



22. Homes destroyed by Hurricane Michael in Mexico Beach on October 11, 2018 #

# Climate CRISIS Update

By Pauline Seales  
Sept 2019

Pictures show 2018 fires and floods



# 2019 Climate Chaos



Early in the year there were serious floods in Nebraska and also Mozambique

Summer brought devastating hurricane Dorian to the Bahamas and fires in the Amazon



at Marsh Harbour on Great Abaco Island have been razed by Dorian. Photo: Scott Olson/Getty Images



# Climate Change

Climate Change

Global Warming



Climate Change

Global Warming

Climate Disruption

Climate Change

Global Warming

Climate Disruption

Global Weirding



Climate Change

Global Warming

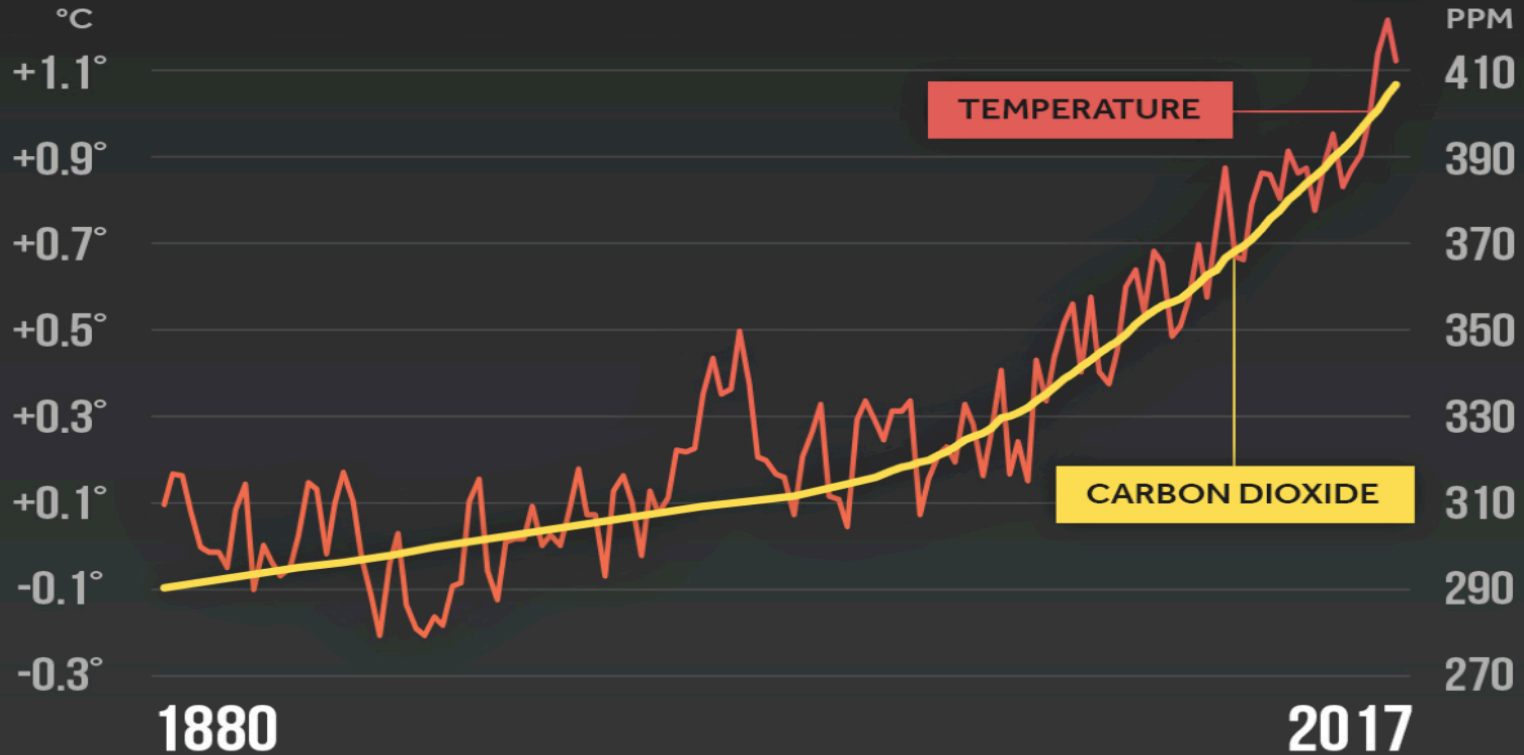
Emergency Climate Crisis

Climate Disruption

Global Weirding

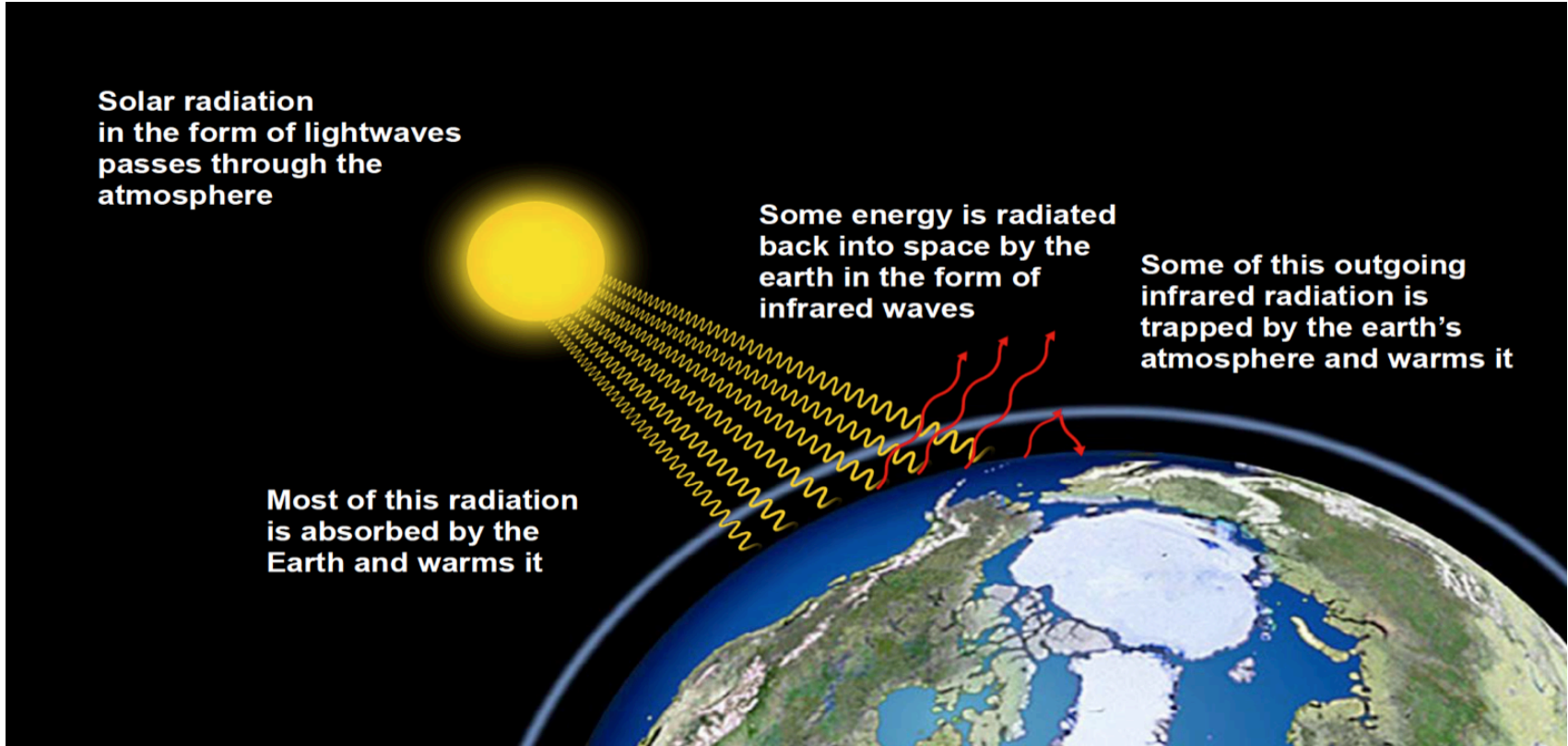
It's getting **Hotter!** And there's more CO<sub>2</sub>

## GLOBAL TEMPERATURE & CARBON DIOXIDE





# Greenhouse Effect





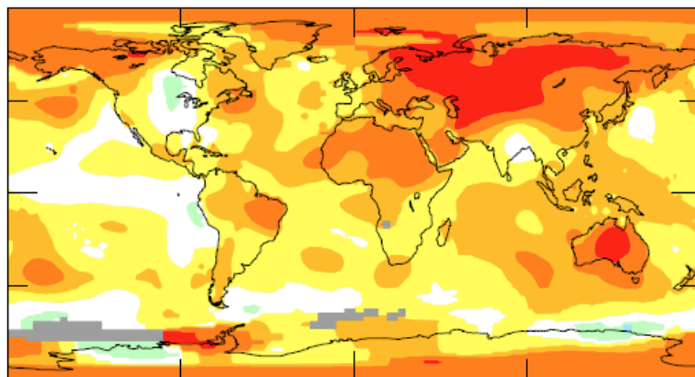
What's really warming the world?



# Annual-Mean Surface Temperature ( $^{\circ}\text{C}$ ) Relative to 1951-1980

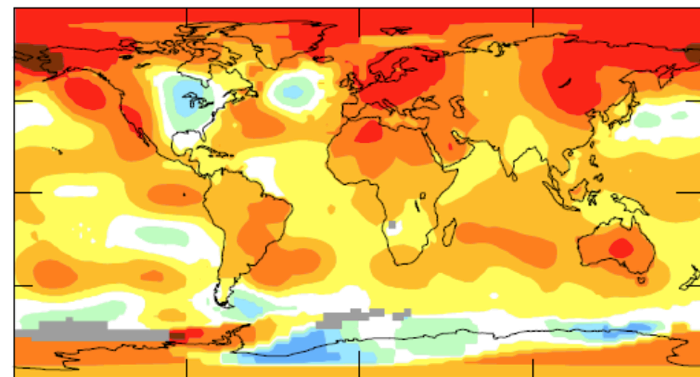
2013

0.66



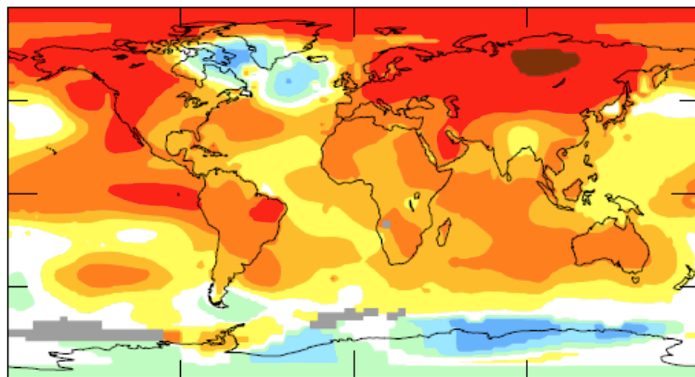
2014

0.74



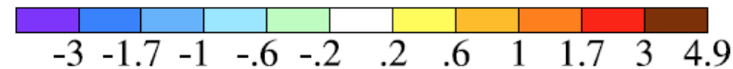
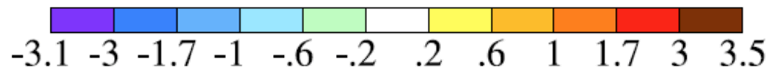
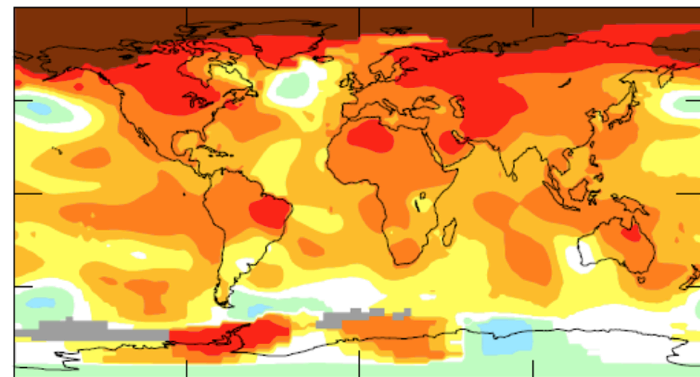
2015

0.87



2016

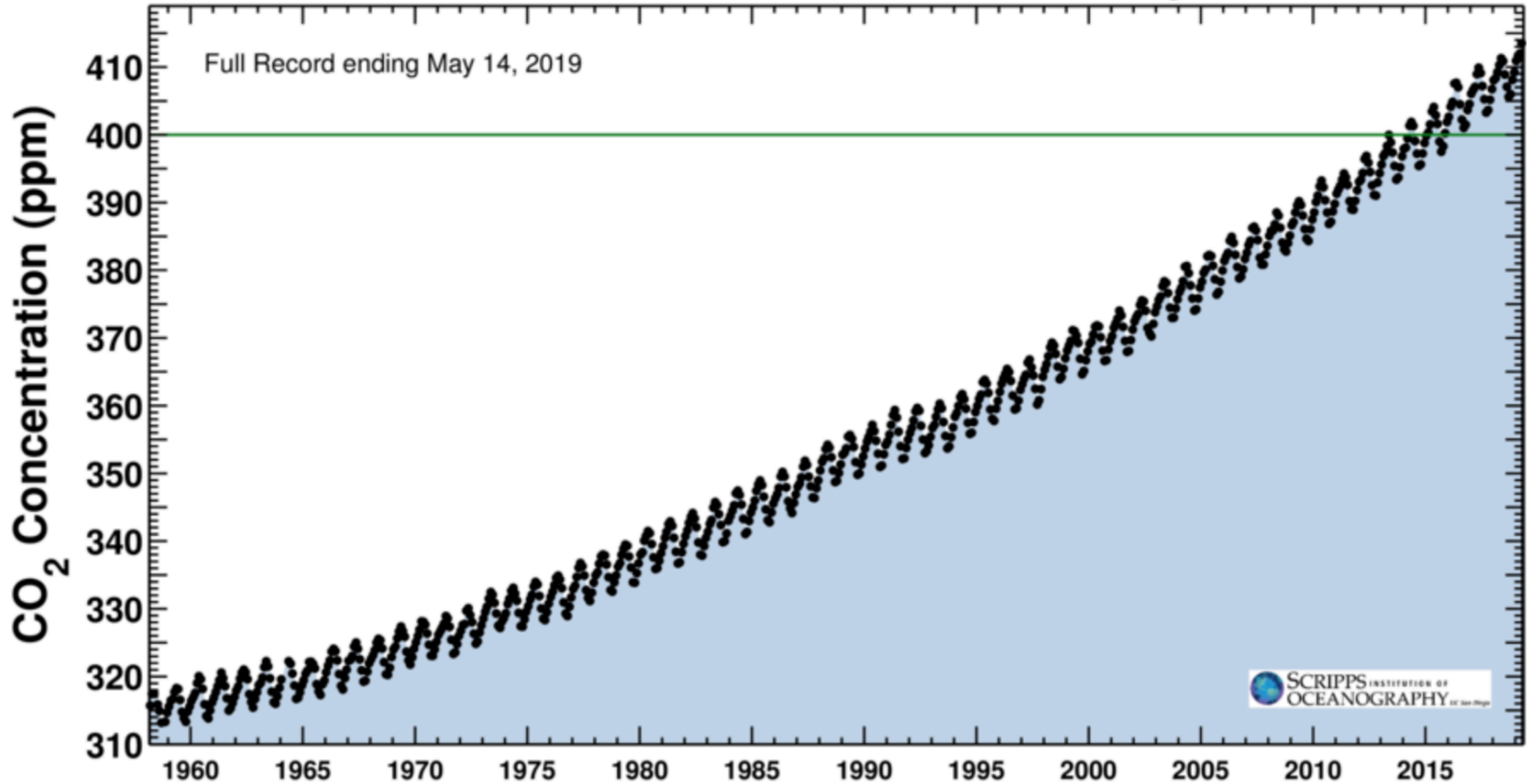
0.99



Latest CO<sub>2</sub> reading  
May 14, 2019

415.26 ppm

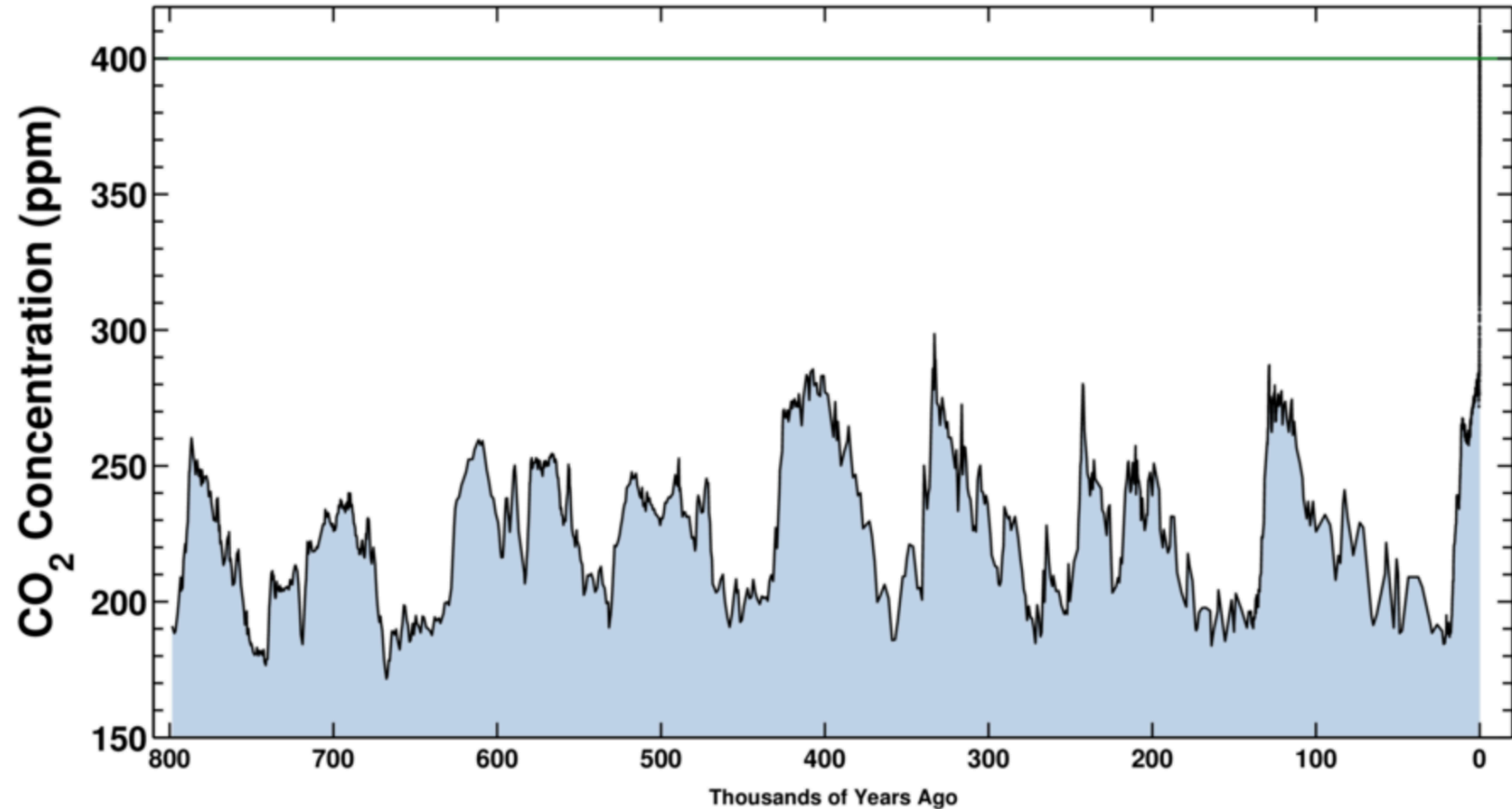
**Carbon dioxide concentration at Mauna Loa Observatory**



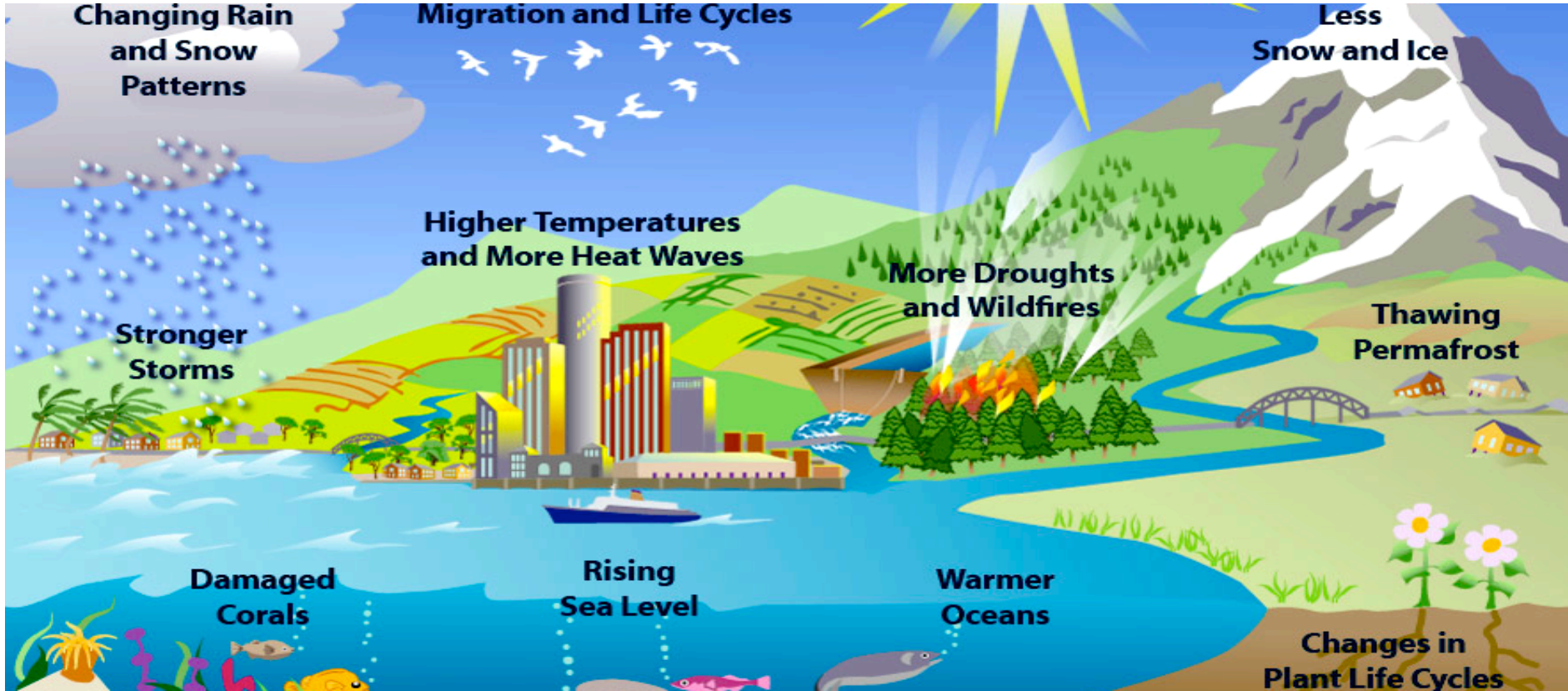
Latest CO<sub>2</sub> reading  
May 14, 2019

415.26 ppm

Ice-core data before 1958. Mauna Loa data after 1958.



# Climate Change has many effects



# Do a few degrees matter?

Absolutely !

- we already see drastic effects with only  
1 deg C = 1.8 deg F change

New IPCC Report says even 1.5 deg C is a problem but 2 deg C is MUCH WORSE

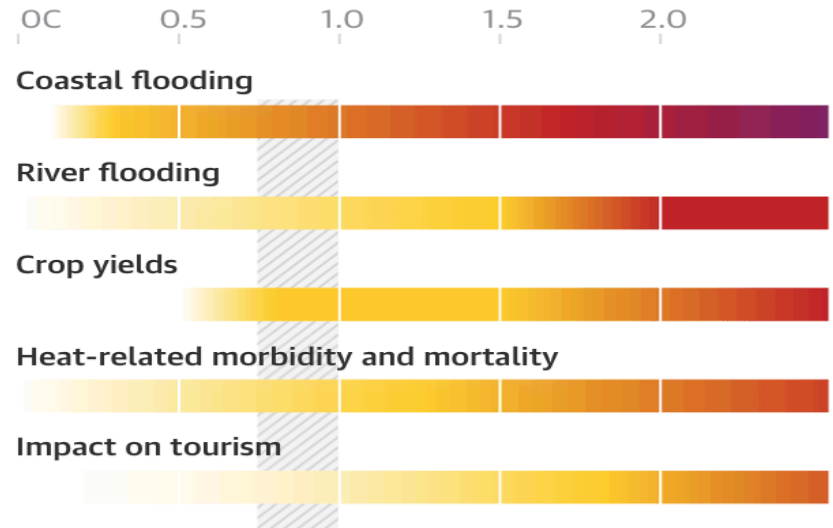
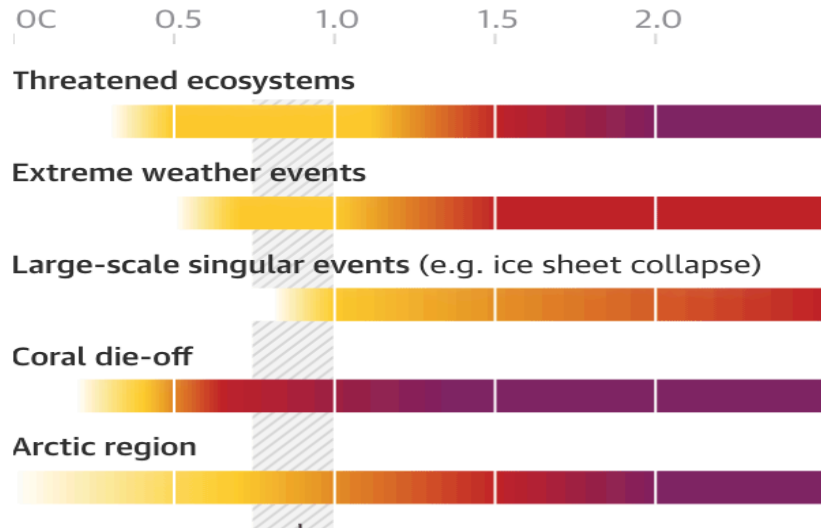
# IPCC 2018 Summary

## Intergovernmental Panel on Climate Change(U.N.)

### Key to impacts and risks



### Global mean surface temperature change relative to pre-industrial levels, C





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## TEMPERATURE

BY 2100

AVERAGE ANNUAL MAXIMUM  
**DAILY TEMPERATURE**

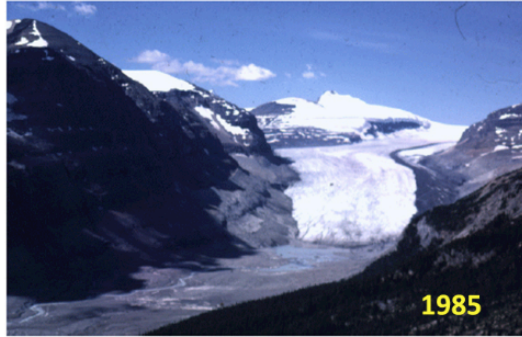
IS PROJECTED TO

**INCREASE BY**  
**5.6°–8.8°**

Depending on greenhouse gas emissions reductions. The greatest increase is seen with business-as-usual emissions levels.



- But it's NOT GAME OVER
- It's GAME ON



Ice is melting  
everywhere and  
sea level is  
rising.

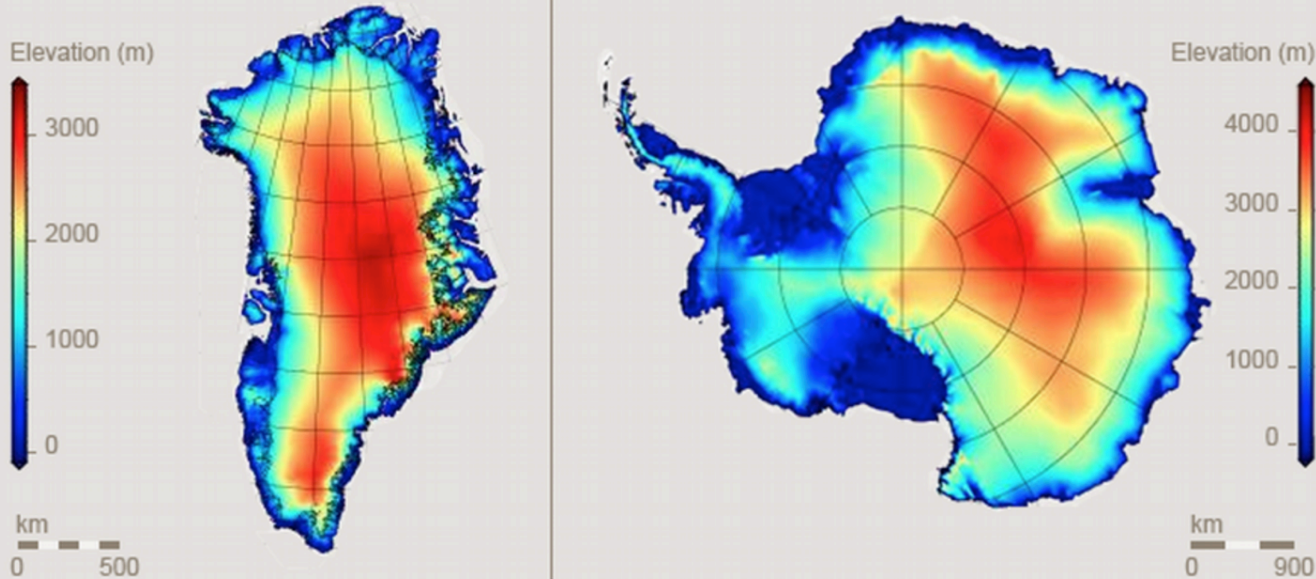
Saskatchewan  
Glacier , Alberta

# Greenland and Antarctica

Ice loss **doubled** in Greenland and **tripled** in the West Antarctic between 2009 to 2014.

## Record decline of ice sheets

For the first time scientists map elevation changes of Greenlandic and Antarctic glaciers



Source: Helm et al., The Cryosphere, 2014

© DW

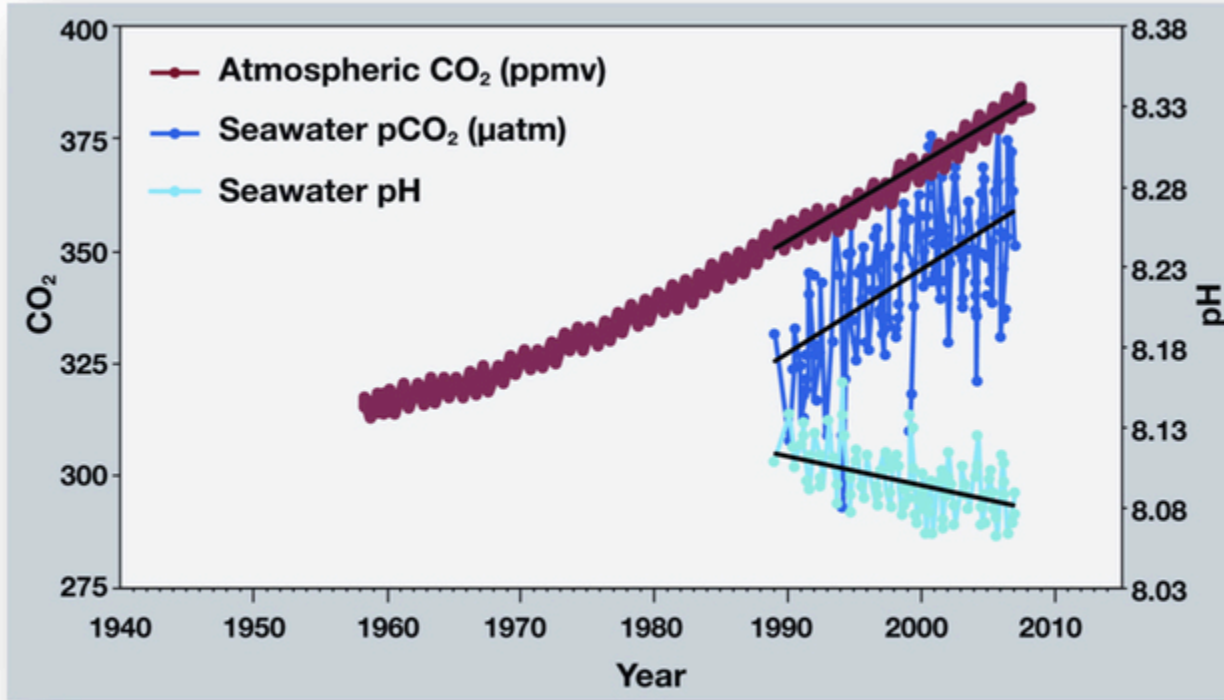
Santa Cruz, California, United States 

Which sea level will we lock in?

When will this happen?



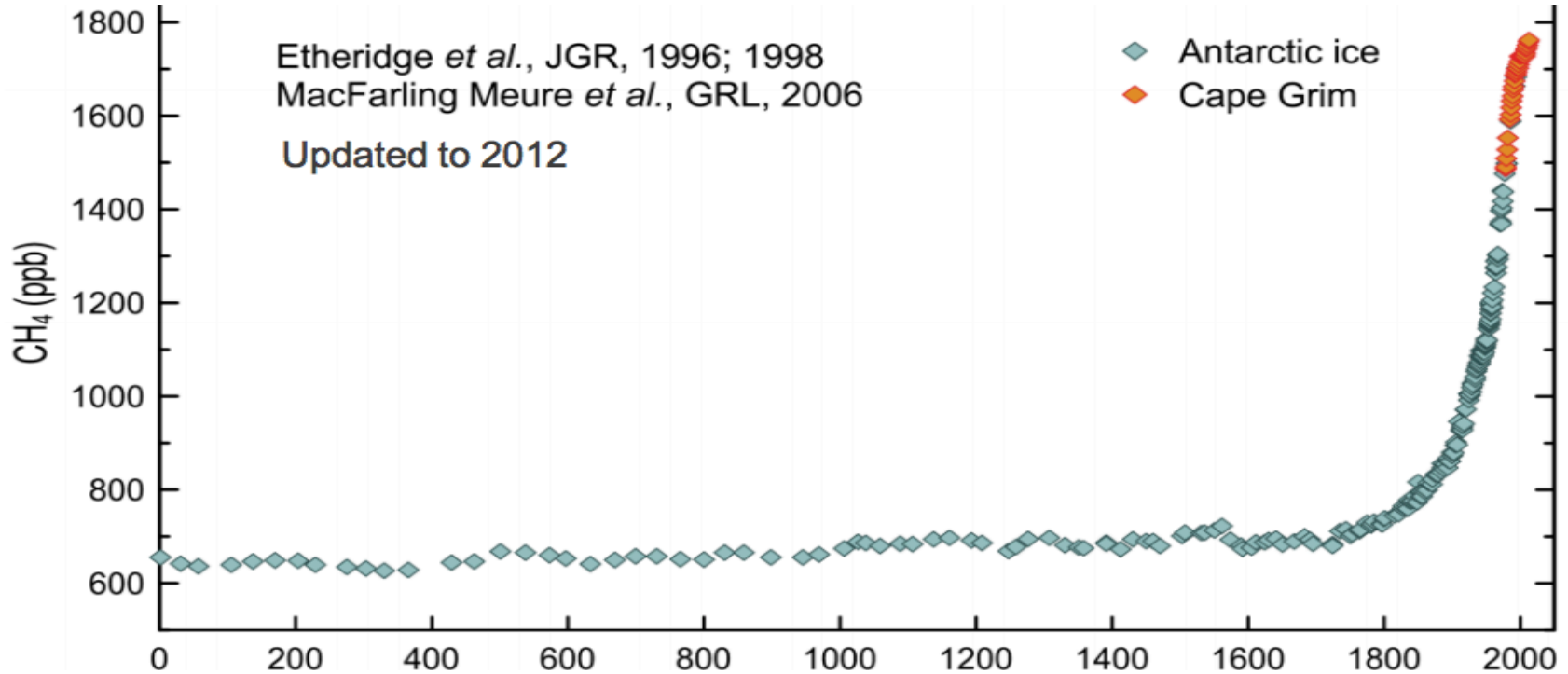
# Ocean Acidification



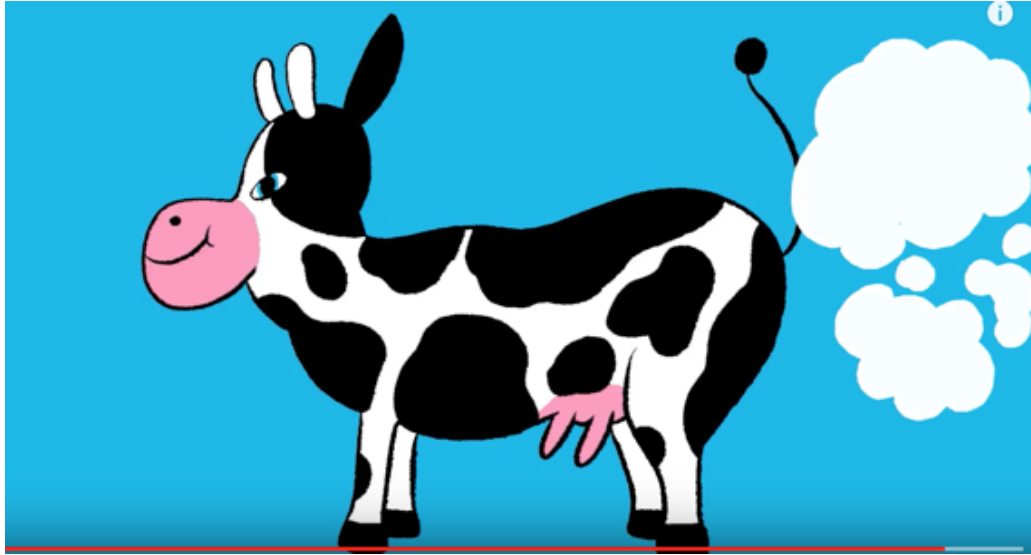
Human made carbon dioxide is being absorbed by the oceans making them approx. 30% more acidic so far



# Methane levels for the past 2000 yrs



# MEAT - especially BEEF - is a HUGE PROBLEM



**Eat Less Meat**

Changing your diet a little will help the planet a lot. Cows produce loads of methane - a super powerful greenhouse gas.

Beef production also uses more water and needs more land. Changing to smaller amounts of meat (preferably chicken) and lots of veg is also better for your health.



# Climate Change Summary so Far

It's Real

It's US

Scientists Agree

It's BAD

There's HOPE!!!

**DRAWDOWN**  
THE MOST COMPREHENSIVE  
PLAN EVER PROPOSED TO  
REVERSE GLOBAL WARMING  
EDITED BY PAUL HAWKEN

Detailed Carbon Reduction  
program by Paul Hawken.  
Includes detailed analysis of  
**80** different solutions





What to  
reduce or  
avoid

Buy less new stuff



Drive MUCH less

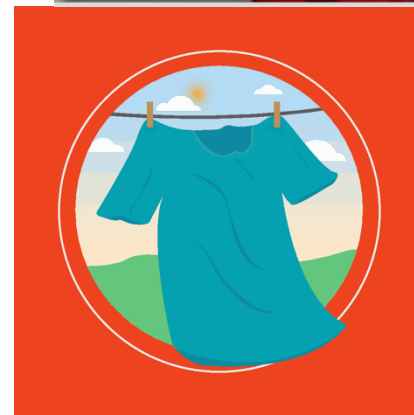




# Enjoy



Public  
Transport

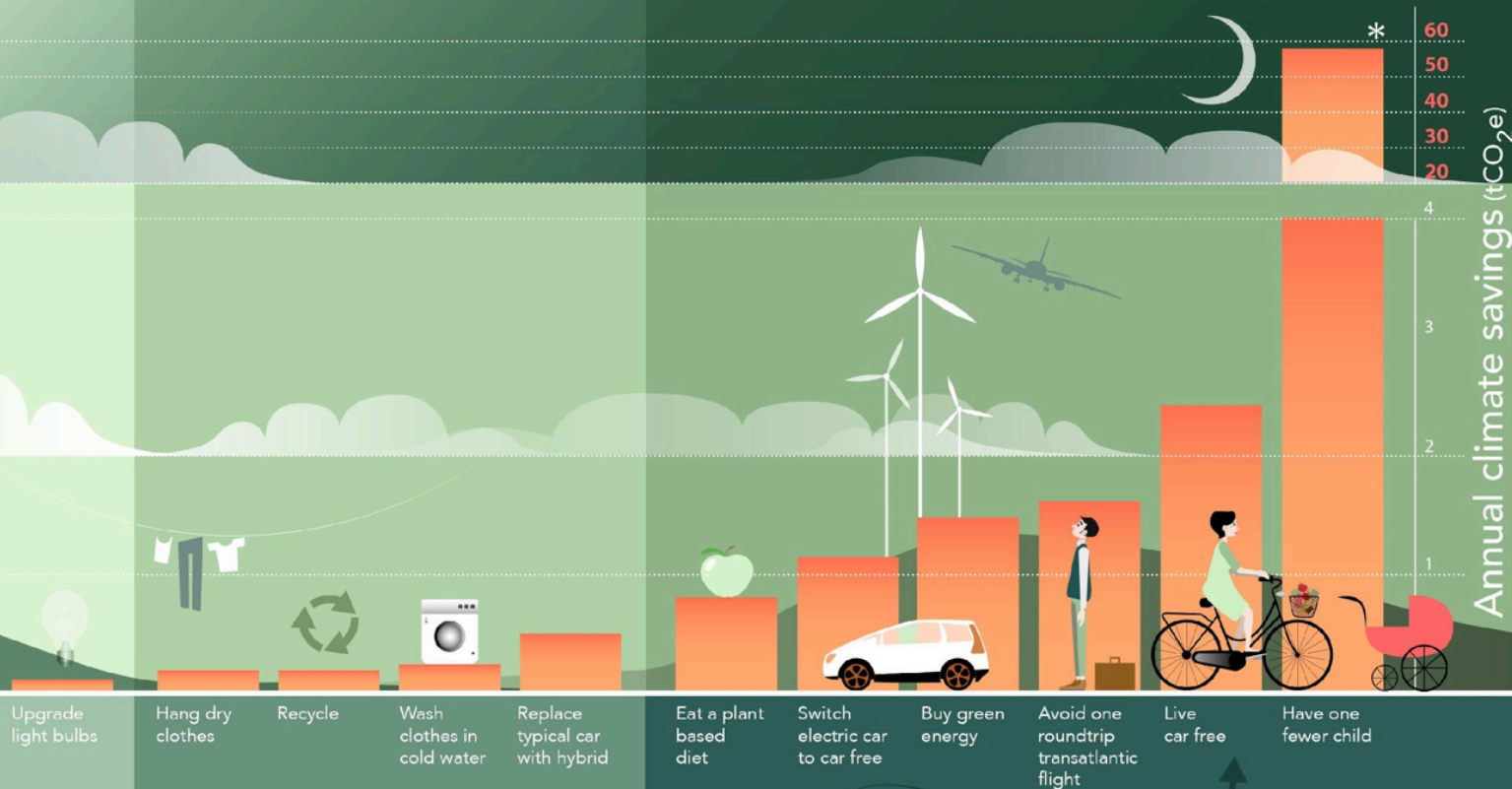


# Personal choices to reduce your contribution to climate change

\* Cumulative emissions from descendants; decreases substantially if national emissions decrease.

Average values for developed countries, based on current emissions.

Annual climate savings (tCO<sub>2</sub>e)



## Low Impact

< 0.2 tCO<sub>2</sub>e

## Moderate Impact

0.8-0.2 tCO<sub>2</sub>e

## High Impact

> 0.8 tCO<sub>2</sub>e



# We need **URGENT** action by



## Good News:

Santa Cruz City Council passed  
an Emergency Resolution

Oct 27, 2018

Santa Cruz County Resolution  
passed Jan 29, 2019.



# Local action on Transportation

## **Campaign for Sustainable Transportation**

works tirelessly to change the

Business as Usual” auto centric culture.

Opposing new parking garage – not needed

Opposing highway widening

Working for real solutions – bus passes, bus on shoulder etc.

Supporting safer biking, walking etc.



## Normal political mode

## Emergency mode

<b>Crisis constrained by business as usual</b>	<b>Crisis embraced with urgency by all</b>
<b>No urgent threat perceived, time of response not important</b>	<b>Known escalation beyond control if immediate action not taken</b>
<b>The crisis is one of many issues</b>	<b>The crisis is of highest priority</b>
<b>Budgetary restraints</b>	<b>All available resources devoted to the emergency</b>
<b>Slow rate of change, systemic inertia</b>	<b>Rapid transition &amp; scaling up</b>

## **Normal political mode**

**Targets & goals determined by political tradeoffs**

**Politics is adversarial & divisive**

## **Emergency mode**

**Critical targets and goals not compromised**

**Collaborative and effective leadership**

Based on material by The Climate Mobilization (TCM)

# Green New Deal





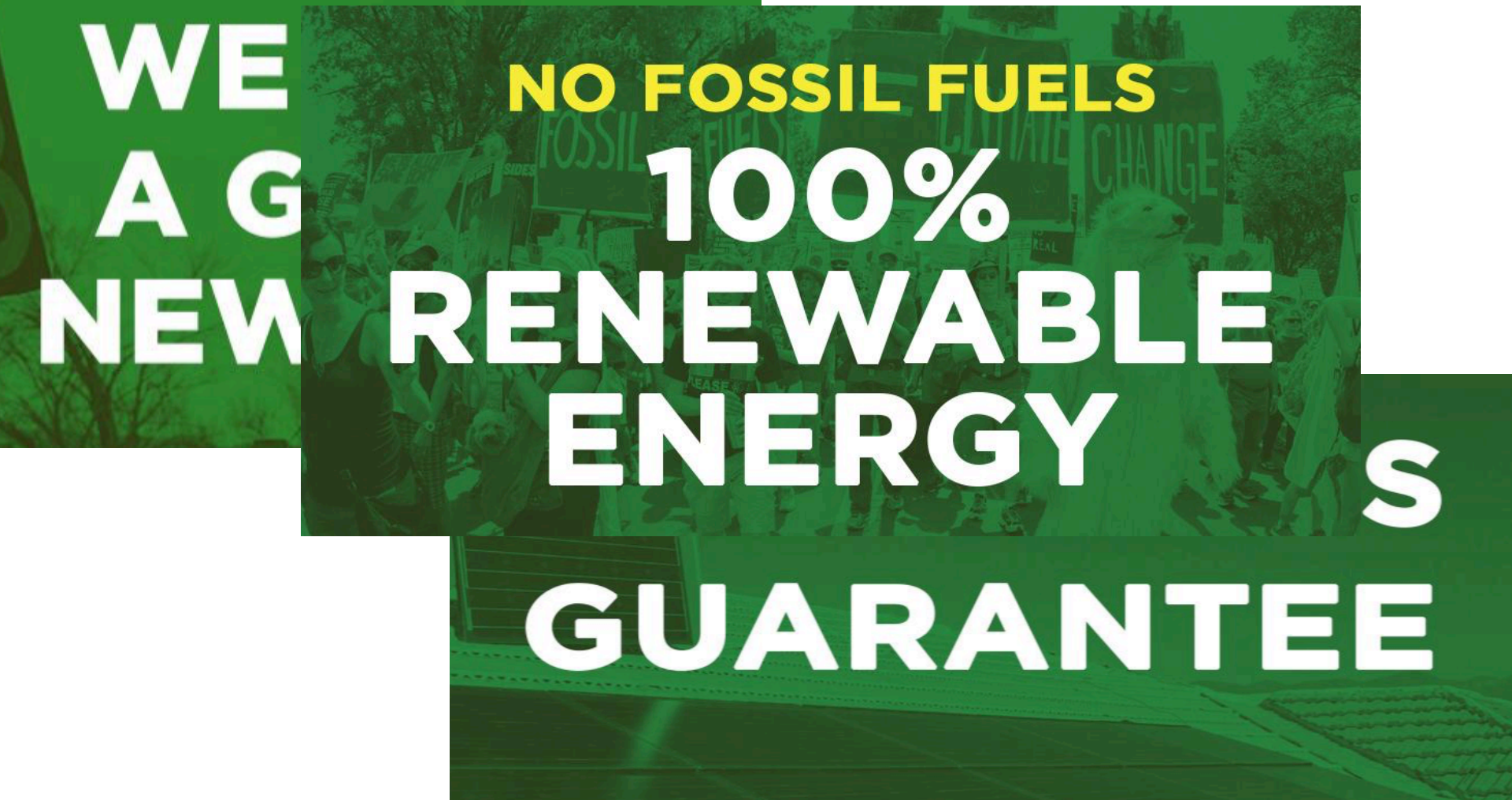
**WE NEED  
A GREEN  
NEW DEAL**

The background of the entire image is a green-tinted photograph. It depicts a person, likely a worker, standing on a roof and installing or maintaining solar panels. The scene is captured from a low angle, looking up at the worker and the panels. The green tint is uniform across the entire image, creating a strong visual link to the 'green' theme of the text.

**WE NEED  
A GREEN  
NEW DEAL**

**GREEN JOBS  
GUARANTEE**





**WE  
A G  
NEW**

**NO FOSSIL FUELS**

**100%  
RENEWABLE  
ENERGY**

**S  
GUARANTEE**



A photograph of a flooded street in a developing area, with a person wading through the water. The image is overlaid with a green tint. The text 'JUST TRANSITION' is written in large, white, bold, sans-serif capital letters across the top half of the image.

# JUST TRANSITION



**JUST  
TR**

**FOSSIL FREE  
AGRICULTURE**

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**FOSSIL FREE  
TRANSPORTATION**

**JUST  
TI FOSSIL FREE  
FUTURE**

**UPHOLD  
INDIGENOUS  
RIGHTS**

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**EE  
TION**

# Good News

Feb 11 Congressman **Jimmy Panetta** agreed to back the **Green New Deal** Thanks Jimmy!

To Finance it we need **PUBLIC BANKING**.  
**CA AB 857** will authorize **Public Banking**  
- co-authored by **Mark Stone**

Let him know we appreciate his support.



# California Green New Deal

We cannot afford to wait for the federal government.

We are the most populous state in the USA and the 2<sup>nd</sup> highest GHG emitter

We need to act now. Write or call your representatives or visit their offices.

**PLEASE CALL DIANE FEINSTEIN!**



**Young people worldwide are protesting.** Their future is in serious jeopardy!

**Climate Strike**

**Sep 20-27**

**Big Kid action Sep 27**

**Join and bring your  
parents**

**4pm Farmers Market Lot**





There really is HOPE!  
Together we CAN do it.



For more details see <https://scruzclimate.org/>