

CLIMATE CRISIS: BOARDS ON THE HOT SEAT

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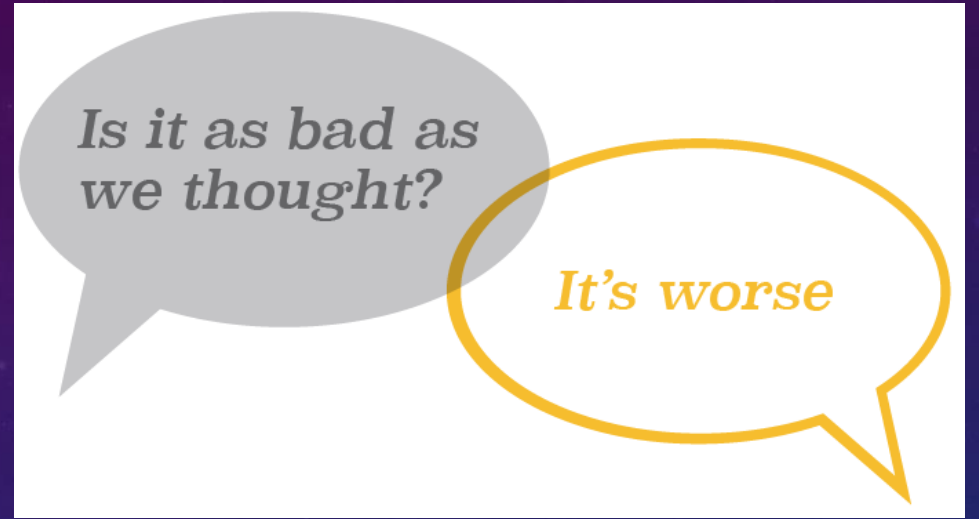
Presentation at:
Ryerson University's
Institute for the Study of CSR
Toronto, Ontario

Sept. 25, 2019



OVERVIEW

1. Climate changes everything
2. Duty to disclose
3. Liability for climate damage?



1. CLIMATE CHANGES EVERYTHING

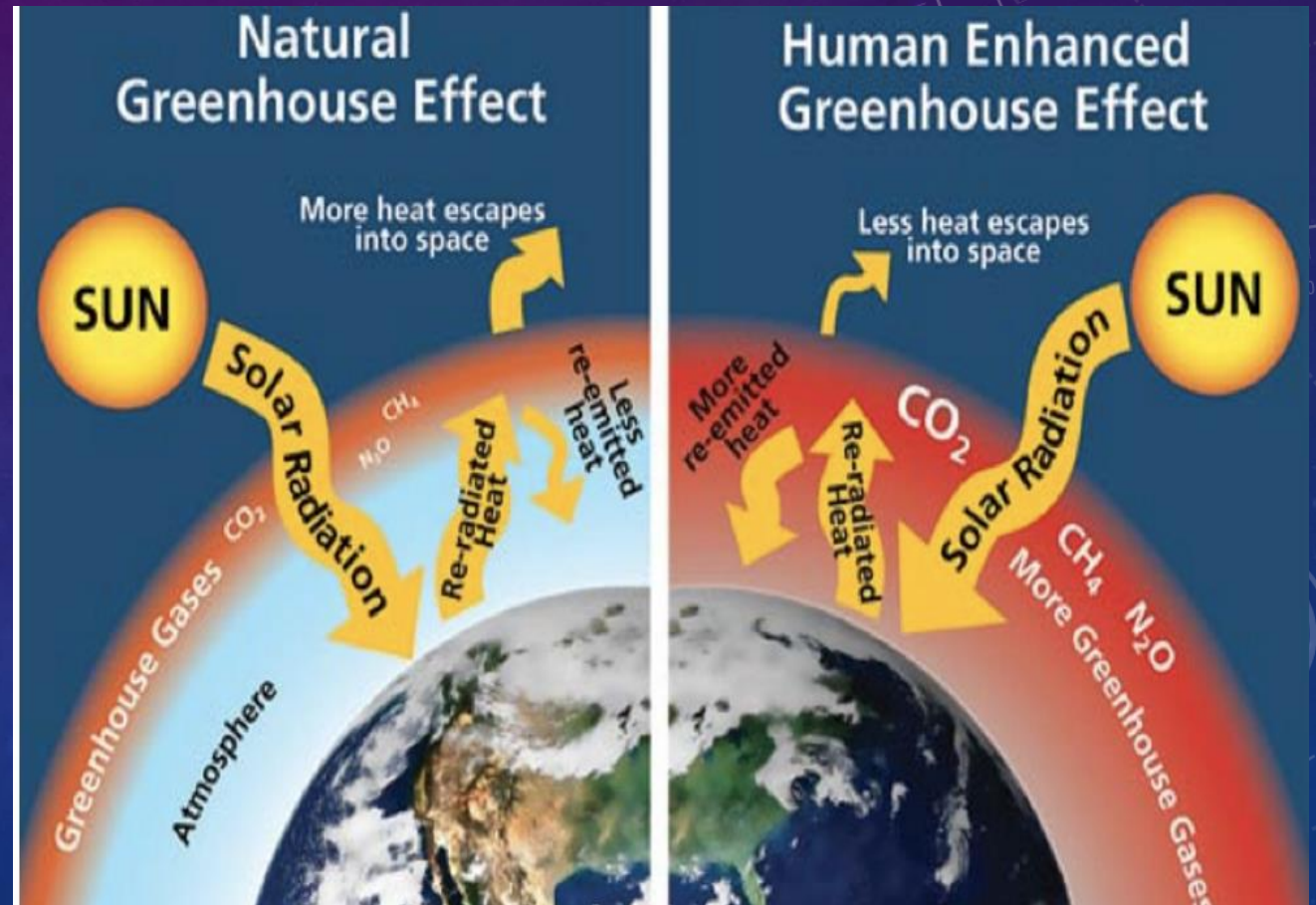
CLIMATE CHANGE
IS HERE.
IT AFFECTS US
NOW.

- Much worse is ahead.
- We're determining the future.



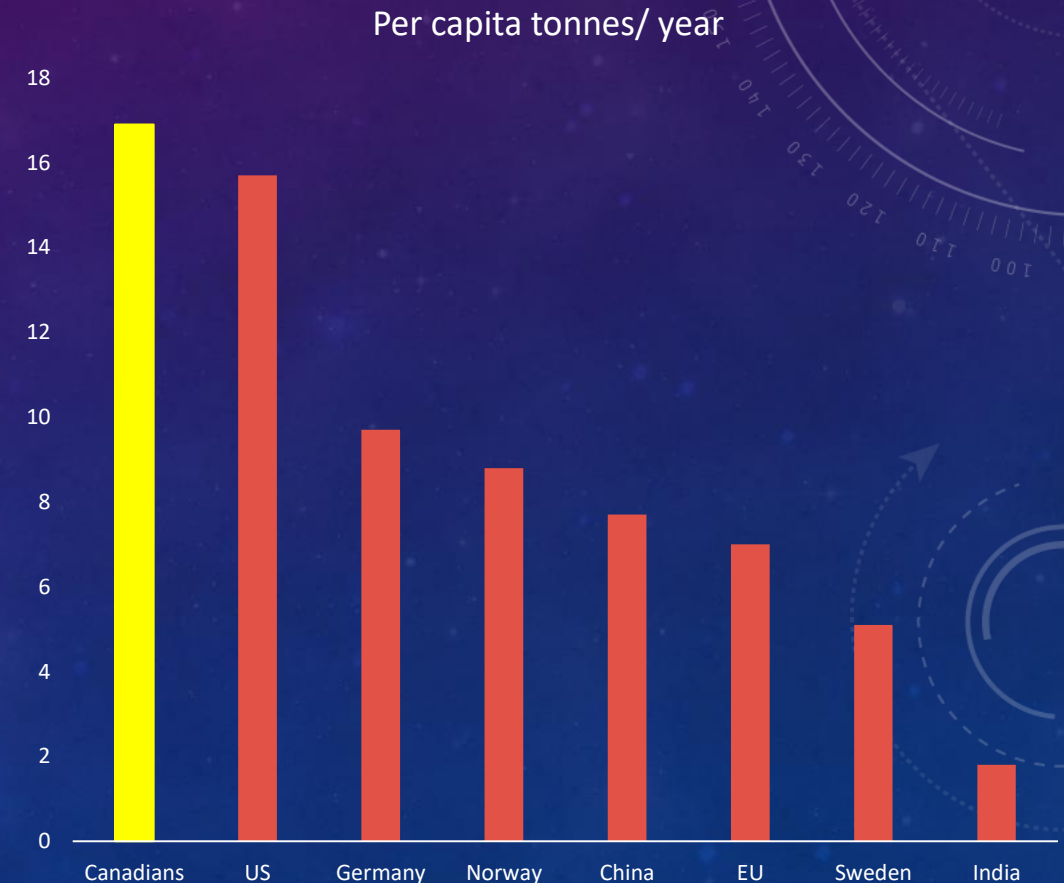
PEOPLE CAUSE CLIMATE CRISIS BY:

- Putting greenhouse gases in the atmosphere that keep solar heat from escaping
- Mostly CO₂ from burning fossil fuels



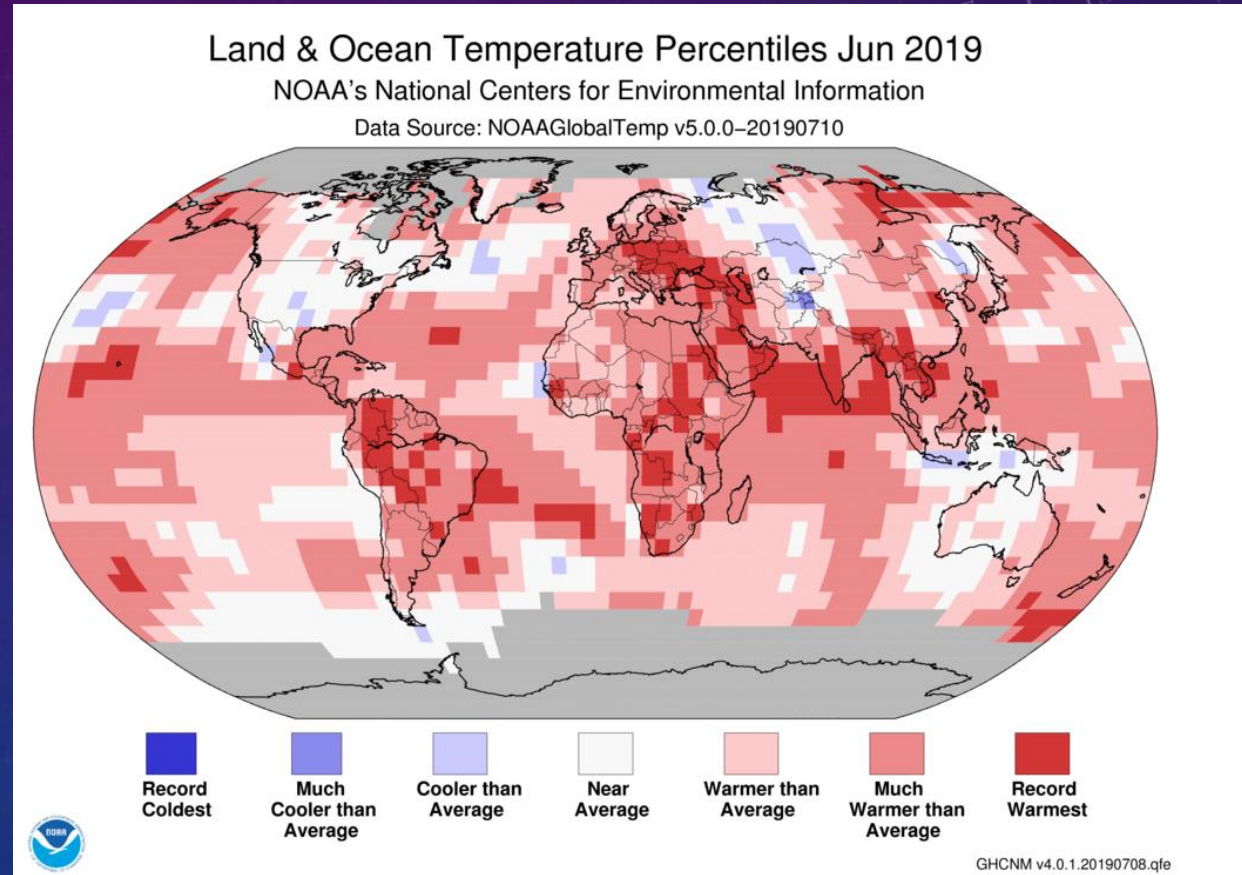
CANADA IS A BIG PART OF THE PROBLEM

- A Top 10 emitting country
- Now and cumulative
- Among world's largest per capita emitters

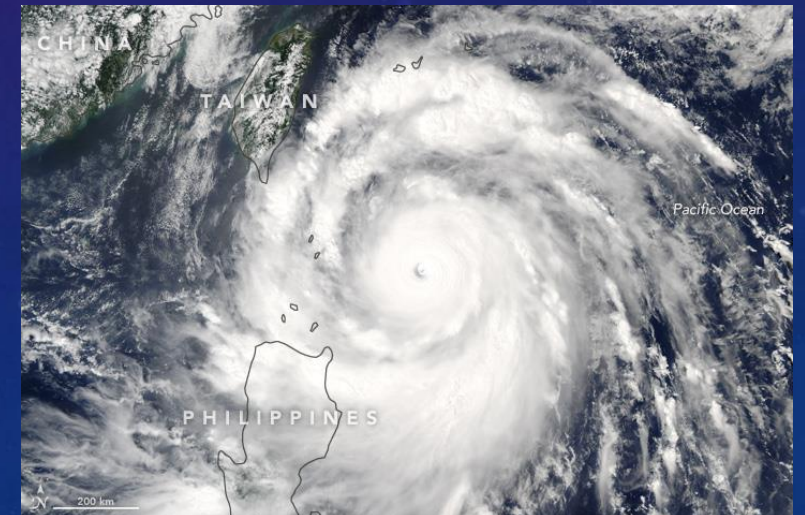
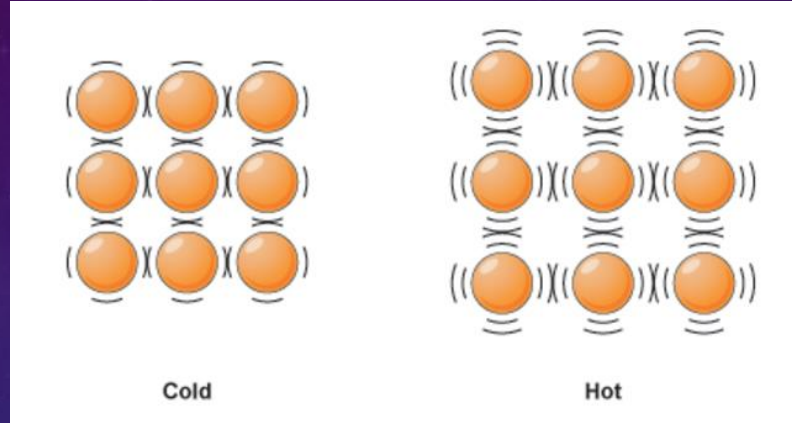
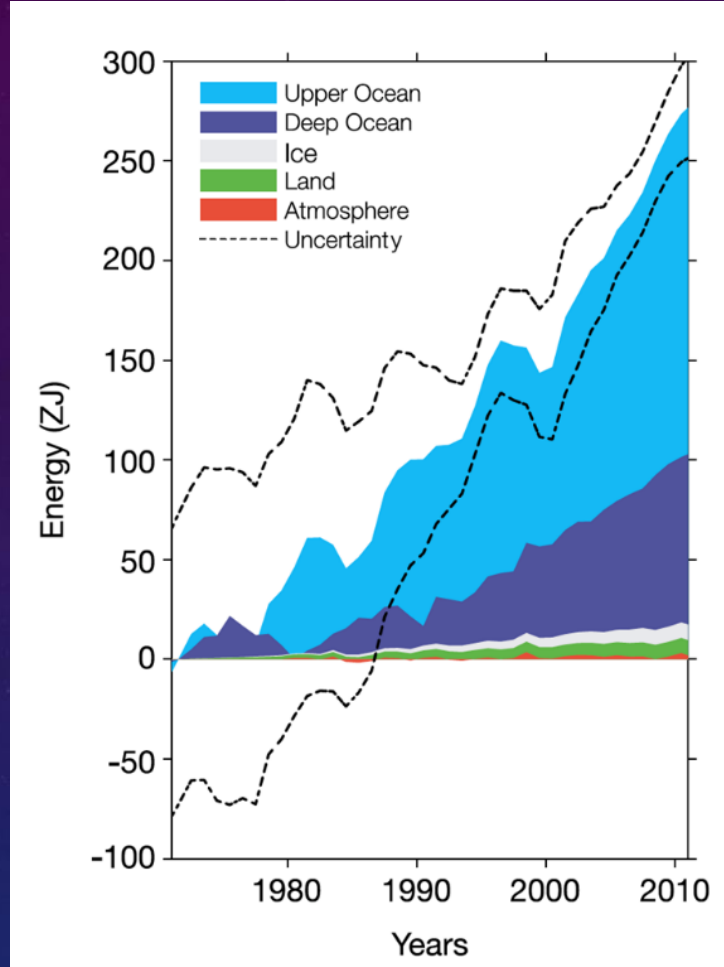


THIS IS GIVING THE WORLD A FEVER

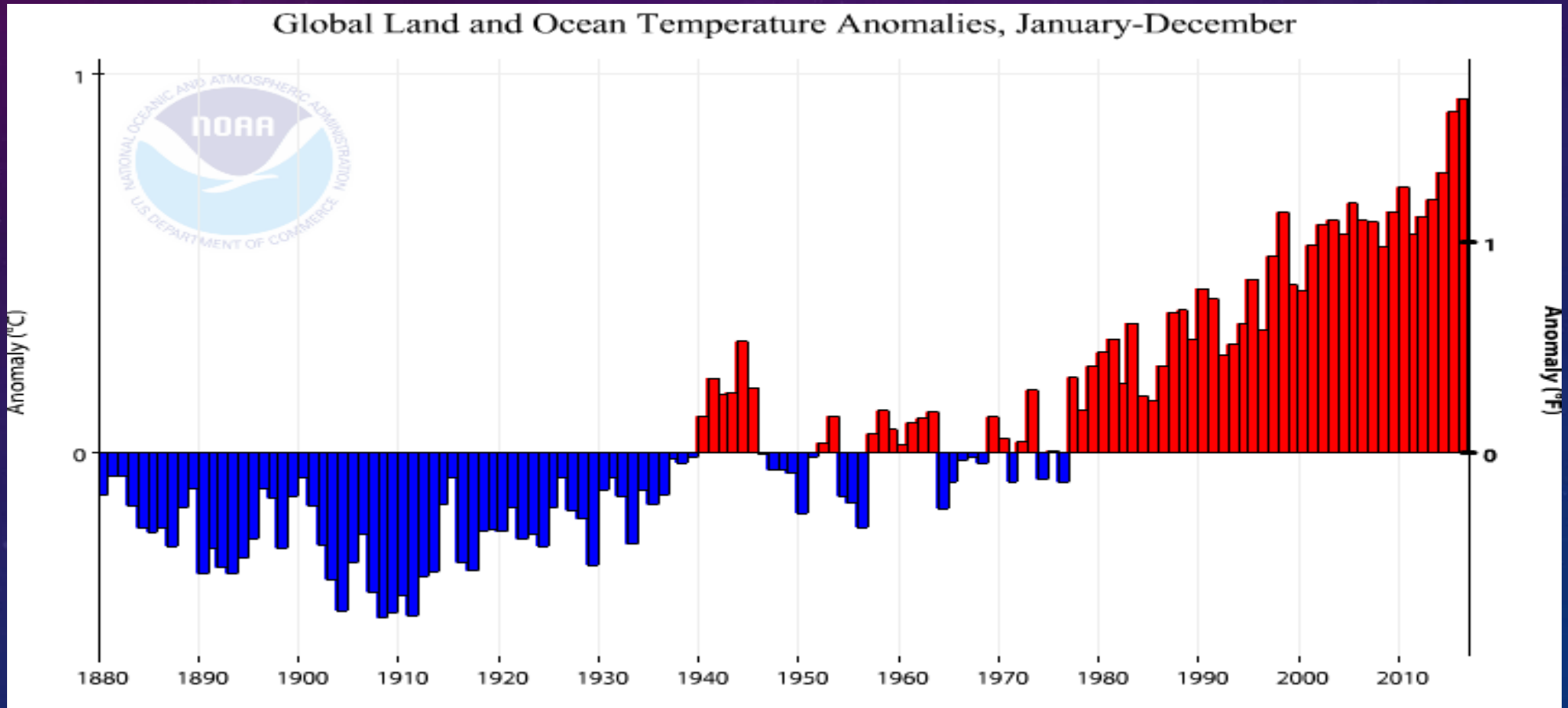
- **Highest recorded:**
 - GHG emissions
 - GHGs in atmosphere
 - Temperatures
 - Ocean acidity



ESPECIALLY THE OCEANS



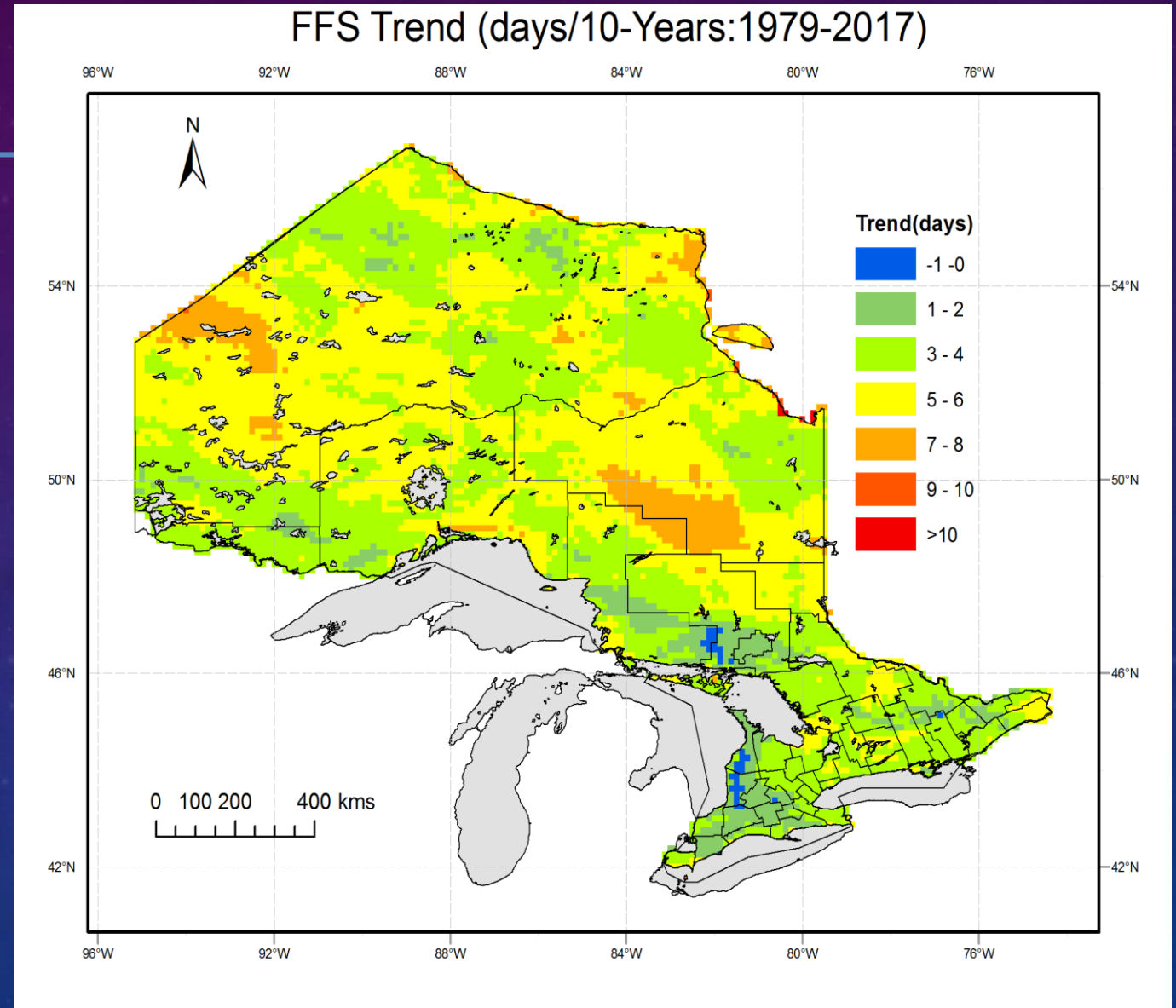
20TH CENTURY “NORMAL” IS GONE



Source: National Oceanic and Atmospheric Administration, [Climate Change – Global Temperature](#)

CANADA TOO

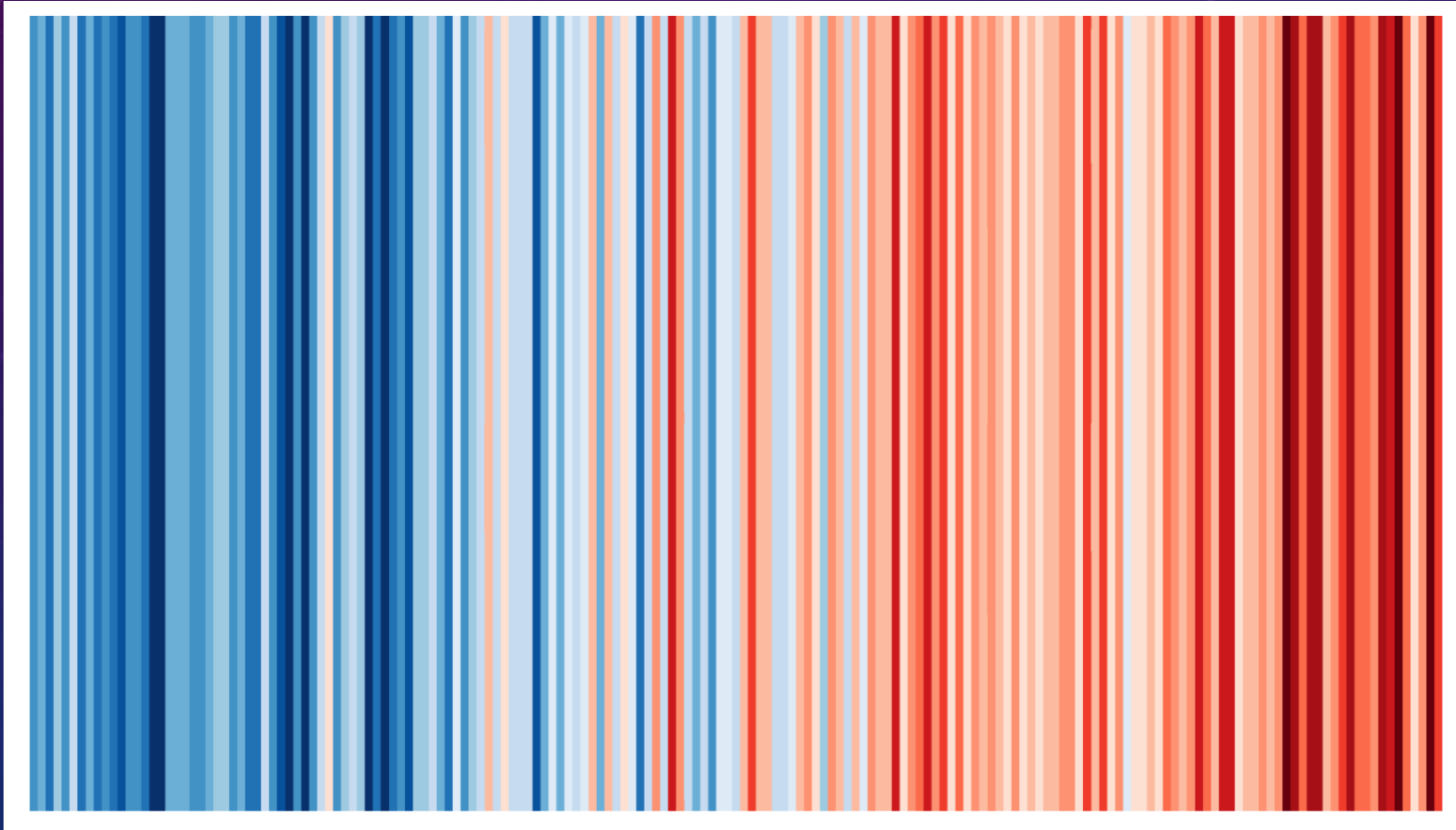
- Canada heating up faster than global average
- 1.7°C warmer since 1948
- 2.5°C to 3.7°C warmer by 2050
- Differs by region
 - latitude, topography, water...



Source: LAMPS Climate Change Group, [Ontario Frost Free Season Changes Analysis](#).

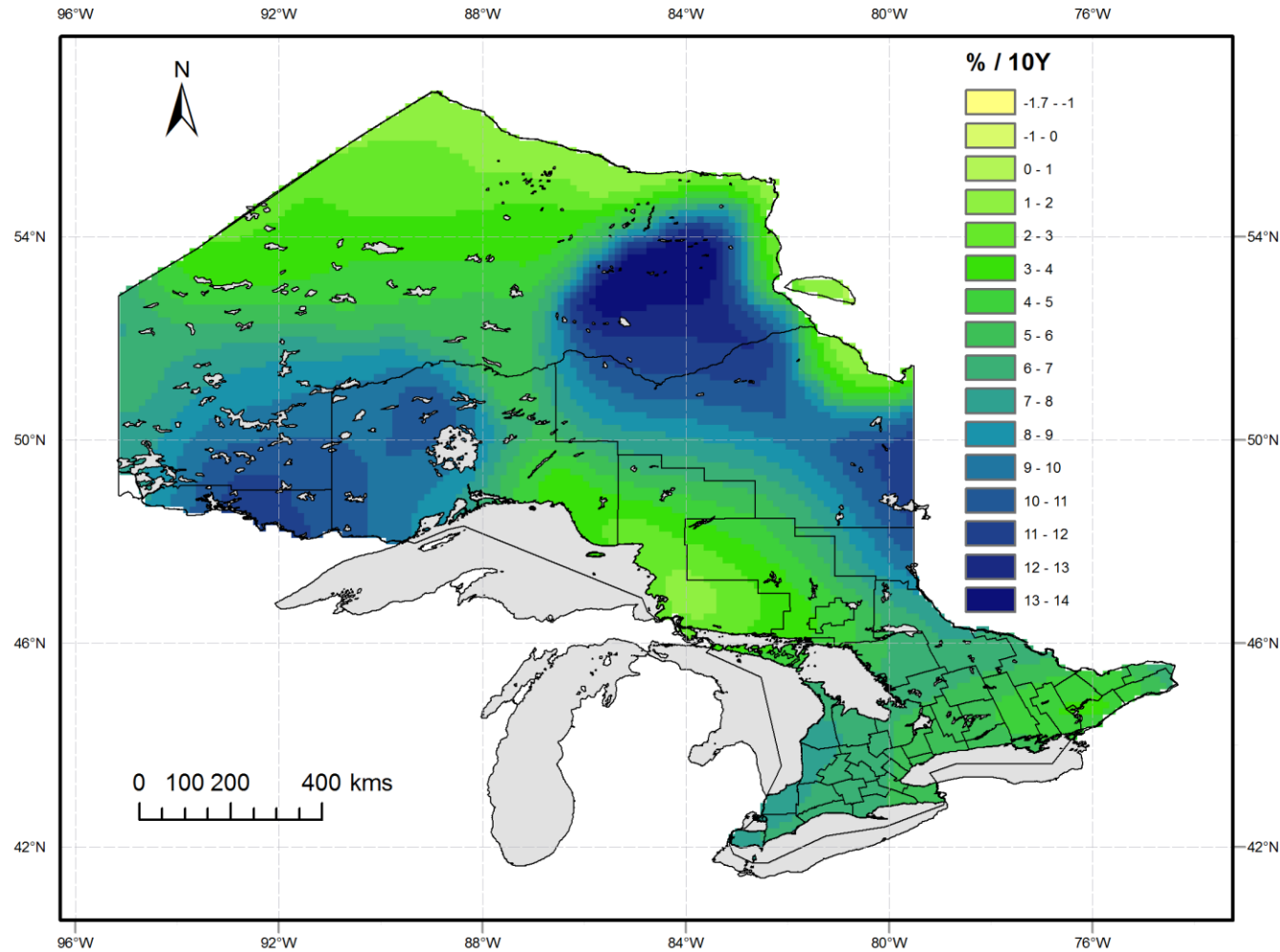
CITIES ARE HOTTER

7.6°C (dark blue) to 10.8°C (dark red)



Toronto Annual temperatures 1841-2017
Source: National Centre for Atmospheric Science

Precipitation Anomaly Percentage Trends (Winter: %/10Y)

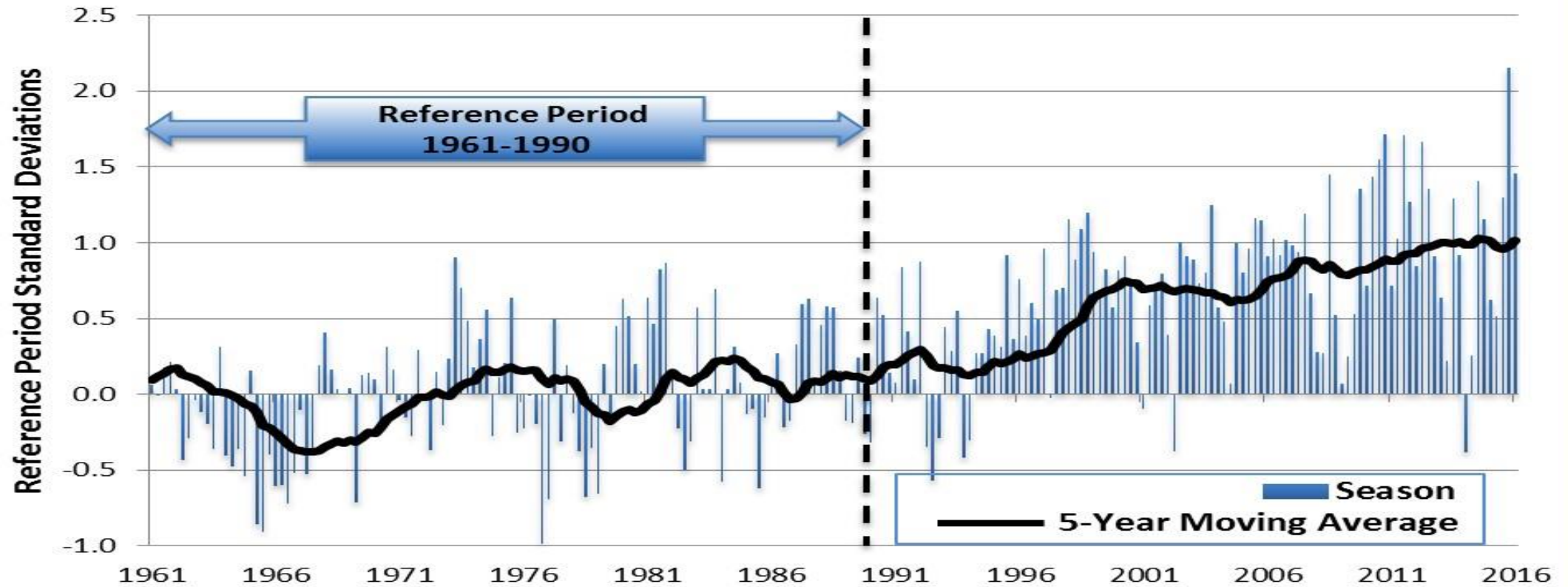


Winter is Wetter

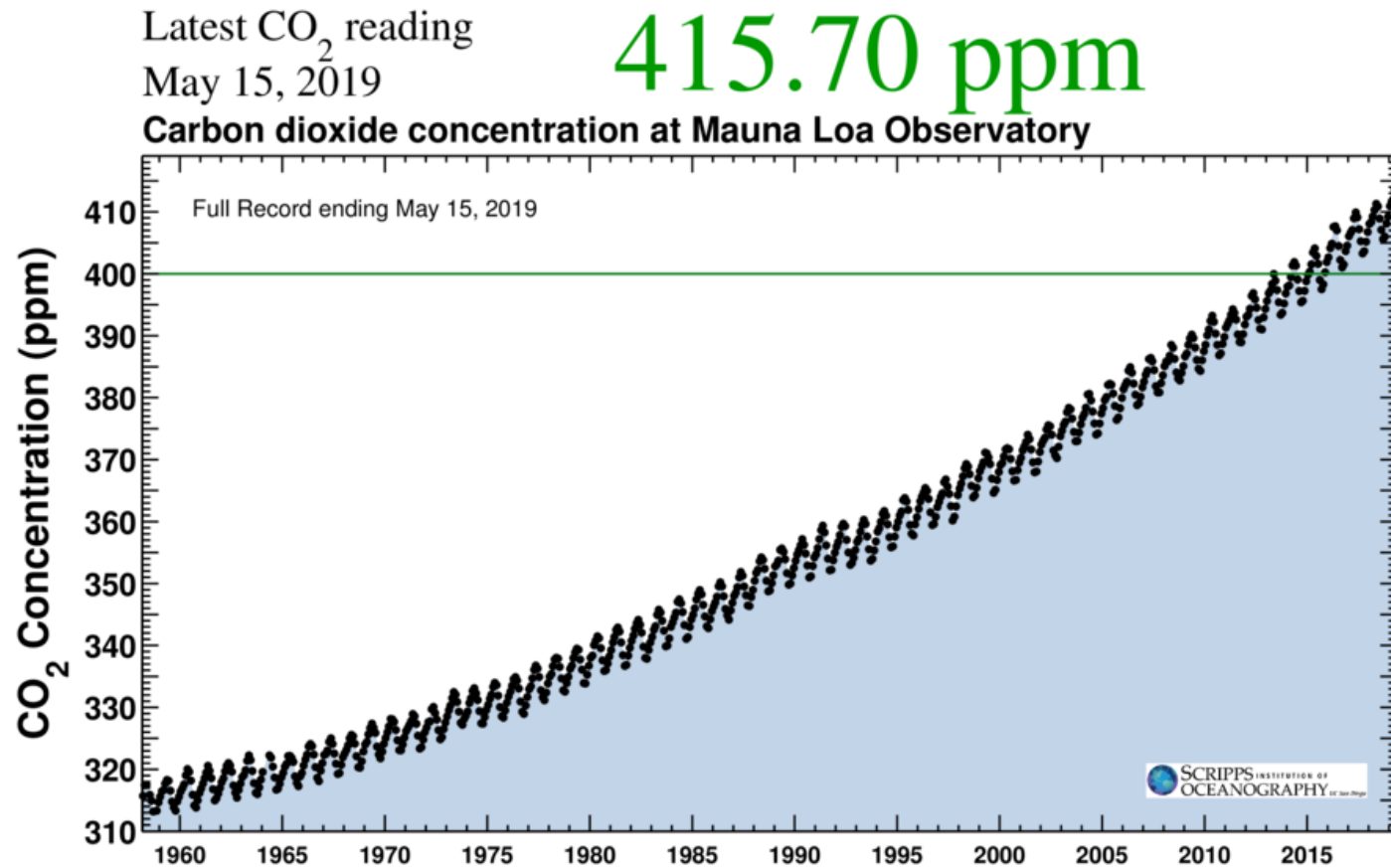
Average change
per decade
1979-2016

4 X CLIMATE EXTREMES

Actuaries Climate Index - Canada & U.S.



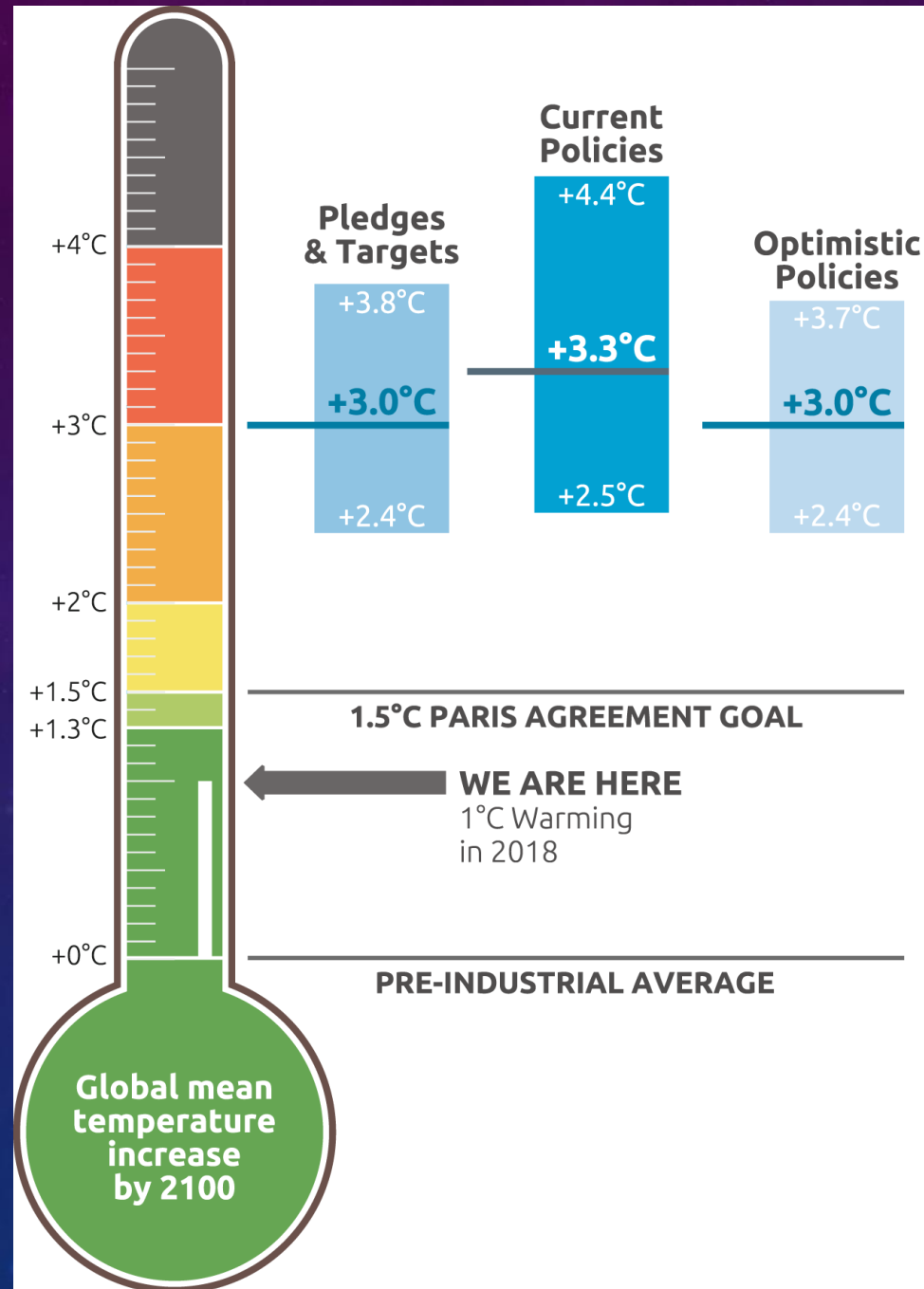
NO “NEW NORMAL” IN SIGHT



EVERY REPORT MORE GRIM THAN THE LAST

- Today, the IPCC cryosphere report:
- Everything frozen is melting, faster and faster
- So what?
 - Faster-rising sea levels threaten major coastal cities
 - Soaring flood damage bills
 - Dire water shortages
 - Will likely displace hundreds of millions of people

WHERE ARE WE HEADED?



CAT warming
projections
**Global temperature
increase by 2100**

December 2018 Update

The background is a gradient of dark blue and purple, speckled with small white dots. On the left side, there are several concentric circles and a large circular scale with degree markings from 140 to 260. Some of the circles have arrows indicating a clockwise direction. The text 'SO WHAT?' is positioned on the right side of the image.

SO WHAT?

WHEN NOT IF: FLOODS, FIRE, DROUGHT, WIND, HEAT



Photo credit: Ottawa Paramedics



Photo credit: Ryan Forbes



Photo credit: Associated Press



Photo credit: Viv Lynch. Used under CC BY-NC-ND 2.0

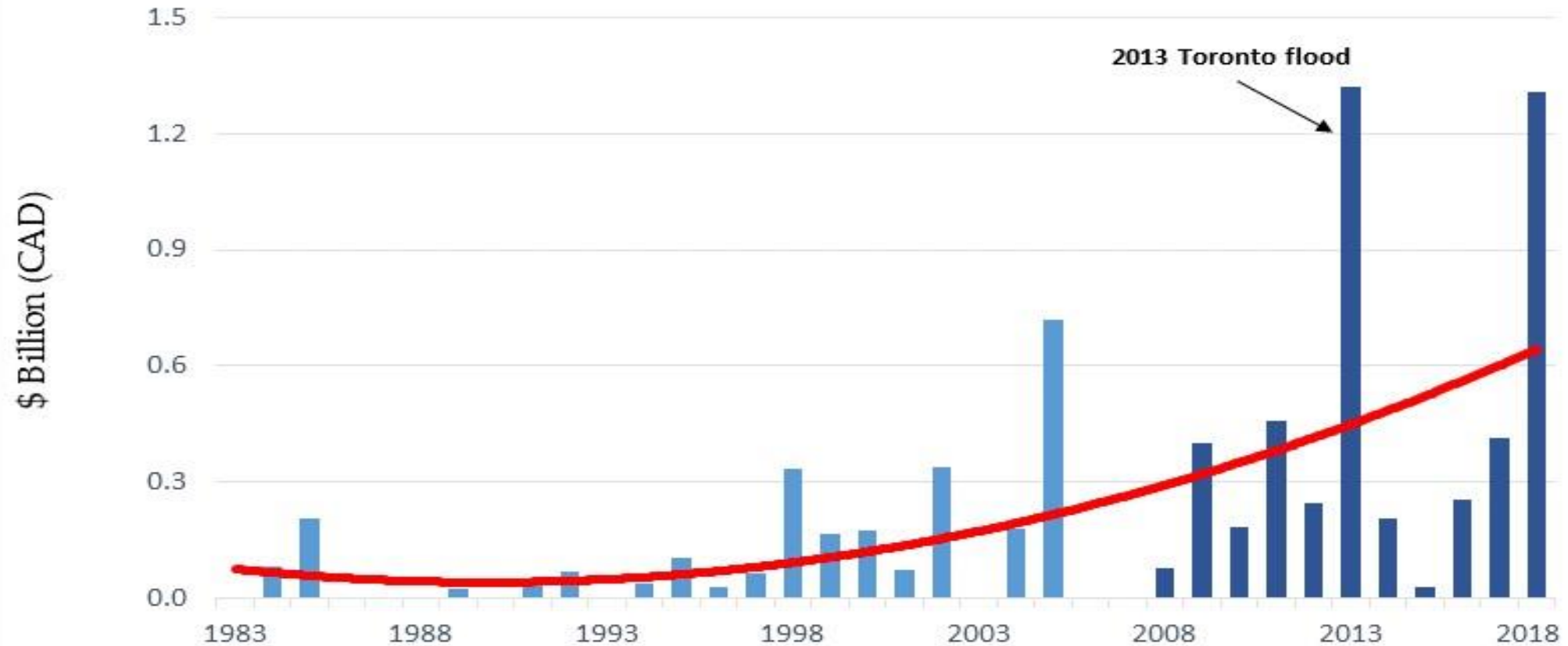


Photo credit: The Canadian Press



Photo credit: OPP North East

INSURED LOSSES (PLUS...)



\$1.3 billion in 2018



Up to 10% of Canadian properties may soon be too high risk for private sector flood insurance, if no protective measures are taken.

Insurance Bureau of Canada

LAND, FOOD, WATER, HEALTH

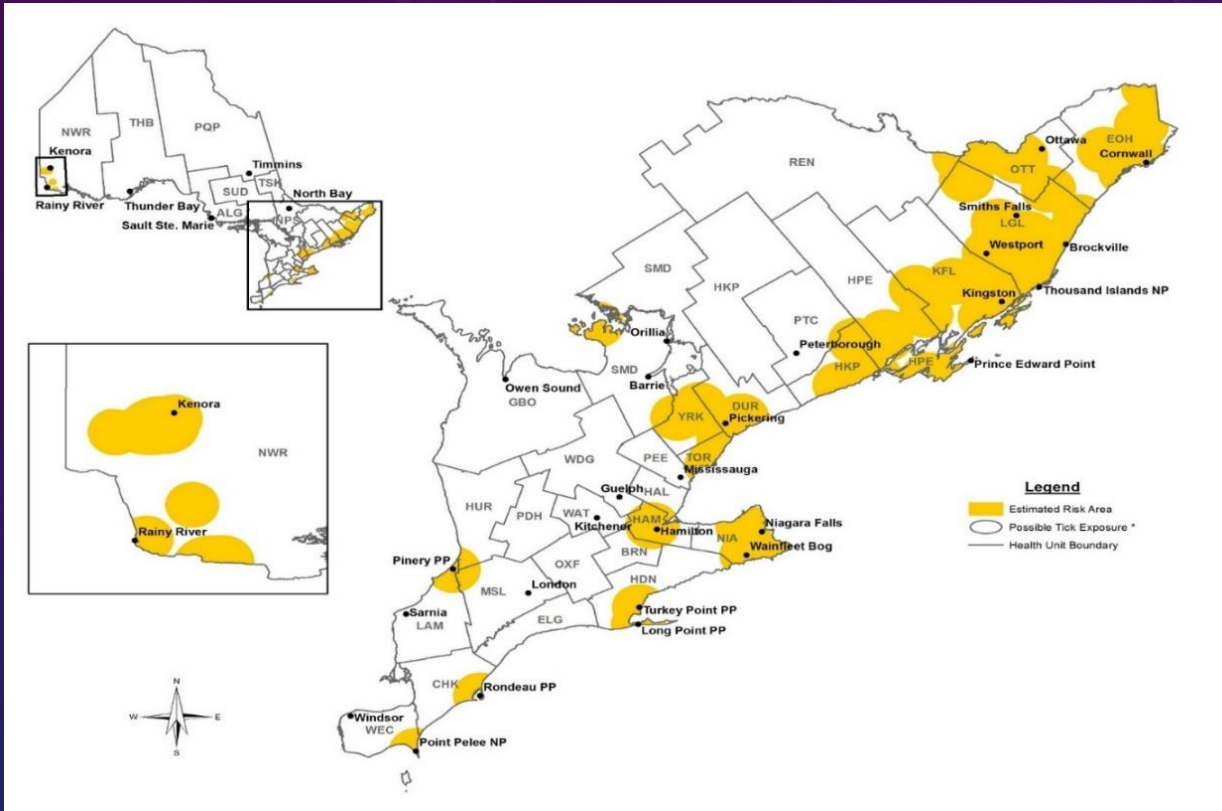
- Climate crisis already affects food quality and security
- High risks at 1.5°, very high risks at 2°
- **If we keep delaying:**
 - Food supply less stable, more expensive
 - Rapid declines in agricultural productivity
 - Irreversible damage to land and ecosystems
 - More wildfire, more conflict, more migration



WORLD HEALTH ORGANIZATION

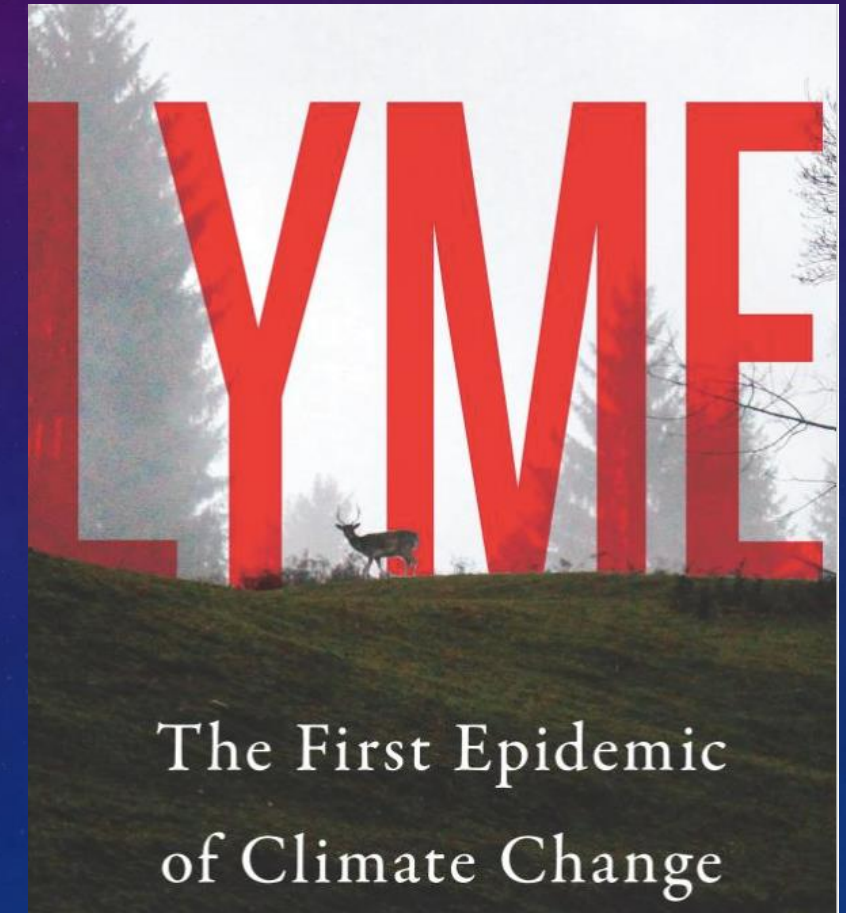
- Climate change – “one of the biggest global health threats of this century”
- “Health benefits far outweigh the costs of meeting climate change goals”

HEALTH IMPACTS INCLUDE



Ontario Lyme Disease Risk Map 2018: Estimated Risk Areas

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario)



ACCELERATING CHANGE

- Hotter, weirder, wackier weather
- Physical damage
- Food instability
- Economic Loss
- Physical and mental health
- Conflict, inequality, migration



AND WHAT ELSE?

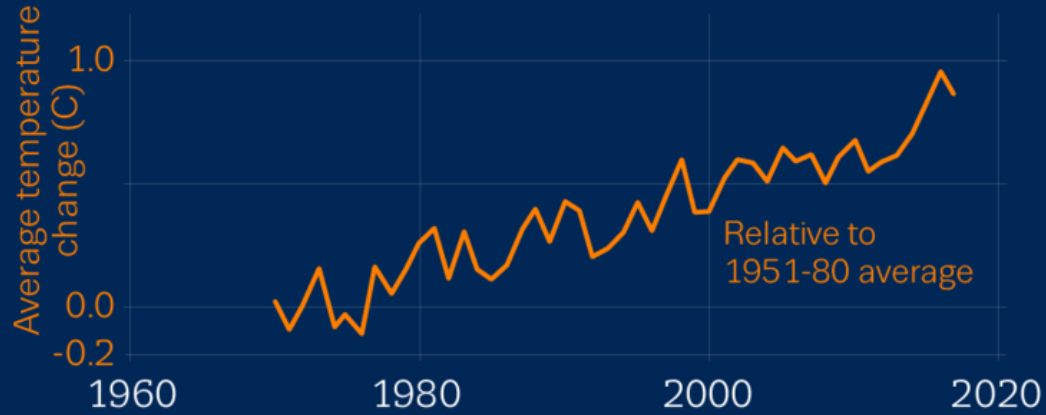
*“Large-scale uneven impacts of climate change may destabilize existing institutional arrangements, increase incentives to violently redistribute wealth, or generate other forms of **social conflict**.”*

Hsiang, Oliva, Walker 2017

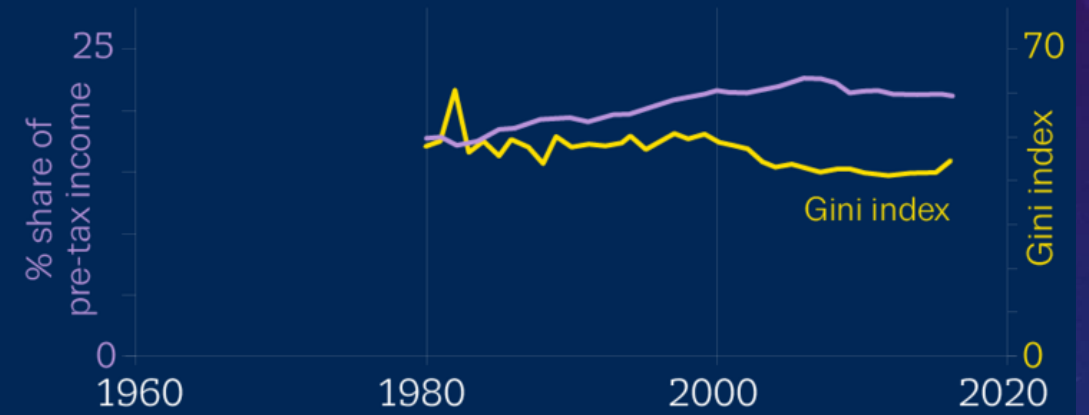
Danger signs

History suggests that when these indicators rise, the likelihood of collapse is greater.

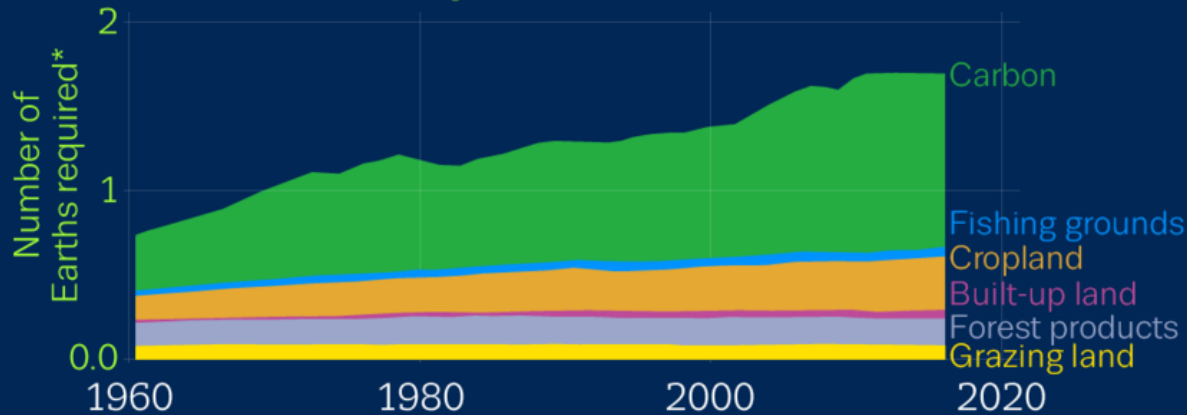
Climate change



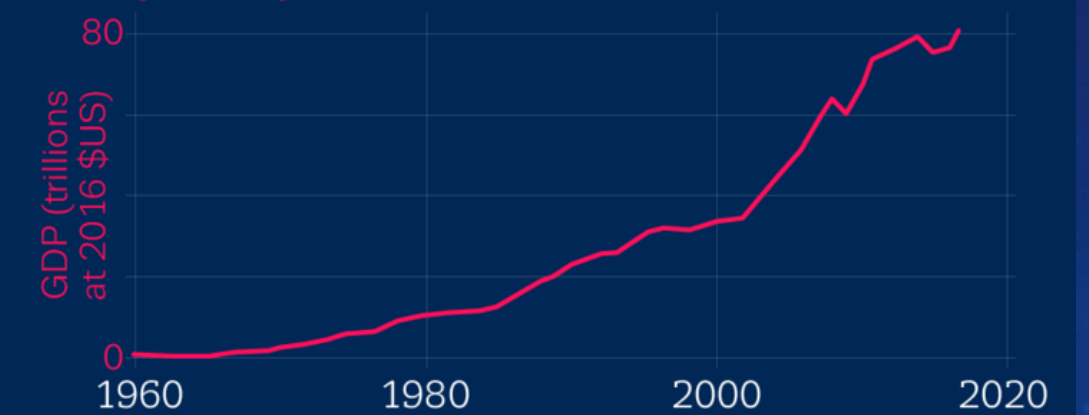
Inequality



Environmental impact



Complexity



*a measure of ecological footprint, describing Earth's capacity to support our demands

© Nigel Hawtin

BBC FUTURE



IF AVOID UNMANAGEABLE,

CAN MANAGE UNAVOIDABLE

Mitigation

- reduce emissions of pollutants (GHGs) that cause climate change

Adaptation

- cope with the impacts that have already occurred and will occur as a result of climate change

PAY LESS NOW OR PAY MORE LATER

- The costs and losses could be enormous
- Much cheaper to prepare now
 - Every \$1 spent reducing the risk of future hazards saves \$6 in future disaster costs

**THERE IS A HIGH COST TO
DELAYING ACTION ON CLIMATE
CHANGE.**

2. DUTY TO DISCLOSE

ISSUERS MUST DISCLOSE MATERIAL RISKS

- Companies that sell shares to the public must disclose the material risks affecting their business and, where practicable, the financial impacts of such risks

FLYING BLIND IS DANGEROUS

- Bank of Canada: **climate change a key vulnerability** in the Canadian financial system
- Expert Panel on Sustainable Finance:
 - “A reliable, consistent and comparable bottom-up view of climate risk exposure is essential to proper assessment and pricing...”
 - Particularly relevant to Canada, given the **severe physical and financial risks** associated with our country’s accelerated rate of warming”

SUPERINTENDENT OF FINANCIAL INSTITUTIONS

- “All of us ... will have to adjust to a new reality.
- OSFI wants all insurers to quantify their [climate risk] exposure and develop strategic approaches for making the **transition to fewer carbon-linked assets**.
- OSFI will be looking to companies to analyze their exposure to carbon-based asset repricing and develop policies to reflect possible future changes.”

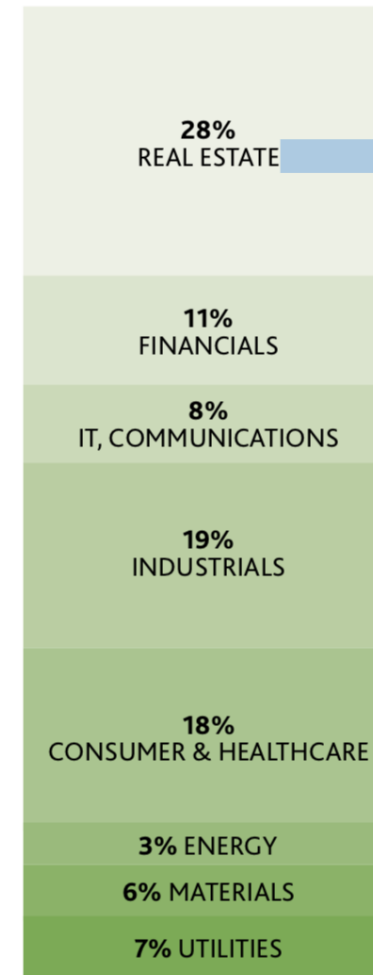
OSFI Pillar, February 2019

WHAT YOU DON'T KNOW CAN HURT YOU

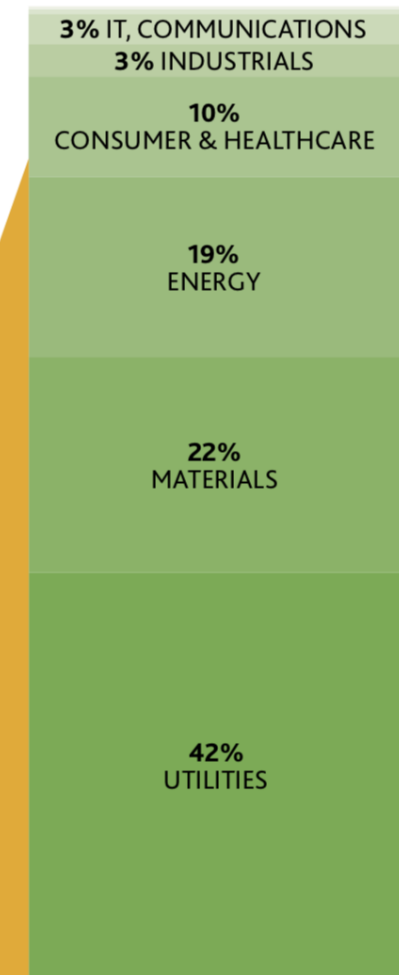
OTPP 2018 CLIMATE REPORT

Sector-based carbon footprint contribution

SHARE OF MARKET EXPOSURE



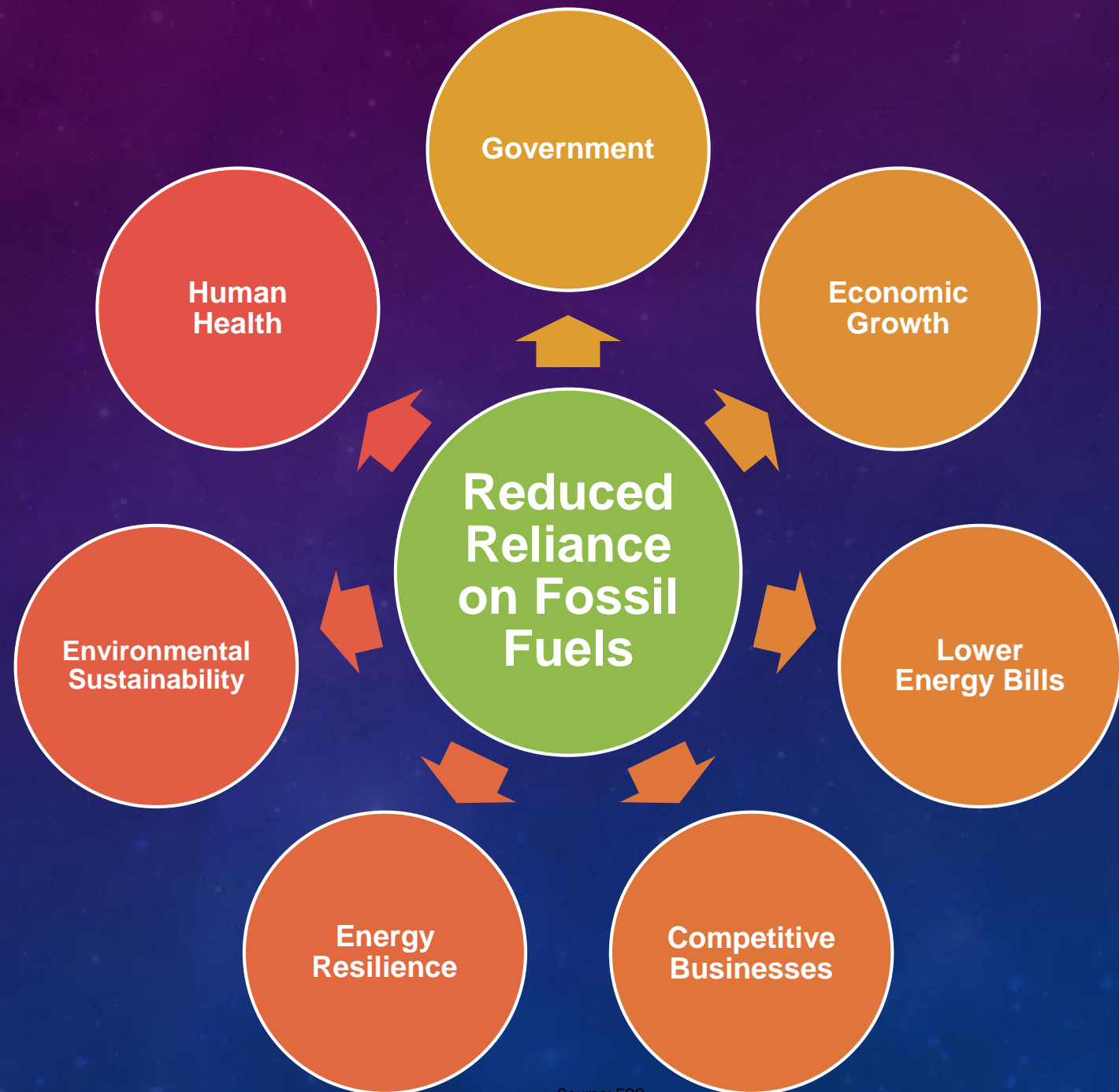
SHARE OF EMISSIONS



About 16% of
the portfolio
drives 83% of
the portfolio's
emissions

OPPORTUNITIES TOO

MAJOR CO-BENEFITS OF REDUCING RELIANCE ON FOSSIL FUELS

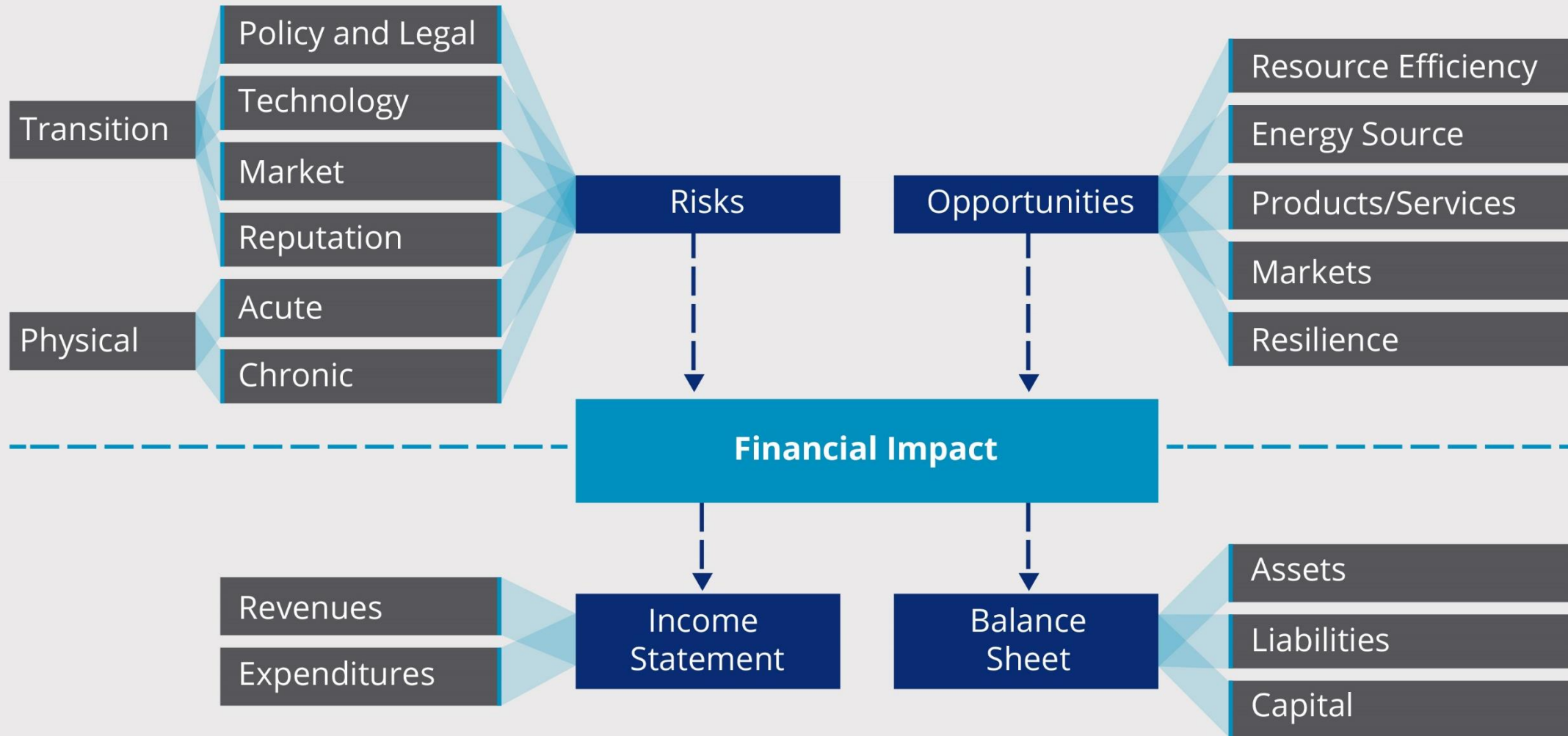


Source: ECO

NEW GLOBAL BENCHMARKS

- Climate Risk Technical Bulletin
 - Sustainability Accounting Standard Board (**SASB**), October 2016
- Task Force on Climate-related Financial Disclosures, November 2016

TCFD: EVALUATING FINANCIAL IMPACT



TCFD RECOMMENDS DISCLOSURE OF:



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

EXPERT PANEL ON SUSTAINABLE FINANCE

- TCFD recommendations “well on their way to becoming the global benchmark”
- “Intensifying pressure on companies and investors to adopt”
- Federal government support in *Budget 2019*

FIDUCIARY DUTY?

- “Legacy perception” that climate risks are outside board’s fiduciary duties...
- “Landmark legal judgments and a proliferation of public studies and statements are **debunking this belief.**”

ARE CLIMATE RISKS “MATERIAL”?

- Complex
- Widespread
- Timing, scale and pace are uncertain
- But “once climate change becomes a defining issue for financial stability, it may already be too late” – Mark Carney

CSA STAFF NOTICE 51-358

- *Reporting of Climate Change-related Risks*
- *Builds on Staff Notice 51-333 Environmental Reporting Guidance*
- **Why?**
 - Increased investor interest
 - Global standards available
 - **Current disclosure needs improvement**

August 1, 2019



EVERY BOARD IS ON NOTICE

- Climate change-related risks are mainstream business issues
- Even if more uncertain, longer time horizon than other business risks
- Board and management must have appropriate expertise

MOST ARE AFFECTED

- “We encourage issuers to carefully consider if they have any material exposure to climate change-related risks...
- **Most industries and issuers have some exposure** to these types of risks, even if they are not directly involved in a carbon-intensive industry”

Climate Change-related Risks

Physical

Acute

Chronic

Transition

Reputational

Market

Regulatory

Policy

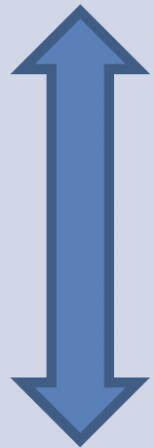
Legal

Technology

Time Horizon

Short-term

Long-term



BIGGEST SHORT TERM CANADIAN RISK?

- Risk of catastrophic damage to physical infrastructure in just the next 20 years:
 - 85%

- And then worse

FINANCIAL IMPACTS OF CLIMATE CHANGE MAY DWARF THOSE OF INFRASTRUCTURE DAMAGE.



CONSEQUENCES?

- \$Billions of annual costs, damage, loss
- Thousands of km² lost or irreversibly damaged
- Millions of people affected, hundreds of deaths

and/or

- Major, widespread, irreversible changes to natural assets or ecosystems

WHICH INDUSTRIES?

- Agriculture
- Utilities
- Aviation
- Construction
- Shipping
- Health
- Retail
- Banking
- Mining
- Insurance
- Vehicles
- Real Estate...



NOT MATERIAL YET?

- “The velocity of climate risks is increasing”

Superintendent of Financial Institutions

- TCFD “encourages organizations where climate-related issues could be material in future to begin disclosing climate-related financial information outside financial filings”

GOOD CLIMATE DISCLOSURE IS:

- Relevant
- Clear
- Understandable
- Entity-specific

- No boilerplate
- Get expert help!



3. LIABILITY FOR CLIMATE DAMAGE?

YES, YOU SHOULD BE WORRIED

- Climate “**liability risks must also be top of mind**”

Superintendent of Financial Institutions, OSFI Pillar February 2019

HOW MUCH IS AT STAKE?

Estimated damage:

1.2% of gross domestic
product per +1°C

of additional average temperature

- Far more than:
 - Asbestos (~\$100 B)
 - Tobacco (insolvent after \$15 B in Quebec class action, March 2019)



GLOBAL LOSSES ALREADY

Fourth warmest year

on record dating to 1880 for combined
land and **ocean temperatures**

USD 653 billion



2017 & 2018: Costliest back-to-back
years for **weather disasters** on record

USD 237 billion



2017 & 2018: Costliest back-to-back years
for **public and private insurers** on record

WITH \$B AT STAKE, THERE WILL BE LAWYERS

- More than 1,200 lawsuits already
- Causation getting clearer
- Event attribution improving
- Demands for loss and damage compensation
- *Force majeure* looking wobbly

LEGAL OPTIONS?

- Blocking projects
- Non-disclosure/ misrepresentation
- Human rights, securities laws
- Convention on the Rights of the Child
- How long until “Climate Negligence”?

CLIMATE NEGLIGENCE?

- Foreseeability is the fundamental moral glue of tort.
- Parties owe a duty of care to those whom they ought reasonably to have in contemplation as being at risk when they act.

Supreme Court of Canada, *Rankin v. J.J.*

WHAT'S FORESEEABLE NOW?

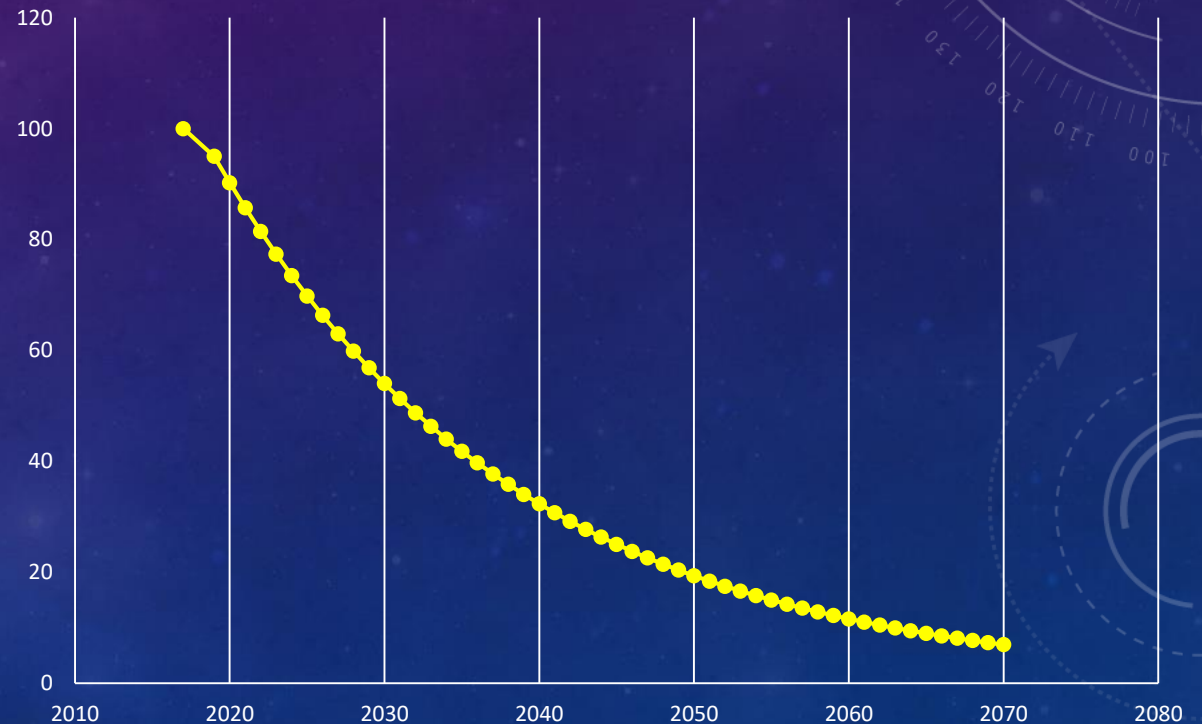
- No plausible claim of ignorance any more
- Every fossil fuel investment today means more damage
- In the lifetime of today's children
- We have alternatives



IF WE WANT A 2° WORLD

- 2° world: Much less stable and safe than today, major economic damage but survivable for most
- We can only emit:
 - ~75% of 2010 GHGs by 2030
 - Net 0% of 2010 GHGs by ~2070

5% declining balance doesn't get there

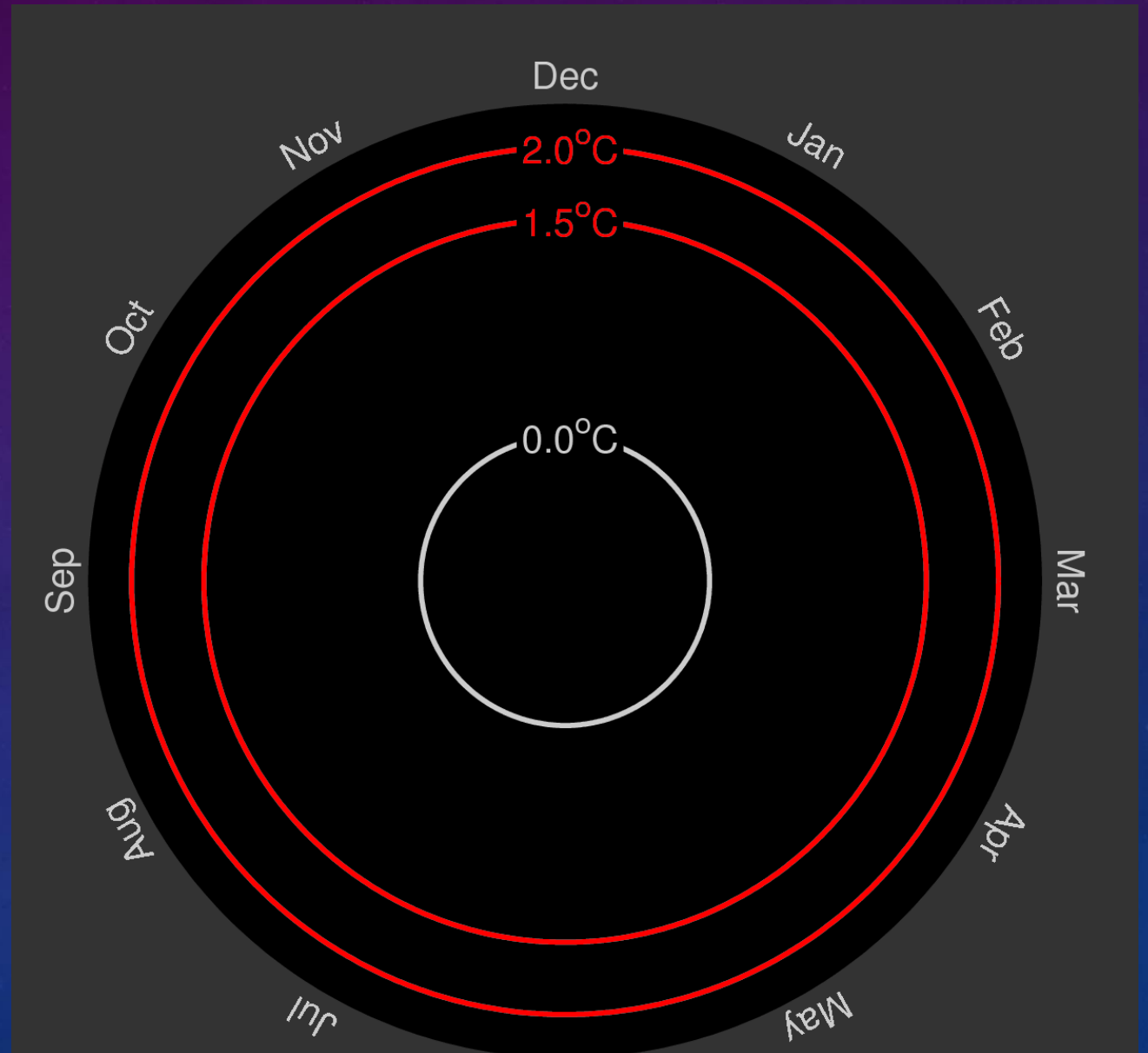


IF WE WANT A 1.5° WORLD

- 1.5° world: Less stable and safe than today, but manageable
- We can only emit:
 - ~55% of 2010 GHGs by 2030
 - Net 0% GHGs by ~2050

REDUCE HOW MUCH?

We're almost at 1.5°
Our house is on fire



IS IT TOO LATE?

- We are in for big changes
- Liability will come
- There is still a little time to avoid the worst
- **Our choices, right now, matter**

Money Is the Oxygen on
Which the Fire of Global
Warming Burns



WHAT WILL JUDGES DO?

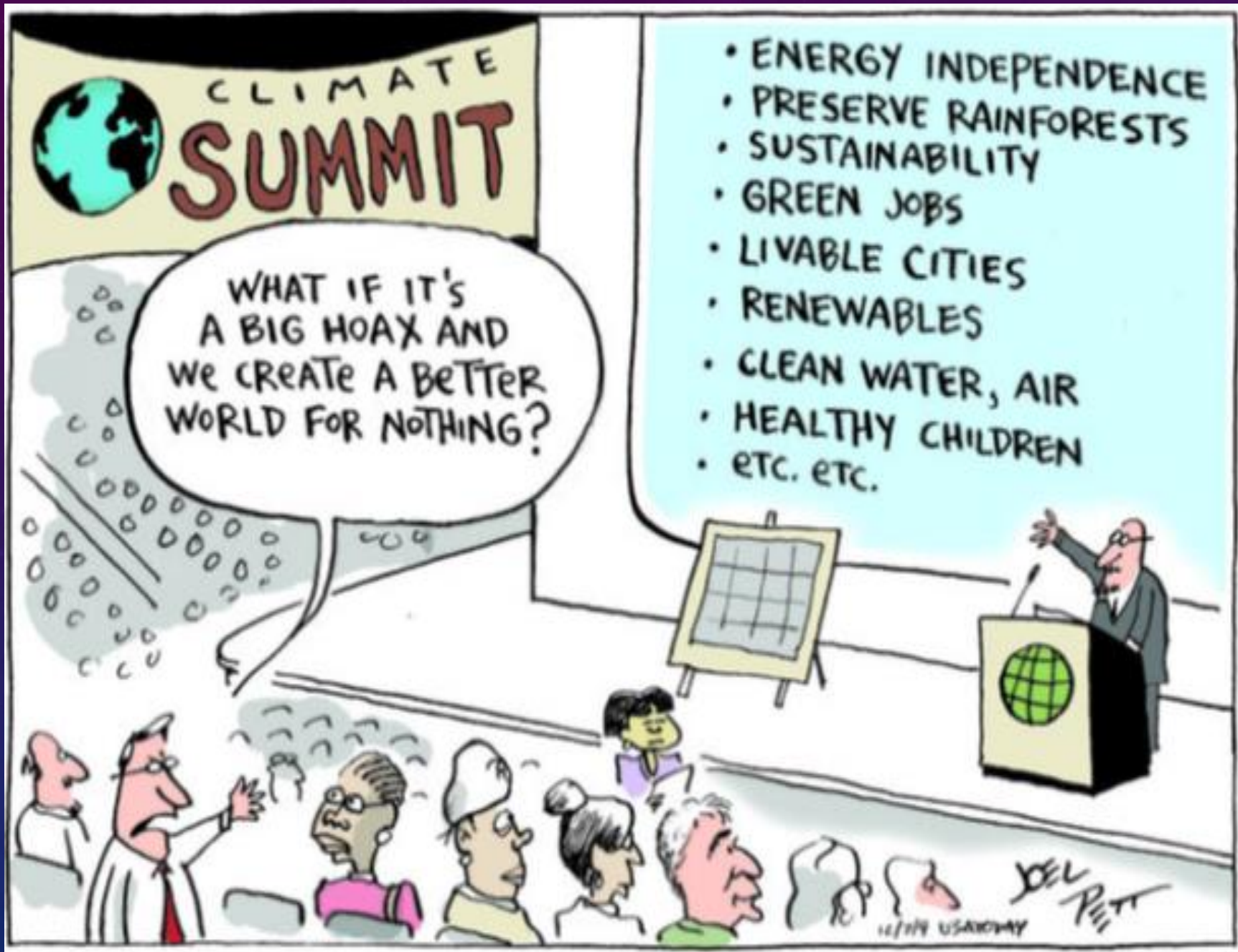
- So far in 2019:
 - Multi-\$B coal plants / mines blocked by courts :
 - Poland, Turkey, Kenya, Australia
 - German Higher Regional Court allowed Saul Lliuya to sue RWE AG for ice melt damage in Peru
 - Rhode Island allowed to sue Chevron, Shell, BP for climate damage
 - \$15 B Quebec damages award against big tobacco

HOW TO PROTECT YOURSELF?

Honest disclosure

Reduce carbon footprint

Get ready to adapt



THANK YOU

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