

The Climate Emergency and the Climate Change Commission

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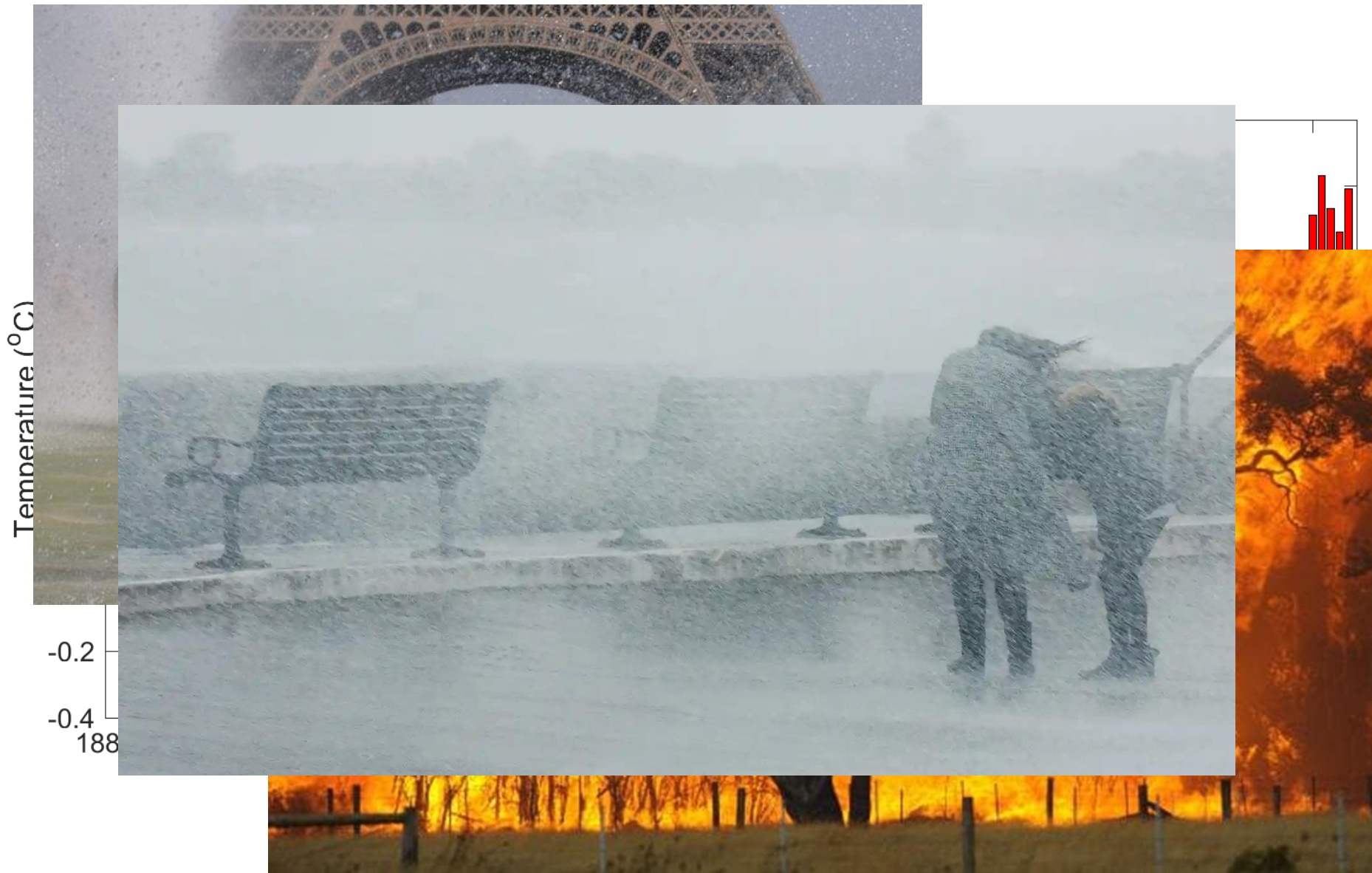
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@CubaRaglanGuy

Me

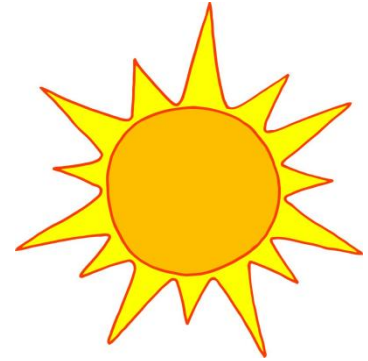


What's happening?

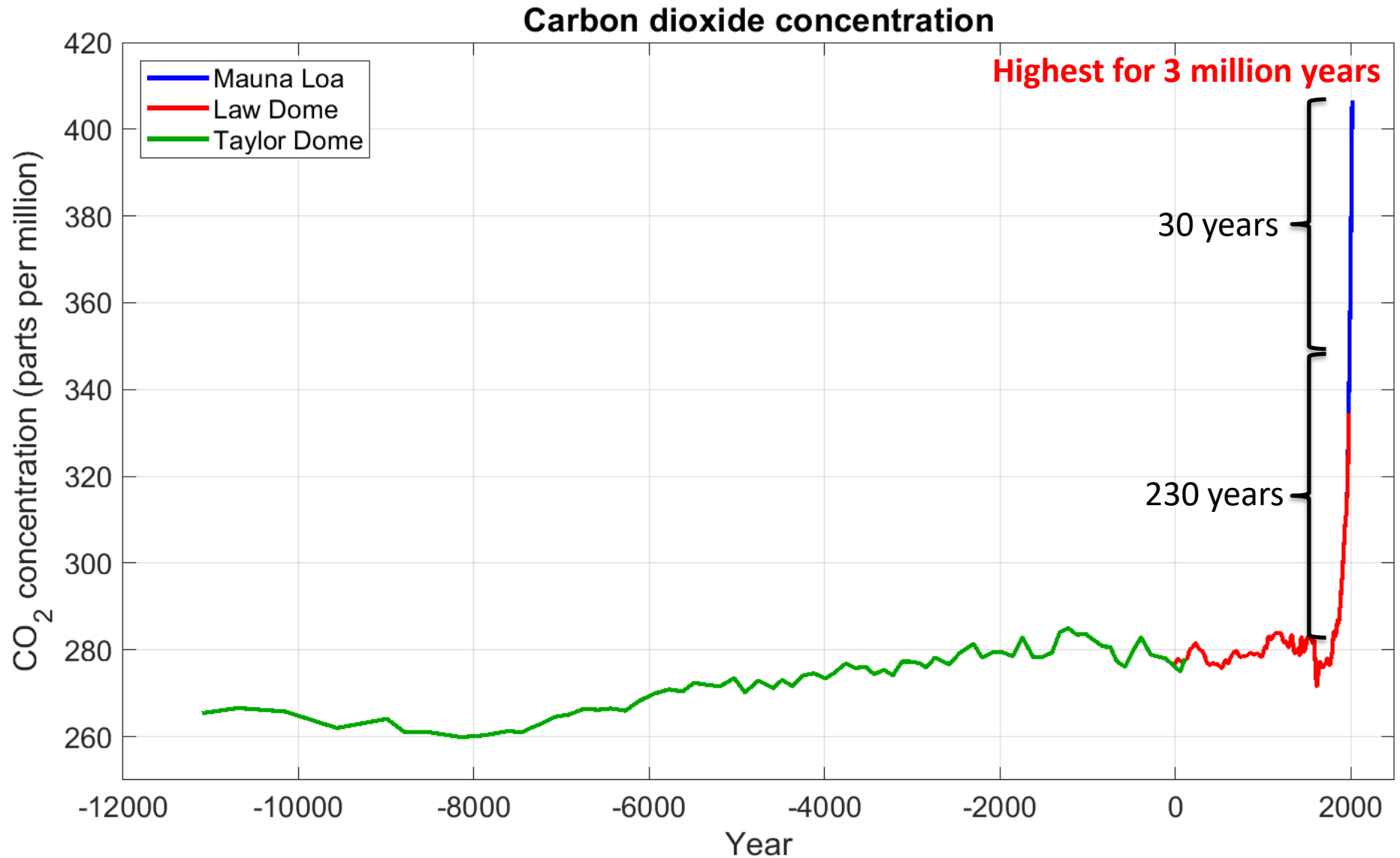


Why is this happening?

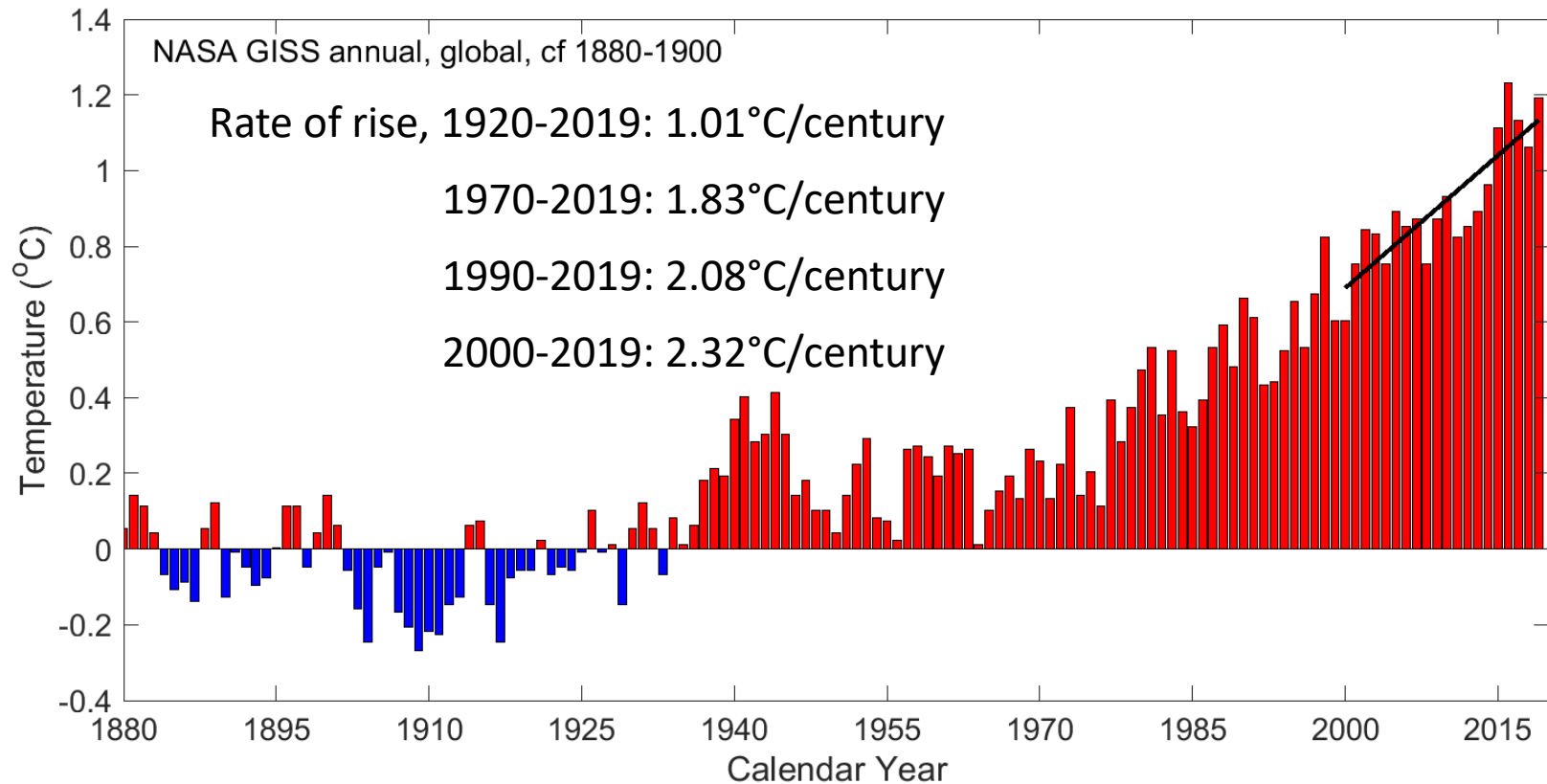
- The sun emits (mostly) visible light
 - Absorbed by the earth
- The earth emits heat (infrared) radiation
 - Absorbed (and re-radiated) by the atmosphere
 - By “greenhouse” gases (carbon dioxide, water vapour, etc)
- Change the climate by
 - Changing sunlight
 - Changing greenhouse gas amounts



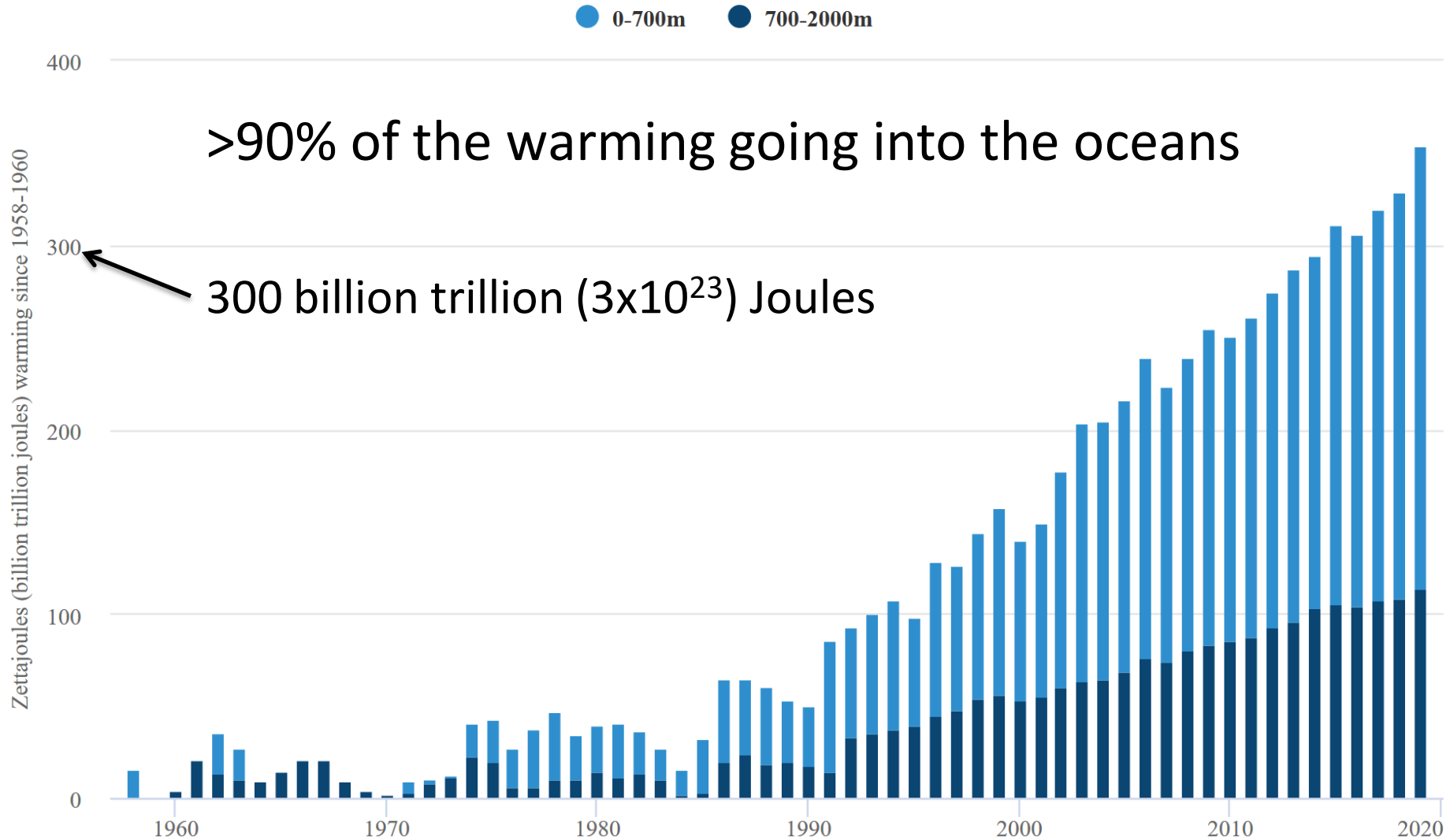
The Problem



Atmospheric Warming

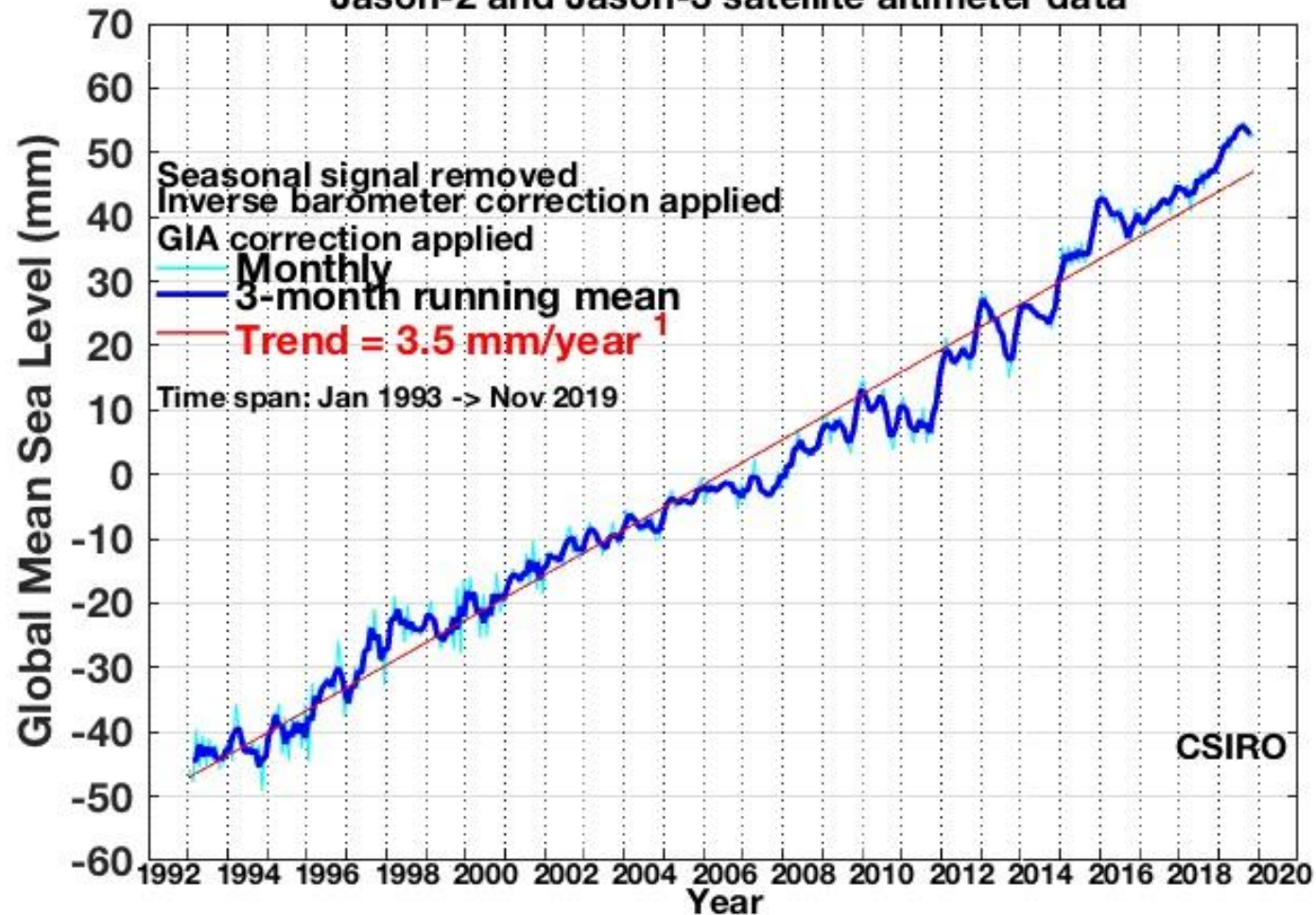


Global Ocean Heat Content

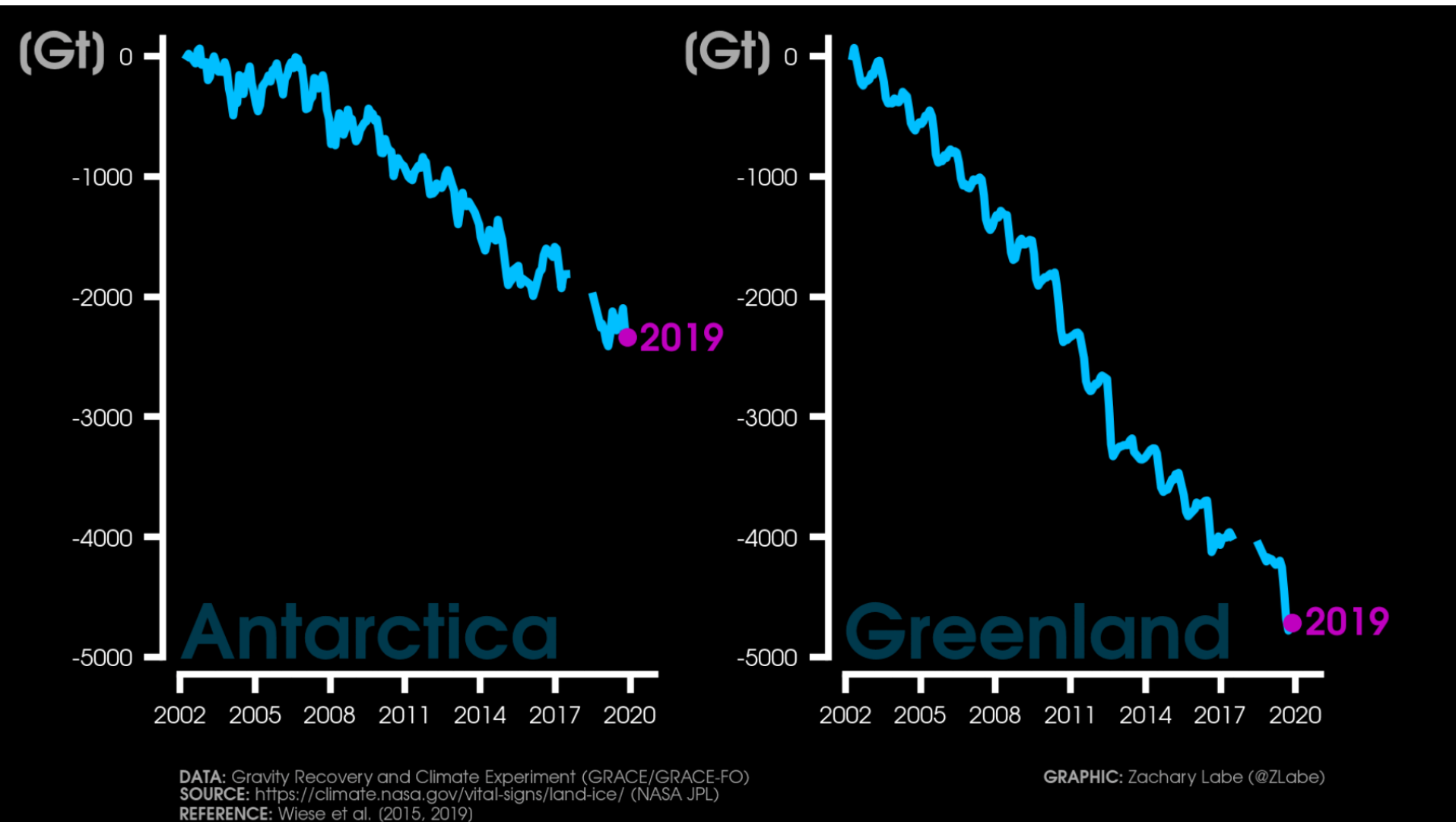


Global sea level

GMSL from TOPEX/Poseidon, Jason-1,
Jason-2 and Jason-3 satellite altimeter data

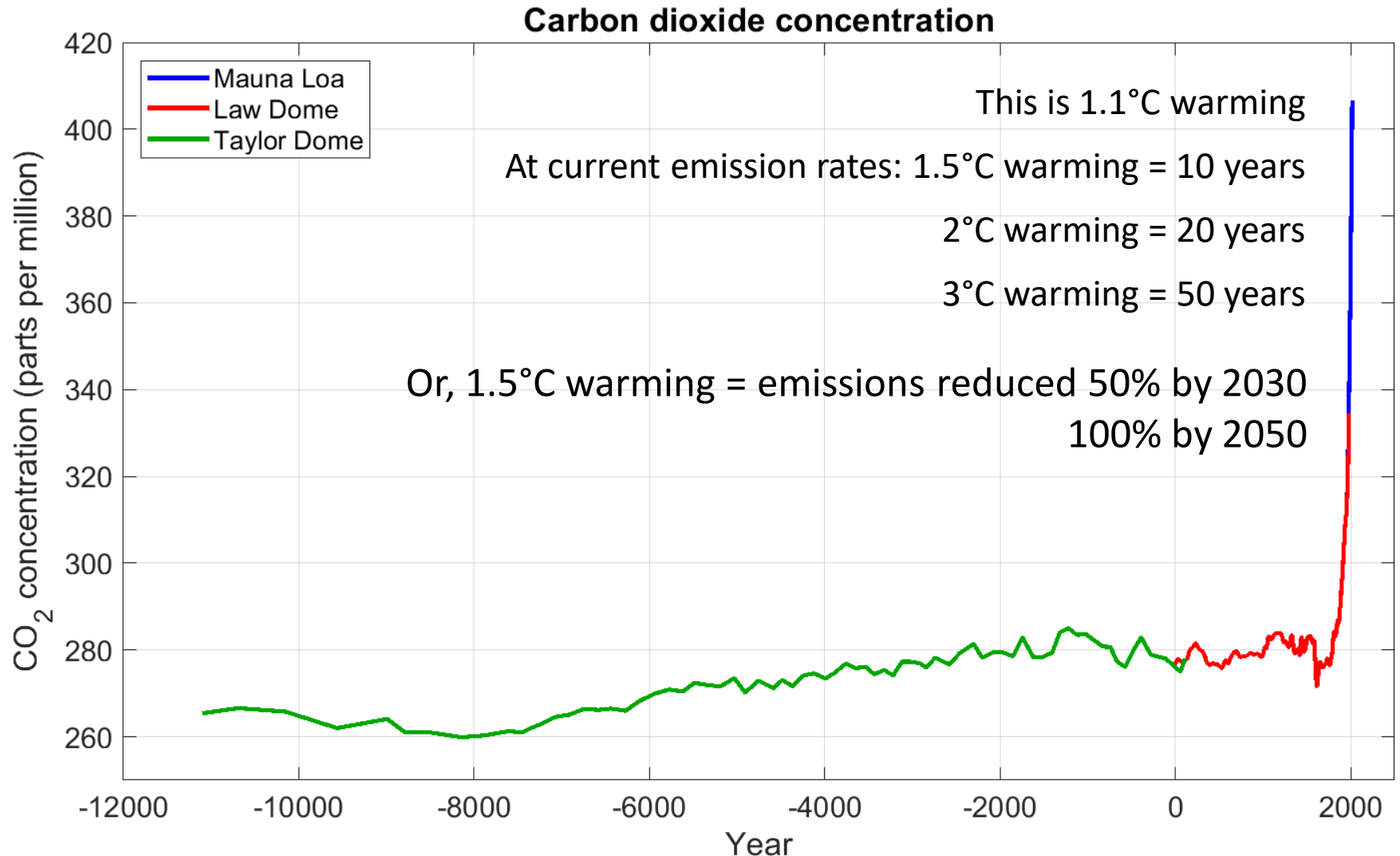


Ice Sheet Melt



Exchange rate: 360Gt ice = 1mm SLR

Where to from here?



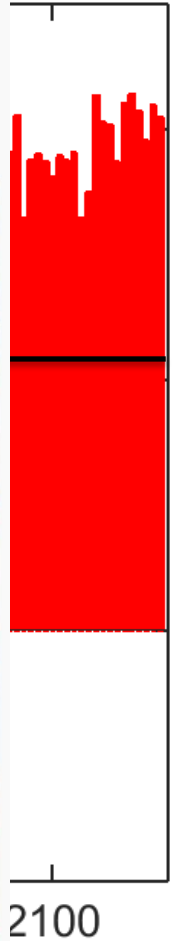
So what?

Sydney, Melbourne urged to prepare for 50C days by end of century

By [Jake Evans](#)

Updated Wed at 10:29pm

Temperature °C

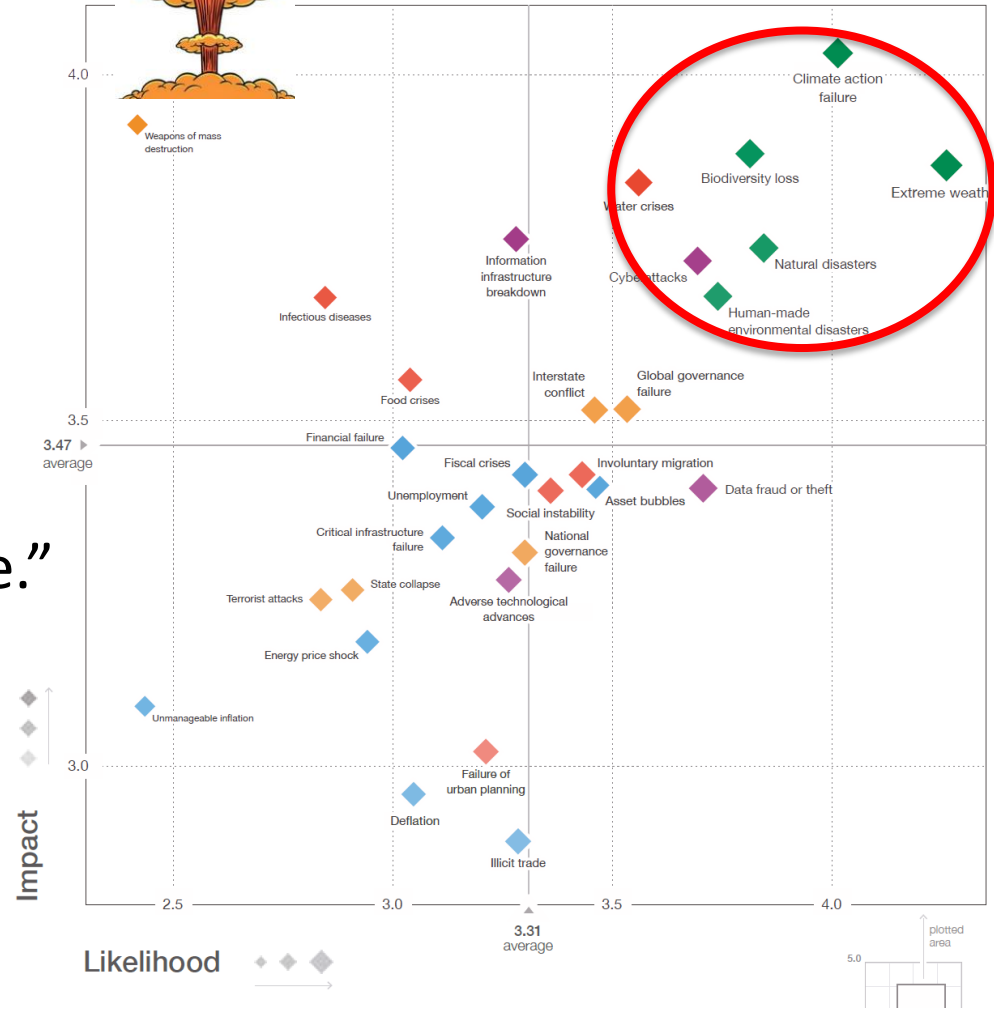


Risk

Figure II: 1

dscape 2020

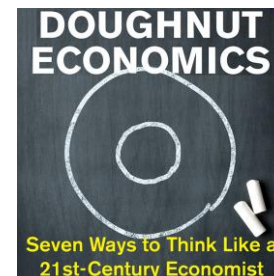
World Economic Forum



- Climate change and weather extremes the most likely and the most damaging
- “...the world is most clearly sleepwalking into catastrophe.”
— World Economic Forum, 2019

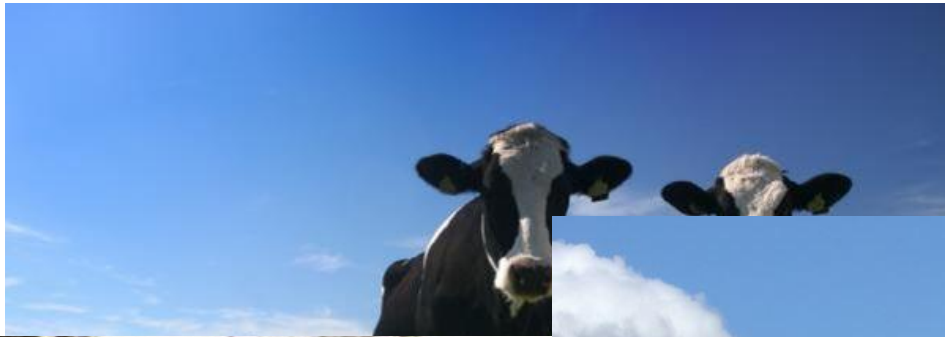
What do we do?

- Decarbonise the economy
 - Here, and internationally
 - By 2050, for 1.5°C warming
- 100% renewable electricity production
 - Then 100% renewable energy production
- Changes to land use (fewer cows)
- Reduce waste, increase energy efficiency
- For true sustainability
 - Halt all forms of growth
 - Economic, population, resource use...



How?

- NZ ag. emissions are large



Carbon dioxide the main event: Get to zero emissions by 2050

Wikimedia

Getty

*100% renewable electricity
(5Mt)*

How?

Cleaner industry, less fossil-fuelled

*Increased forestry to buy time
(3.5Mt)*

***Total saving 28Mt = 40% reduction on 2015
...by 2030***

One Billion Trees

Progress Chart



Te Uru Rākau
Forestry New Zealand

Trees planted

since the One Billion Trees Programme was announced*

149,174,000



Government has directly funded

Right tree, right place, right purpose



Tree seedlings

expected to be planted in 2019**



83,100,000

12% are native species

88% are exotic species



* estimated
** surveyed



As at 7 January 2020

Potential Actions

- Retreat from the coast
 - Easy to say, difficult and costly to do → start early
- Retreat from flood plains
 - Improve drainage, don't build bigger stop banks
- Agriculture: move crops south
 - Move towards dryland farming in the east
 - Introduce new crops in the north
 - Improved water storage & management
- Plan for forced migration
 - Be ready to take migrants, help other nations
 - Work with other nations to resolve tensions
- Make our economy more self-reliant..?

Action



The Commission

- Role of the Climate Change Commission?
- Set up to advise Government on emissions reductions
- Five-year budgets, first one developed this year
- Exact form yet to be decided
 - Sectoral targets for reduced emissions
 - Input into how to go about reductions
 - Incentives for EVs, amount of new generation capacity needed etc
- CCC **advises** Government
 - How will this play out in practice?

The Commission

- A major programme of engagement starting
 - Hear from as many people/sectors as possible
- Sector workshops & hui beginning soon
- Meetings with key stakeholders
- Public consultation in second half of the year
- <https://www.climatecommission.govt.nz/>
 - enquiries@climatecommission.govt.nz

New Zealand's role

- Total New Zealand emissions 0.2% globally
 - But we're in the top 10 per capita
 - All countries must act
- We are well-placed to become zero-carbon
 - 80% renewable electricity now, plenty of sun & wind
 - A small economy that can move quickly
- An opportunity to lead, to inspire
 - And to help other countries
- New Zealand gets noticed internationally –
 - Let's use that power

Summary



Thank you