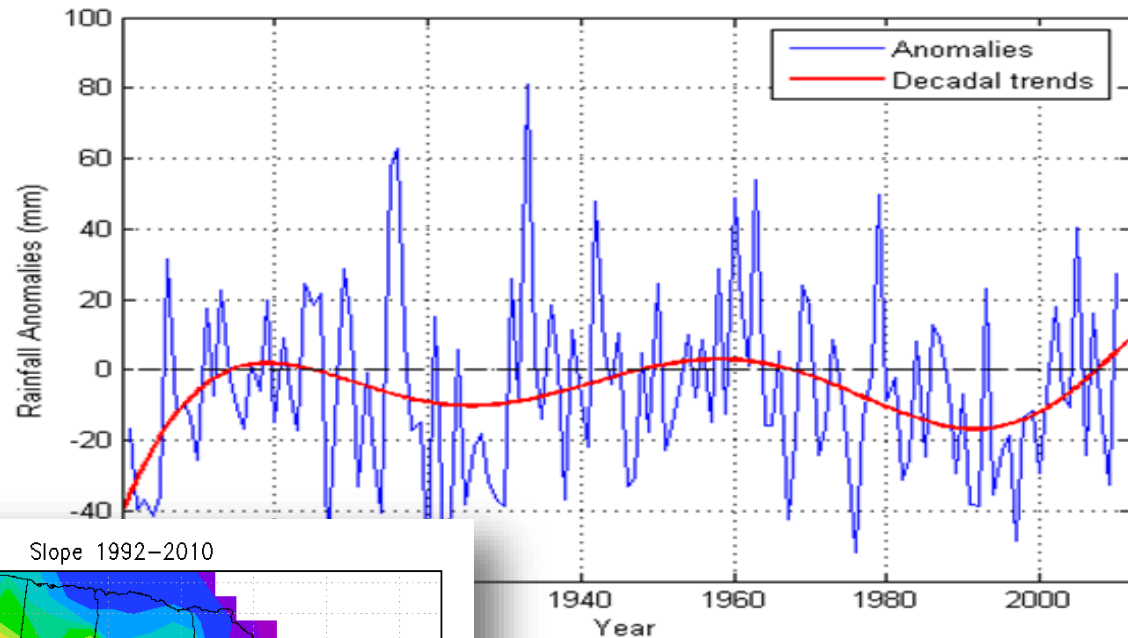
Stephenson et al (2014)

~ 1 degree rise since pre-industrialized times.



1

Rain is more variable...

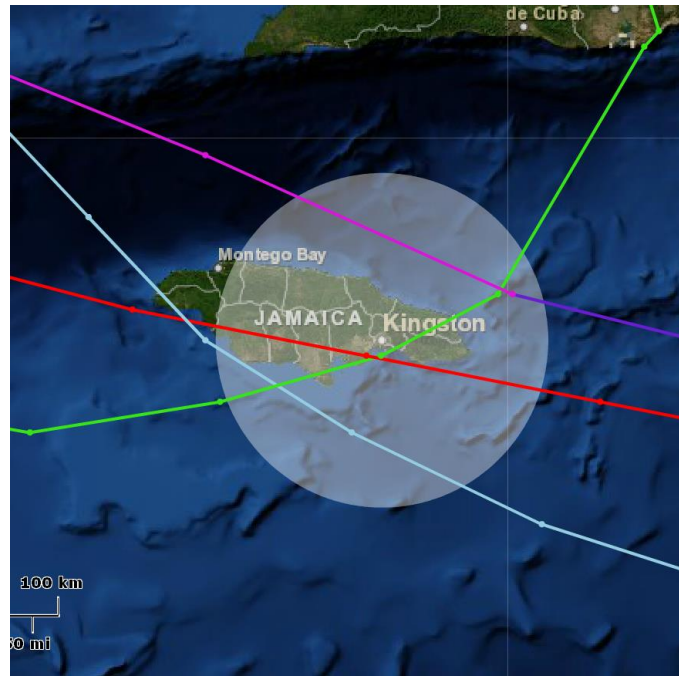


Very variable rainfall pattern + some places getting wetter, some getting drier.



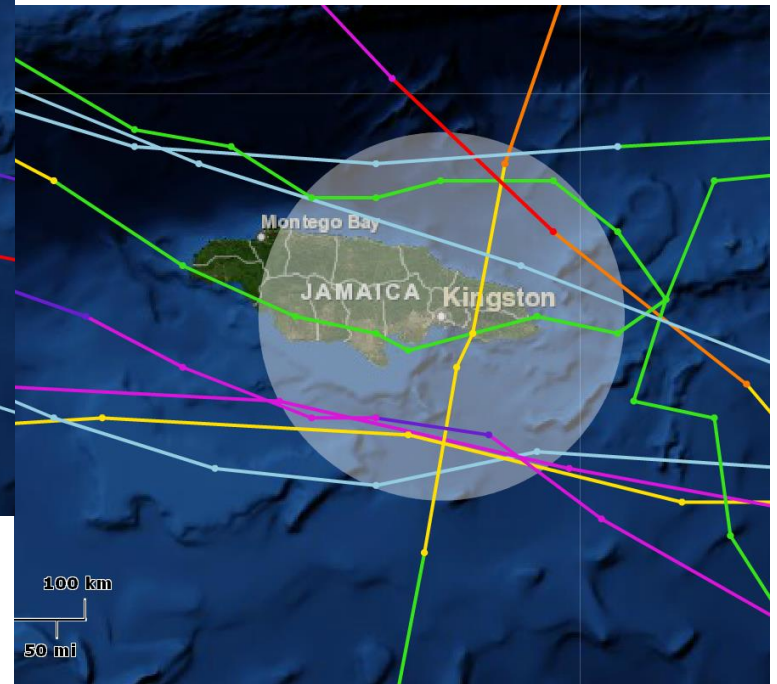
1

More storms...



1980-1999

2000-2012

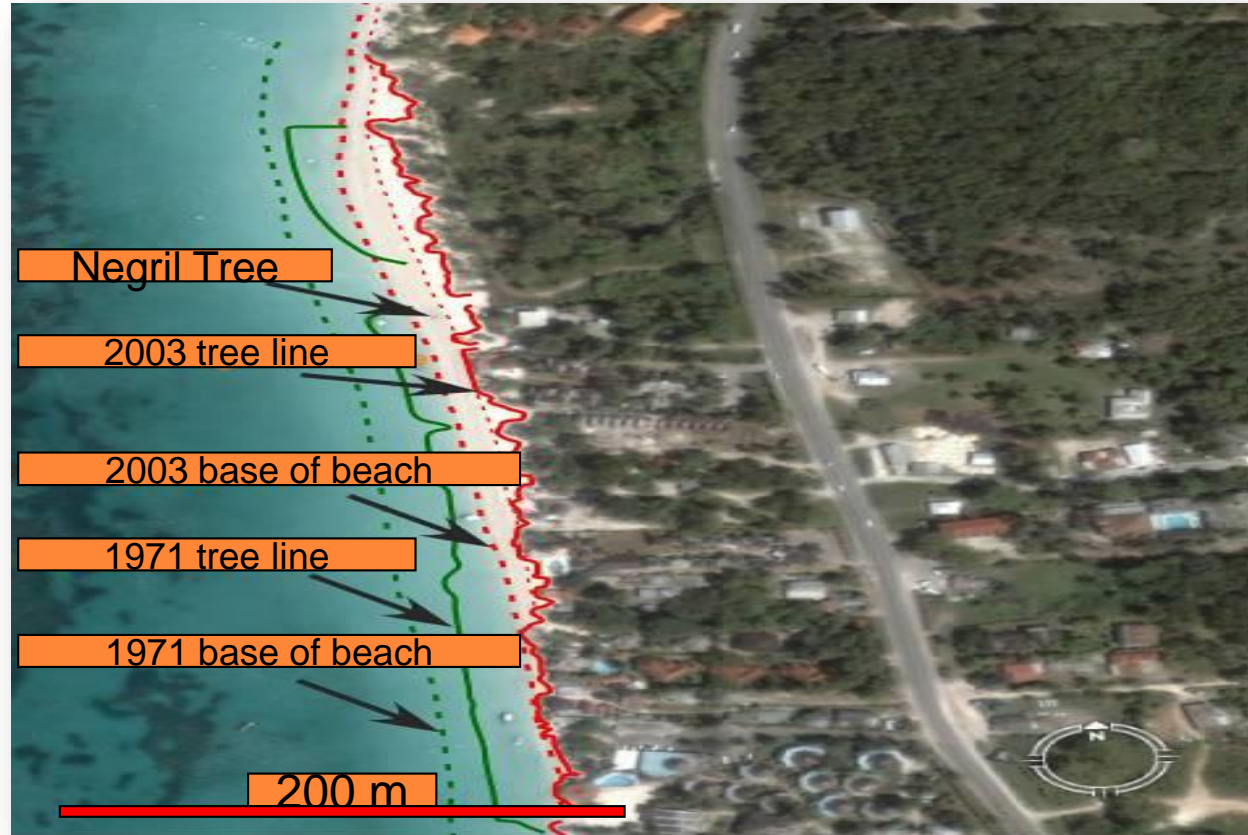


Changing climate leads to changing weather and extreme events.



1

Higher sea levels...



Sea levels are rising at about a rate of 3.5 mm/yr (post 1993)



1

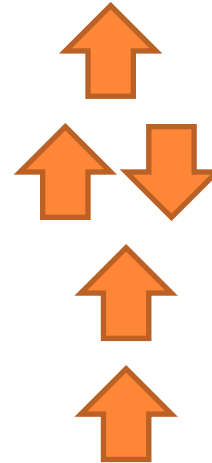
Our Climate has Changed

Temperatures

Rainfall Patterns

Extreme Events

Sea Levels



‘...climate change not just an issue of the future (as it is often characterized) but also an issue of the now...’



1

Our Climate has Changed

2

Our Climate will Change

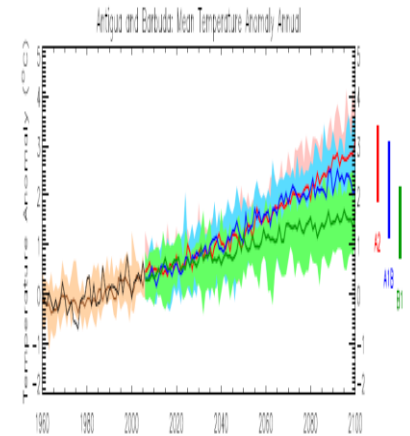
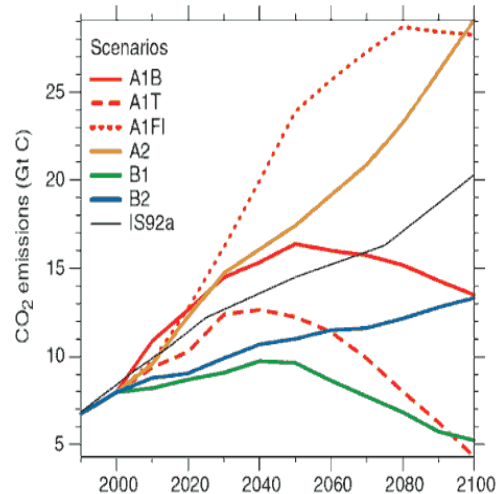




Projecting future climate...

1

2



Storylines

Models

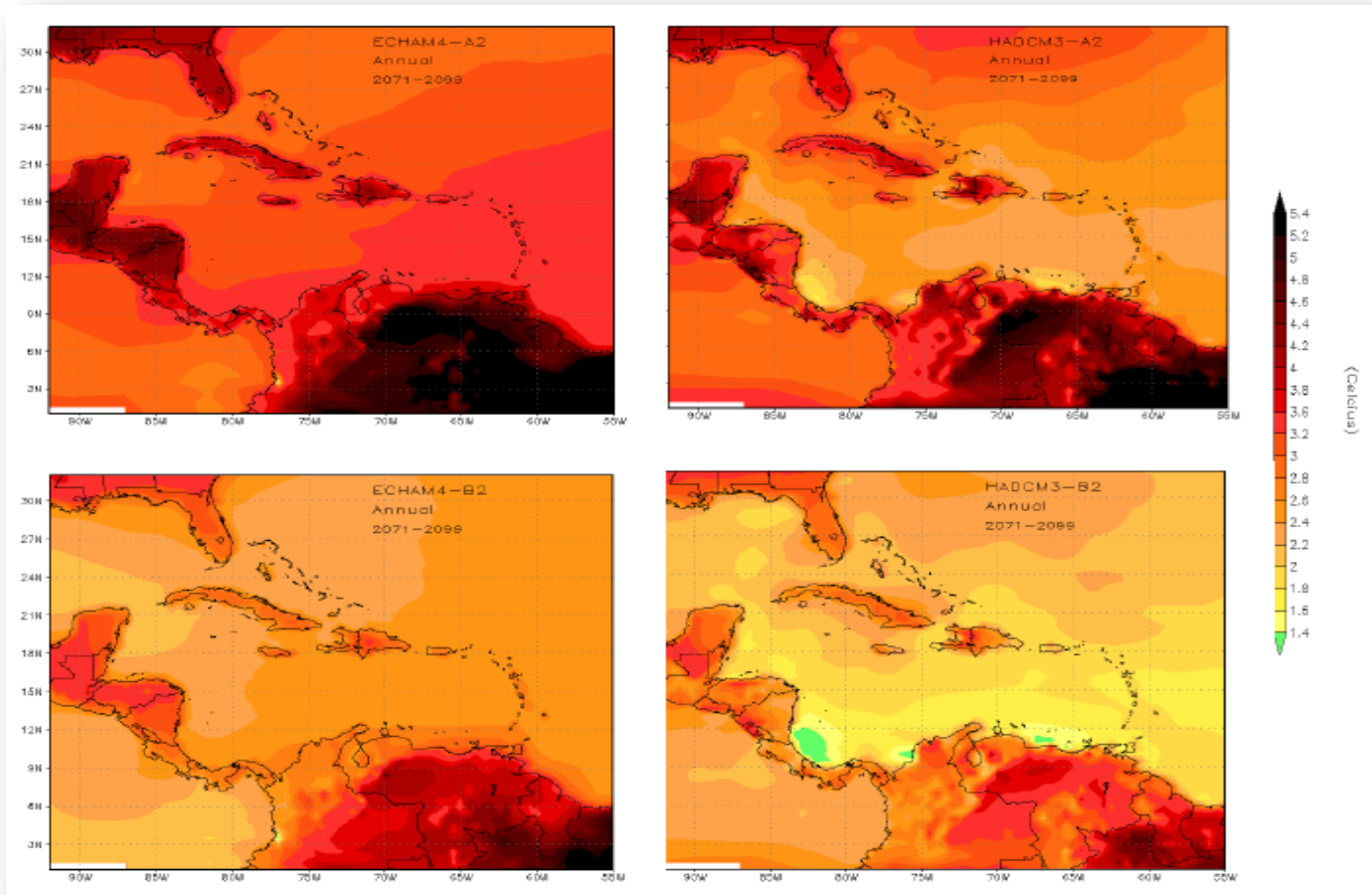
Future
Climates



Jamaica will be hotter...

1

2



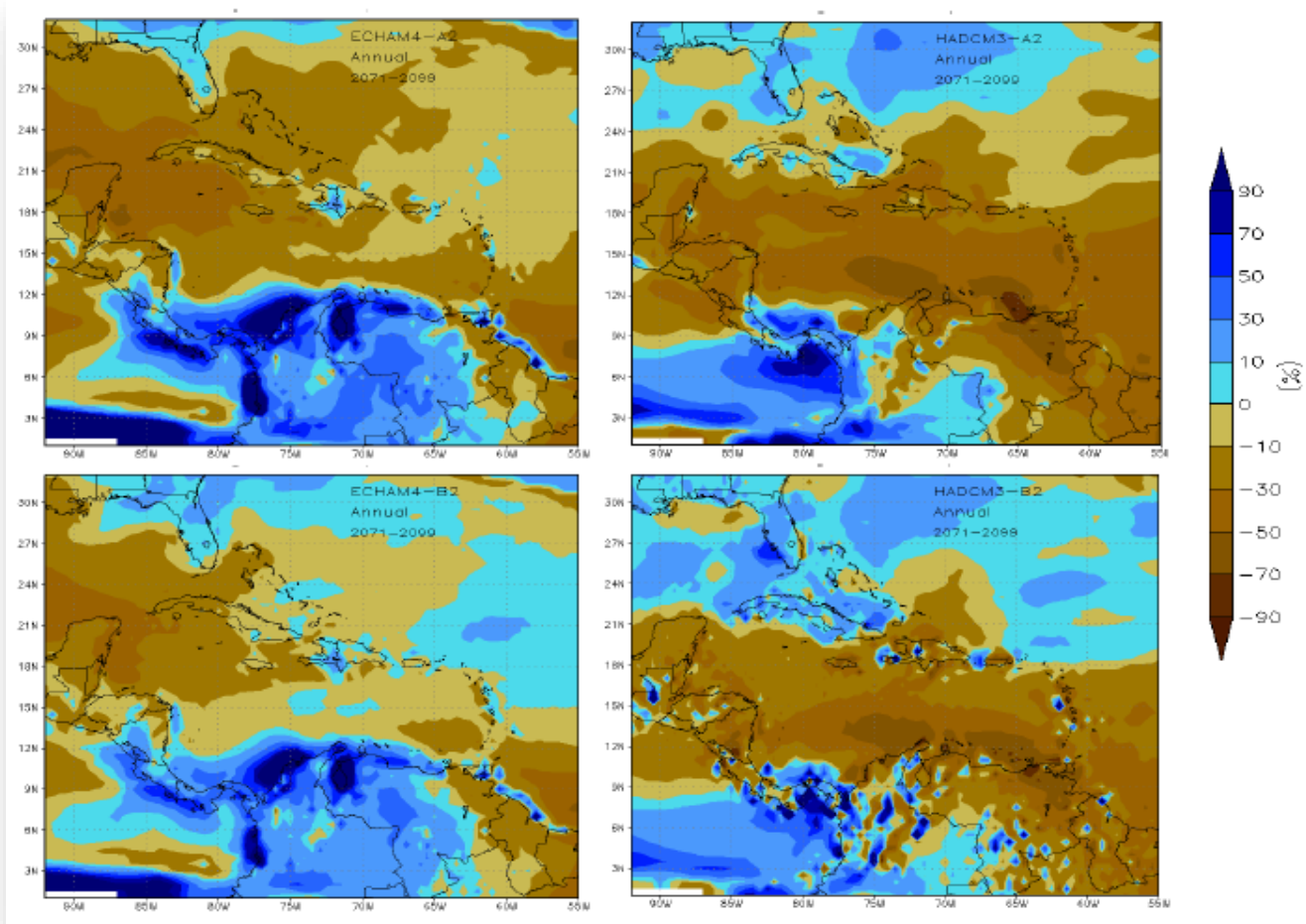
A warming of 1-4 degrees by century's end



Jamaica will be drier...

1

2



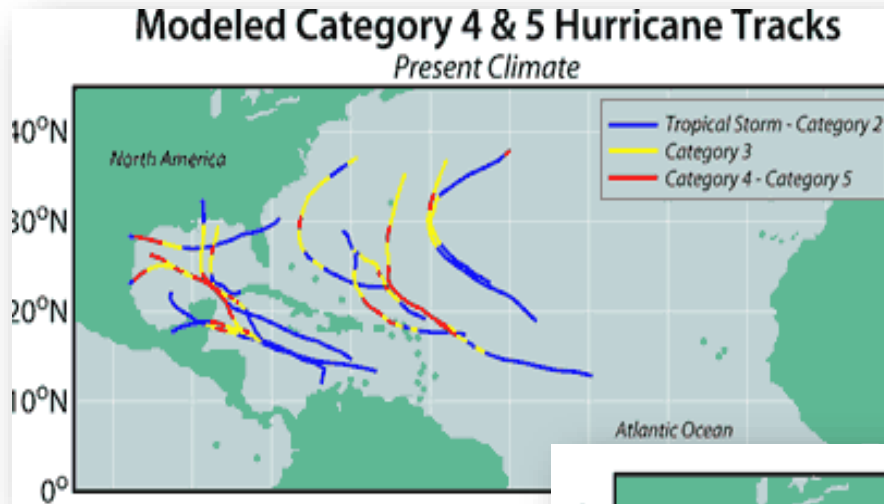
Rainfall still variable but much less ~30% drier.



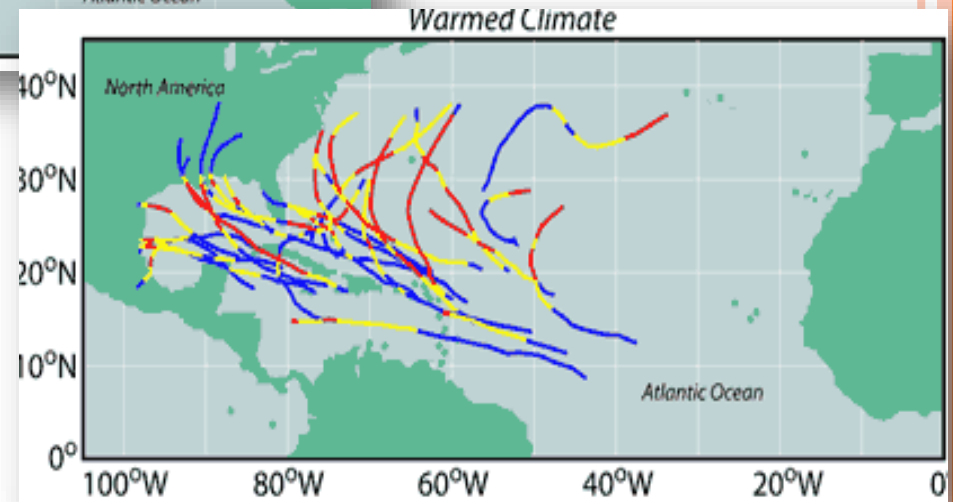
Jamaica will experience more intense storms...

1

2



**Storms, with
higher rainfall
rates and
stronger winds.**



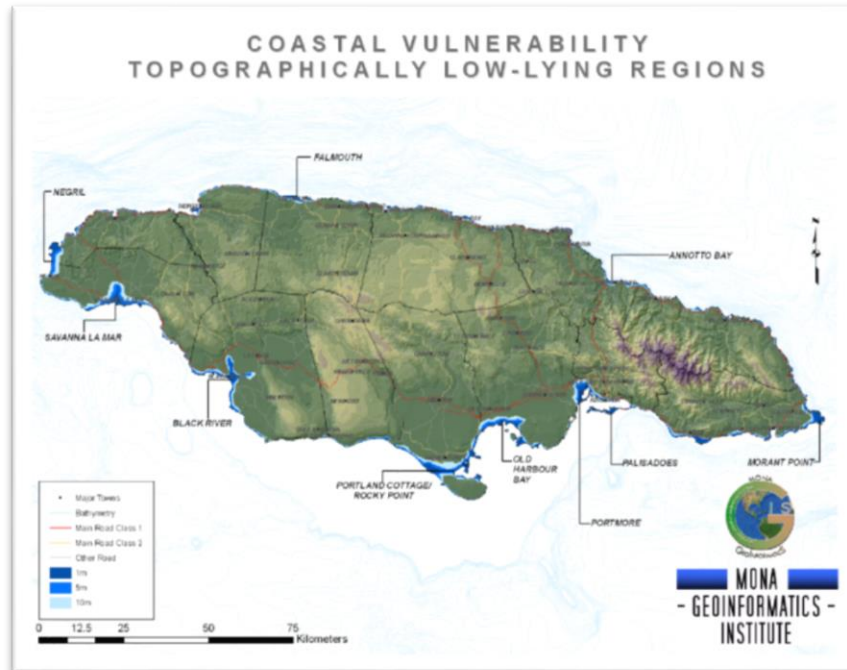
Bender et al. (2010)



Jamaica will see higher sea levels...

1

2



1- 2 m sea level rise
by end of century

Impacts from a 2m SLR on Jamaica

1. Land area lost (**1%**).
2. People displaced (**1%**).
3. Damage or loss to power plants (**20%**)
4. Tourism resorts damaged or lost (**18%**).
5. Loss or damage of airports (**60%**).
6. Loss of roads (**2%**).
7. Loss or damage to port structures (**100%**)

- UNDP/CARIBSAVE (2010)



1

2

Temperatures



Rain



Storms



Sea levels



Our Climate will Change

“... The future changes will be bigger than anything we have already seen”.





1

Our Climate has Changed

2

Our Climate will Change

3

Our Climate Demands Change





Our climate demands change...

Jamaica is very **climate sensitive** – our lives are linked to climate.

1

Climate pattern

Distinct historical cycle of dry and wet and hotter and cooler around which we pattern our lives.

2

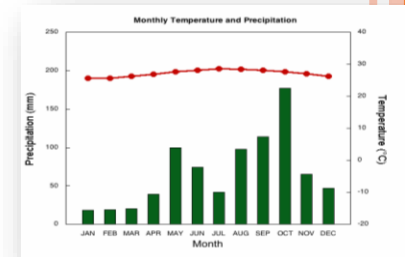
Topography and size

Small islands (bounded by ocean) and hilly backbones means life exists on **steep slopes** or on limited **coastal plains**.

3

Livelihood, Wellbeing and Water

Economy (Agriculture, Tourism, Fisheries, Mining),
Health and Wellbeing (diseases and recreation) and
Critical livelihood sectors (Water, Energy) bound up with climate





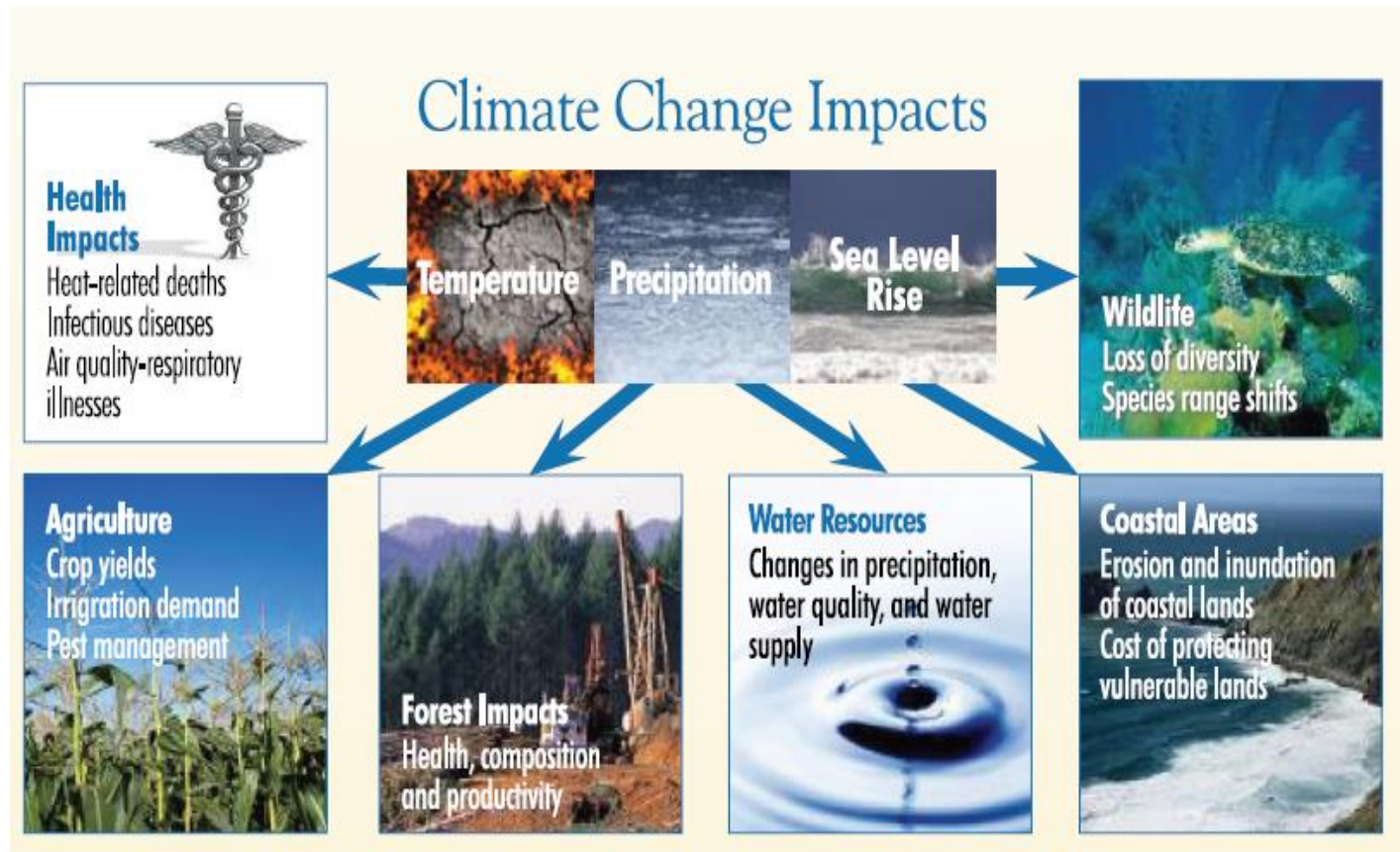
Our climate demands change...

When the climate changes so does our lives.

1

2

3





Climate change demands action

Mitigation

Adaptation

Education

1

‘...efforts to reduce the amount of greenhouse gases in the atmosphere, either by reducing them at source or by creating sinks for the gases.’

2

‘...recognizes the inevitability of present and upcoming change and advocates pursuing options to facilitate living with the changed climate’

‘...providing information and engendering behavioural change’

3

Energy

Waste

Forests

Retooling

Water usage

Structures

Policies

Promoting discussion

Schools

Public forums



1

Climate has Changed

2

Climate will Change

3

Climate Demands Change





THE UNIVERSITY OF THE WEST INDIES
AT MONA, JAMAICA

Thank you