

CLIMATE  
CHANGE  
STOCKTAKE  
Year 38



John Drummond

SCAN Dunedin

30.01.26

June 23 1988

James Hanson testifies before  
the United States Senate  
Committee on Energy and  
Natural Resources

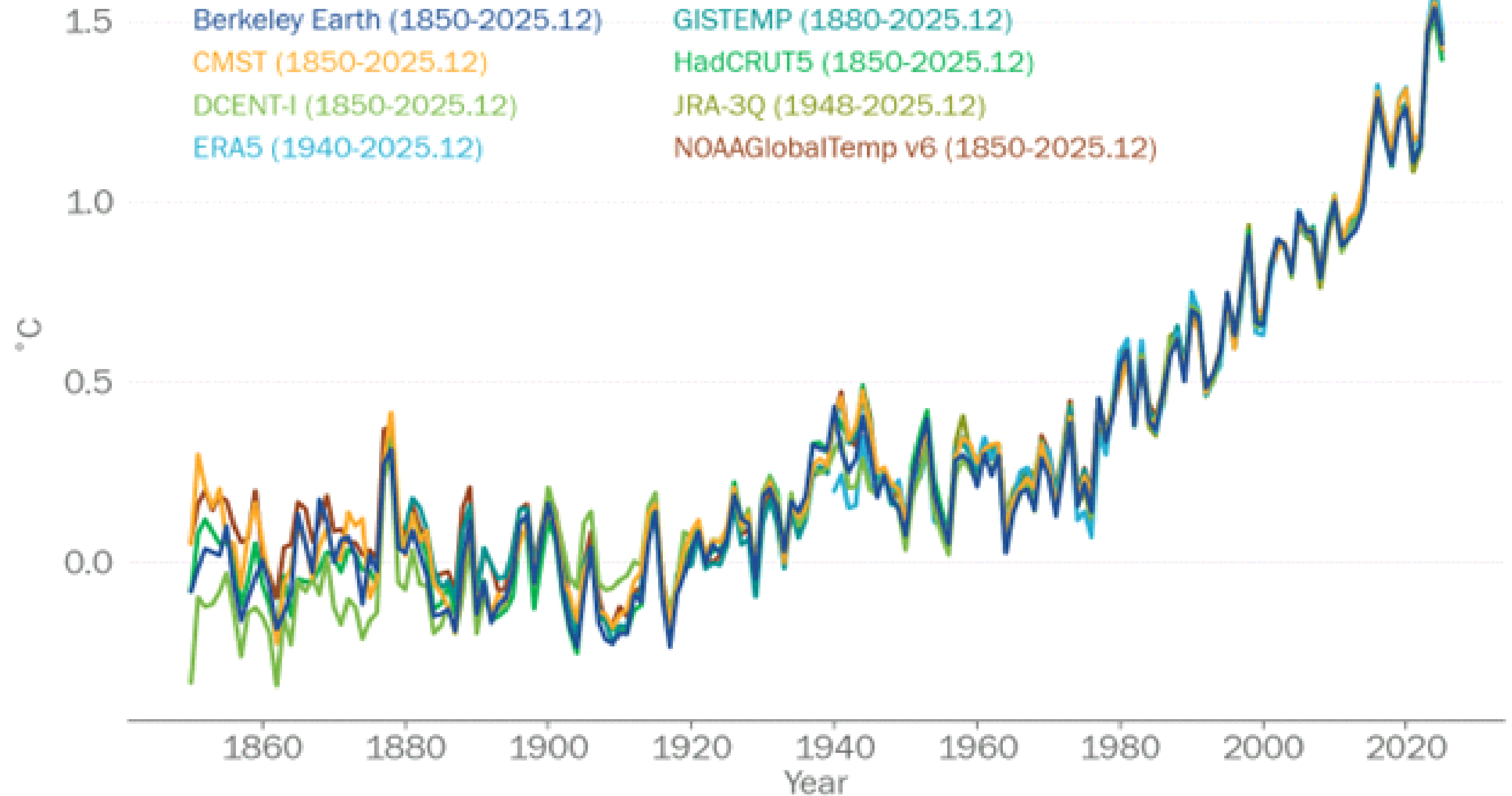


# 1988-2015

- 1988: US Environmental Protection Agency and World Meteorological Association form International Panel on Climate Change, endorsed by UN General Assembly.
- 1990-1995 : IPCC First and Second Assessment Reports
- 1997: Kyoto Protocol, signed by 192 parties, came into force 2005
- 2001-2014: IPCC Third, Fourth and Fifth Assessment Reports
- 2015: Paris Agreement, signed by 195 parties. National Determined Contributions (NDCs) to its goals provided by all parties, to cover period to 2050, and requiring renewal in 2025.

# Global Mean Temperature Difference (°C)

Difference from 1850-1900 average



Where are we?

Where are we going?

What should we do in New Zealand Aotearoa?

# WHERE ARE WE?

2025 Climate Experiences

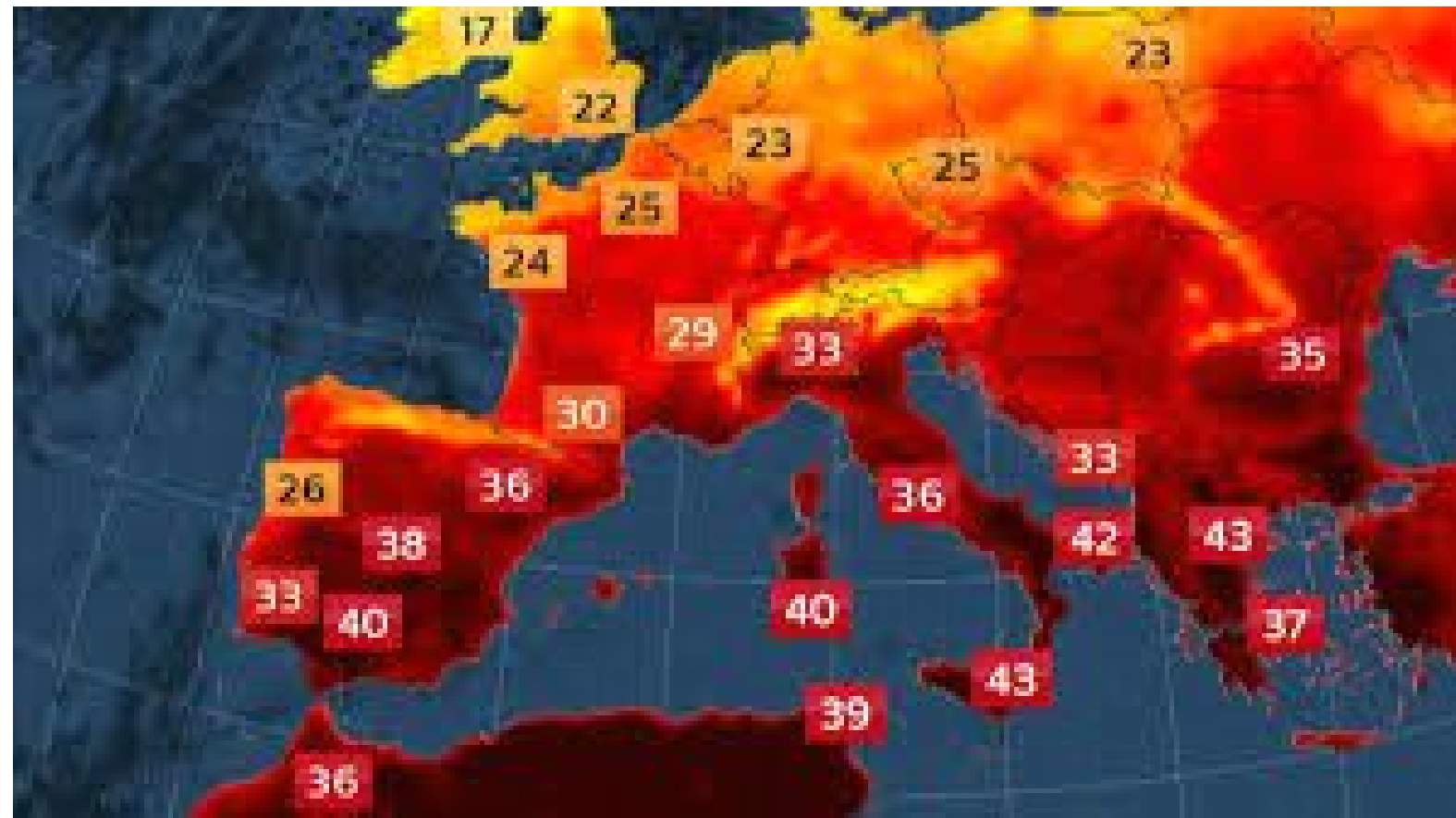
2025 Losses

2025 End-of-year Reports

COP 30 and ICJ decisions

# 2025: CLIMATE EXPERIENCES

- Heatwaves
  - Southern Europe: summer heatwave resulted in over 24,000 deaths
  - South Sudan: February temperatures 4 C hotter than normal '



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- Flooding
  - Supercharged monsoon rains and storms killed over 1,800 people across South and Southeast Asia. 1.2 million lose their homes.
  - Tropical cyclones Ditwah and Senyar hit Indonesia and Malaysia in November causing major devastation.
  - Hurricane Melissa causes \$8b damage in Caribbean/Jamaica
  - Torrential rains in Pakistan/Nepal/India



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  - Torrential rains in Pakistan/Nepal/India
- Wildfires
  - Los Angeles, January. 31 deaths
  - Greece and Turkey: fuelled by prolonged droughts and heatwaves



# 2025 CLIMATE EXPERIENCE: NZ

- January/February: Storm and tornado in Northland
- June-July: Extreme rainfall and flooding in Nelson, Tasman and Marlborough ( ‘worst in 150 years ’ )
- October: Hurricane winds and heavy rain in Canterbury, Southland, Clutha
- October: Fires in Kaikoura District
- Most regions recorded temperatures 0.51-1.20 C above average, especially Northland and Bay of Plenty
- Sea temperatures very high



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- Marine heatwaves
  - Ocean temperature rise was equivalent to 210 times the world's annual electricity generation.
  - 83.7% of the world's coral reefs impacted by bleaching-level heat stress



# 2025 LOSSES WORLDWIDE

- Species lost: 44 animal, fungal and plant species
  - the slender-billed curlew, Christmas Island shrew, a cone snail, and three Australian bandicoot species
  - The Madeira large white butterfly
- IUCN Red List of Critically Endangered Species:
  - 2024: <4,0000
  - 2025:10,443, including 1,500 with fewer than 50 individuals left



# 2025 LOSSES WORLDWIDE

- Economic impact worldwide
  - The top 10 climate disasters in 2025 resulted in over \$120 billion in economic losses
  - LA wildfires cost over \$60b in damage Hurricane Melissa caused \$8b damage in Caribbean/Jamaica
- Economic impact in NZ
  - Estimated cost of climate-change-driven weather events in NZ in 2025: \$5.5 billion.
  - Surging insurance premiums, insurance harder to get in high-risk areas, impact on existing homeowners in vulnerable places

# 2025 END-OF-YEAR REPORTS

Earth.Org: <https://earth.org/year-in-review-the-biggest-climate-headlines-of-2025/>

- 2025 second warmest year on record (after 2024, same as 2023)
  - 1.48 above pre-industrial

Copernicus: <https://climate.copernicus.eu/global-climate-highlights-2025>

- Arctic temperatures have risen more rapidly than those in the rest of the globe, with an estimated warming of around 3 degrees C since the 1970s

World Meteorological Organization: <https://wmo.int/publication-series/wmo-global-annual-decadal-climate-update-2025-2029>

- Temporary cooling by La Niña does not reverse long-term trend

# COP 30, Belém, Brazil: Outcomes

- Agreement to triple global adaptation funding by 2035, aiming for ca \$120 billion
- Agreement to halt deforestation: \$6.7 billion for Tropical Forests Forever Fund
- Established a framework to support workers and communities during the shift away from fossil fuels
- A plan to integrate gender-responsive actions into climate policies
- Initial formal discussions on aligning global trade policies with climate objectives were initiated

# COP 30, Belém, Brazil: Outcomes

- Despite call from 80 developed and developing countries, and 100+ international organizations, no commitment to phase out of transition away from fossil fuels: decisions deferred
- Decisions on National Determined Contributions (NDCs) deferred to 2026
- No plans for international financing of loss or damage from climate change events.

# COP 30: Who was/wasn t' there?

- No USA (second largest GHG emitter after China)
- Fewer Heads of State than previously
- 1 in 25 participants was a fossil-fuel lobbyist
  - 1,602 passes granted to fossil-fuel lobbyists
  - 1,061 passes issued to climate-vulnerable island states

# COP 30: Who was/ wasn't there?

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  - 1,602 passes granted to fossil-fuel lobbyists
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- More than 302 BigAg lobbyists representing the world's largest food and farming companies given access <https://kickbigpollutersout.org/>
- Canada, Japan, Indonesia, Russia, EU, NZ awarded 'Fossil of the Day'. Saudi Arabia awarded 'Colossal Fossil.'

# International Court of Justice, July 2025

Dealing with the consequences of climate change

‘It ruled that government actions driving climate change are illegal and states are legally bound to cut their emissions and compensate vulnerable nations for the harm they have caused. Climate change poses an “existential problem of planetary proportions, ”and those responsible for it can be held accountable for their action and inaction, the world’s top court said. ”Earth.Org

Climate scientists in 2025:

We told you this would happen!

Too little too late!

You can't keep doing the same thing  
and expect a different result!

# Avoidance mechanisms

- “Avoidance mechanisms are conscious or unconscious strategies—including situational avoidance, cognitive distraction, and emotional numbing—used to escape uncomfortable thoughts, feelings, or anxiety-inducing situations. While providing temporary relief from stress, these behaviors often exacerbate problems over time, hinder emotional processing, and can fuel anxiety or depression. ”

# WHERE ARE WE GOING?

Where is the world going?

Where is the US going?

Where is China going?

The elephants in the room

# WHERE IS THE WORLD GOING?

- No way of meeting current Paris target of 1.5 °C ten-year average
  - “Global temperatures are expected to continue at or near record levels in the next five years, increasing climate risks and impacts on societies, economies and sustainable development ”(WMO Global Annual to Decadal Climate Update)
  - The global mean temperature in 2026 is expected to be 1.44-1.46 °C above pre-industrial levels. UK range predicted to be 1.35 °C to 1.58 °C higher.
  - Unusually high temperatures already observed in Arctic, Greenland, western North America, Africa, parts of Asia and Australia.
  - There will be more heatwaves, wildfires, heavy/prolonged weather events, flooding

# WHERE IS THE WORLD GOING?

- The new de facto target is 2 C
- The remaining carbon budget to limit global warming to 1.5°C is virtually exhausted.
- Emissions in 2026 are projected to grow in the USA (13% of global emissions) and EU (6%), and also in India (8%). China?
- 35 countries have decreased their fossil CO<sub>2</sub> emissions significantly while growing their economies in the decade 2015-2024, twice as many as during the previous decade (2005-2014; 18 countries). These 35 countries account for 27% of global fossil CO<sub>2</sub> emissions.
- The remaining carbon budget to limit warming to 2 C has now been reduced to 25 years [i.e. 2049].

<https://www.globalcarbonproject.org/>

# WHERE IS THE WORLD GOING?

- Hansen et al

Environ. Sci. Pol. Sustain. Devel., 67, no. 1, 6-44, doi:10.1080/00139157.2025.2434494

- 2024 temperature jump in August 2024 spurred by periodic El Nino event, and by ban on aerosol emissions. This underestimated in IPCC reports.
- Global temperature will not fall much below +1.5°C level, instead oscillating near or above that level for the next few years.
- More powerful tropical storms, tornadoes, and thunderstorms, and thus more extreme floods, are driven by high sea surface temperature and a warmer atmosphere that holds more water vapor. Higher global temperature also increases the intensity of heat waves.
- We find that polar ice melt and freshwater injection onto the North Atlantic Ocean exceed prior estimates and, because of accelerated global warming, the melt will increase. As a result, shutdown of the Atlantic Meridional Overturning Circulation (AMOC) is likely within the next 20-30 years, unless actions are taken to reduce global warming

# A TURNING POINT?

- 2016 Paris Agreement: focus on mitigation
  - NDCs explain how emissions will be reduced to keep average temperature to 1.5 °C above pre-industrial levels
- 2025 COP 30: focus on adaptation to a 2 °C world [or more?]
  - Mitigation abandoned for 'transition'
    - But mitigation still required to keep rise to 2 °C
    - The tipping-points are not being recognized
  - Adaptation still requires long-term forward planning
- Transition = risk management
  - More mitigation for less adaptation?
  - Less mitigation and more adaptation?

# WHAT IS A 2 WORLD LIKE?

- More extreme weather events: 37% of population experience severe heat waves
- 99% of coral reefs lost
- 10.4 million more people affected by 2 C sea-level rise than 1.5 C
- 62 million more people worldwide affected by drought than 1.5 C
- Irreversible changes to forests and tundra
- Mediterranean and tropics suffer intolerable summer heat and ca 20% loss of crops
- Significant migration demand

# WHERE IS THE USA GOING?

- Trump: Climate Change is “The Green New Scam ”
- January 2025 withdrew from Paris Agreement and rescinded \$4b pledges to UN climate funds
- The One Big Beautiful Bill of 2025 ended incentives for green energy (EVs, heat pumps, energy efficiency)
  - Federal agencies directed to expedite domestic fossil fuel production.
  - Emission standards revoked. Climate research funding removed.
- Feb 2026: Trump repeals the Endangerment Finding. US now 65<sup>th</sup> in the world in Climate Change Performance Index

# WHERE IS THE USA GOING?

- Despite federal policies, state policies and individual companies working hard to address climate change
- US Climate Alliance: bipartisan coalition of 24 state governors “advancing high-impact policies, actions and regulations in key policy areas.” Co-chairs Newsom (California) and Evers (Wisconsin)
  - Claim to have collectively reduced net GHGs 24% below 2005 levels.
  - Co-chairs were present at COP30
- “America is All In ”
  - 388 local governments, 14 tribal nations, 3,032 businesses, 162 cultural institutions, 431 higher education institutions. . . etc. Our members represent 2/3 US population, 74% US GDP. ”

# WHERE IS CHINA GOING?

- World's largest annual GHG emitter and also leader in renewable energy deployment. ???
  - 2015 China committed to turning China into a developed economy.
  - Leading world emitter, 2025 to 2024.
- 2025 China's GHG emissions fall.
  - Renewables now 40% of power generation.
  - Major forest planting.
- Committed to peaking CO2 emissions before 2030 and achieving carbon neutrality by 2060
- Still issues: power storage and delivery, fossil-fuels can't yet be totally abandoned

# THE ELEPHANTS IN THE ROOM

- The GHG impact of 'special military operations '
- The GHG impact of International freight
- The GHG impact of forest fires and wildfires
- The GHG impact of cruise ships
- The insurance consequences of climate change
- AI data-centres

# WHAT SHOULD WE DO IN NEW ZEALAND AOTEAROA?

- Acknowledge
  - that climate change exists
  - what causes it
- Recognize that climate change affects everyone
  - Climate change is a whole-community challenge
  - Strengthen, not weaken the NZ Climate Commission
  - Urge media responsibility

# ODT 24 January 2026

# AL

Ota

## It's climate change, stupid

ly hold that amount of water. Slips have slithered down many slopes, the worst of them at 'apāmoa, where two people were killed, and at the base of Mt launganui, where rescue workers are still searching for several missing people amid debris and crushed buildings and campers. A man is also missing after being swept away by a flooded river near Warkworth.

New Zealand has always been a hazardous country, but how many more deaths do we consider acceptable at the junction of here our changing climate and more extreme weather clashes head-on with human habitation and activities?

It is finally, definitively, time for this government and its successors over the next handful of years to wake up and realise climate change is the most



important issue facing us all.

It's verging on the "too late" already, but concerted and supported efforts here and around the world right now can at least stop the steadily increasing global average temperatures, both in the air and oceans, from rising much further.

Meanwhile, after every latest storm, our politicians fly around the country in helicopters surveying the damage, seemingly puzzled at what has caused it, genuinely upset at the loss of life, homes, communities and liveli-

hood, but doing little to immediately make a difference and reduce the risk of similar or worse events in the decades ahead.

Our continued existence is under threat. Of that there is no doubt. Yet the government appears to carry on much as normal, setting priorities other than dealing with climate change, and in fact watering down efforts we have made in the past decade towards any mitigation.

Aliens looking down from another planet, unable to see the

micro-happenings of our world but observing the bigger picture might wonder what kind of species we are that seems happy to carry on rushing headlong towards our own destruction.

Just this week, Prime Minister Christopher Luxon gave his State of the Nation speech. A quick analysis shows the words "economy" or "economic" were mentioned 18 times. "Climate change"? Not once. It was a speech about wanting to ensure the best possible future for Kiwi which completely ignored the most pressing issue.

Victoria University of Wellington scientist Prof James Renwick isn't mincing his words when it comes to government efforts. In the face of more frequent severe weather, he says dealing with climate change is not a cost to the economy but an investment.

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  - Urge media responsibility
- Internationally, behave responsibly
  - Resist international corporations with vested interests
  - Work with like-minded partners

# WHAT SHOULD WE DO IN NEW ZEALAND AOTEAROA?

- Is open, honest and truthful with New Zealanders (including farmers) about what we must do to prevent that, or deal with its consequences, including
  - Focus on renewability for both mitigation and adaptation, short- and long-term
  - Avoid any further fossil-fuel energy development
  - Develop alternative clean-energy sources: solar, wind
  - Develop other self-sufficiency resources
  - Build a community that is united in purpose, welcomes and celebrates difference and diversity, and cares for those in need - whoever they may be.

IT'S A NEXT GENERATIONS THING



Thank you for listening

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