

Climate Emergency

Here Now, Now What?

Farm Challenges...?

Extreme Weather
Delayed Harvests
Flooding

Planning for...?

Hotter Summers
Colder Winters
More Pest

Langford Schoolhouse NFU Meeting, Mar 15

Co-sponsored by NFU O and Extinction Rebellion



**National Farmers Union –
Ontario
Climate Change Campaign**

Climate Emergency

Here Now.
Now What?



March 15, 2019

6:30PM- 9:00PM

The Langford Schoolhouse

1694 Colborne St E, Brantford, ON N3T 5M1

Do your farm challenges include extreme weather events? Flooding and delayed harvests?

Do your farm plans include hotter summers, colder winters, more pests?

We want to hear from you and help you get up to speed on climate action.



This event includes a **potluck at 6:30**, main dish provided.

NFU member **Ian Graham** on Climate Emergency science and grassroots action.

Arlic McBay on the Climate Change Action for Farmers.

Heading for Extinction & What To Do About It



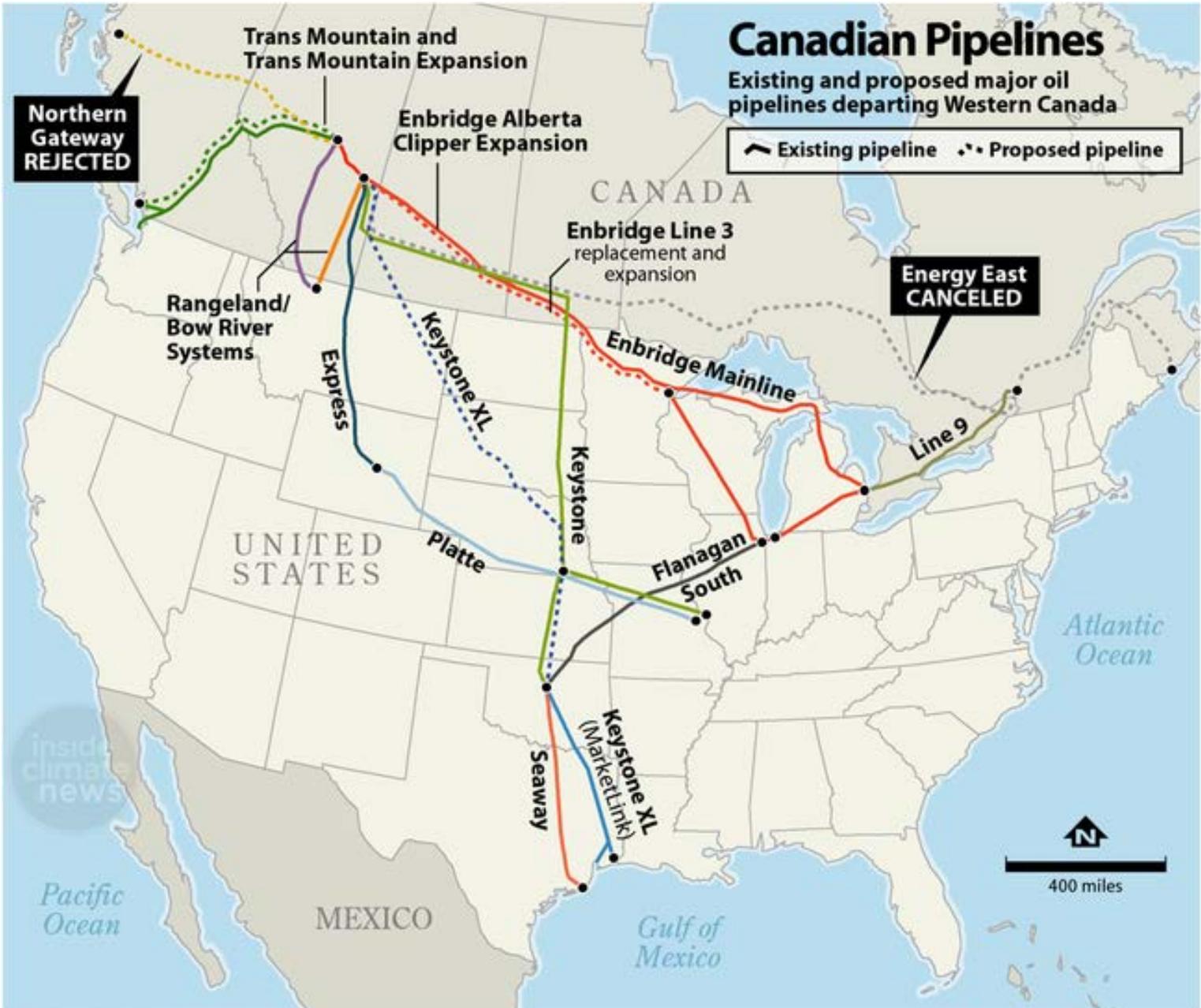
extinction
rebellion

Hamilton
350
Committee

The News tonite could be
Like this.

The image is a composite graphic. On the left, a portion of the Earth is shown, appearing to glow with intense orange and yellow light, suggesting a fiery or burning planet. On the right, a line graph plots data from 1950 to 2019. The graph shows a clear upward trend, with the data points becoming more volatile and reaching higher peaks towards the end of the period. A red target symbol with concentric circles is positioned above the graph, with a vertical line pointing to the data point for the year 2019. The text 'Climate Emergency Declaration' is overlaid in the center in a large, white, sans-serif font.

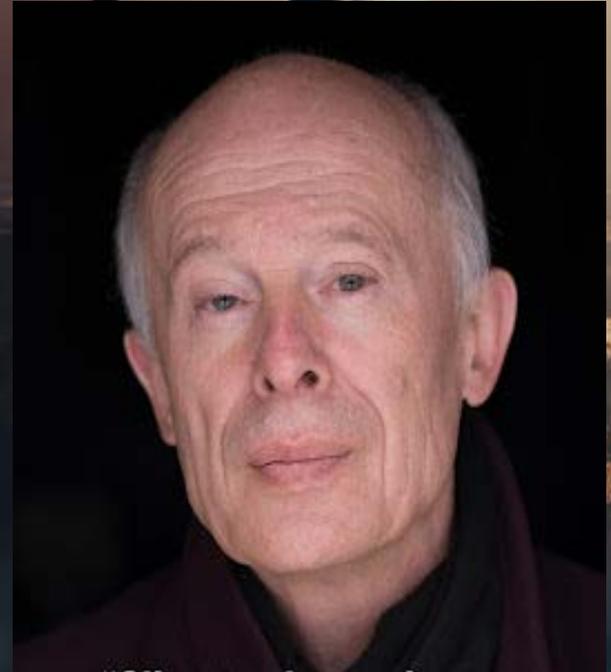
Climate Emergency Declaration



SOURCE: IHS Markit

“Climate change is now reaching the end game... the issue is the very survival of our civilisation.”

~ Prof. Hans Joachim Schellnhuber, for twenty years the Head of the Potsdam Institute for Climate Impact Research, senior advisor to Pope Francis, German Chancellor Angela Merkel and the European Union.



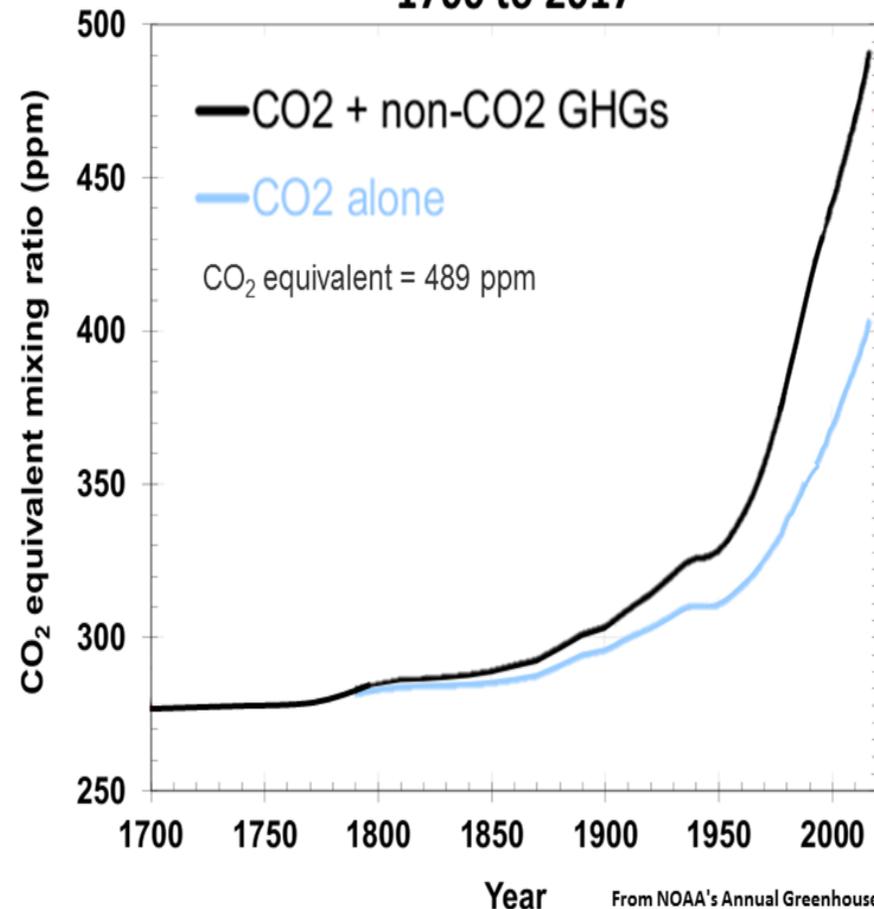
“There’s a time to sit down and work at your desk and there’s a time to get up and leave the area where you are comfortable. That time is now.”



What farmers need to know about climate change

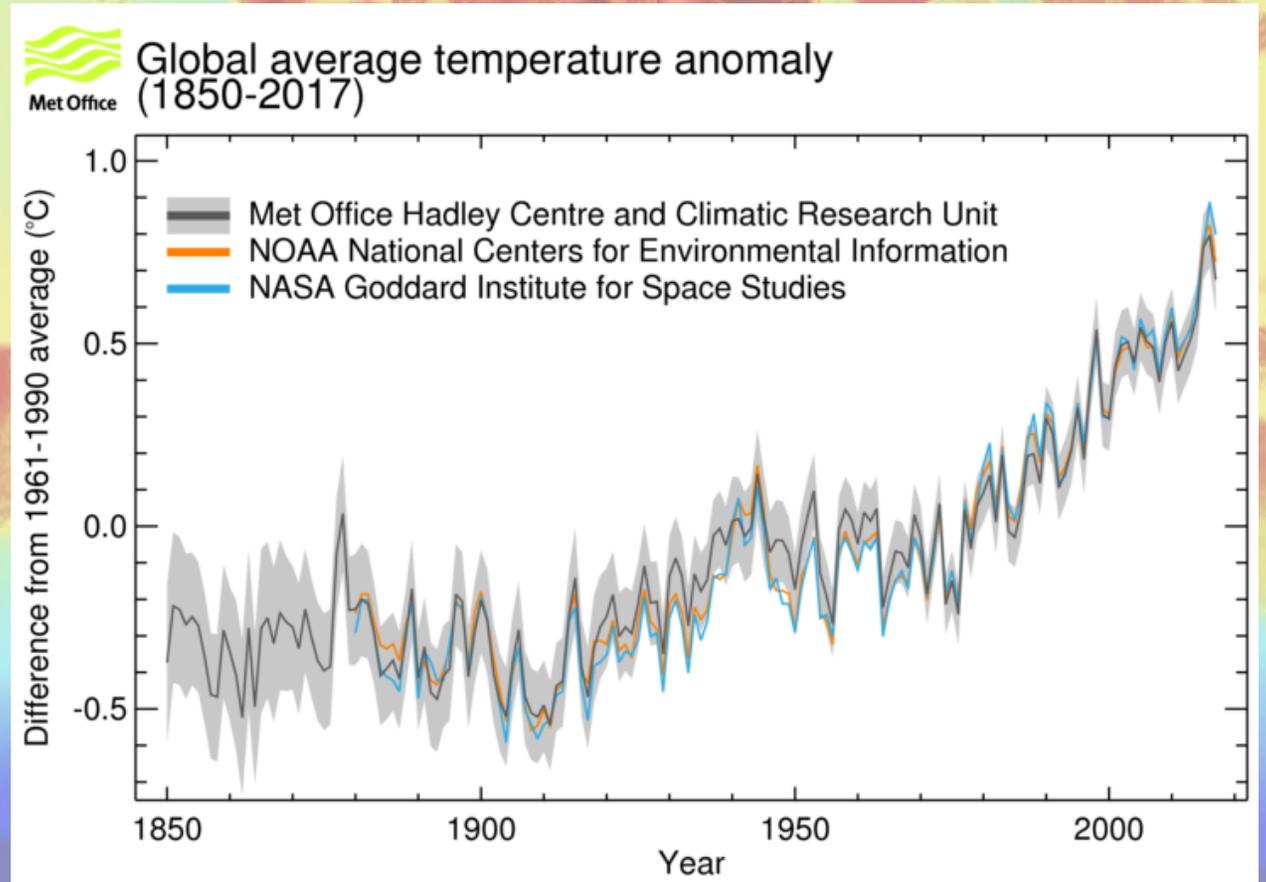
CO2 emissions continue to rise unchecked.

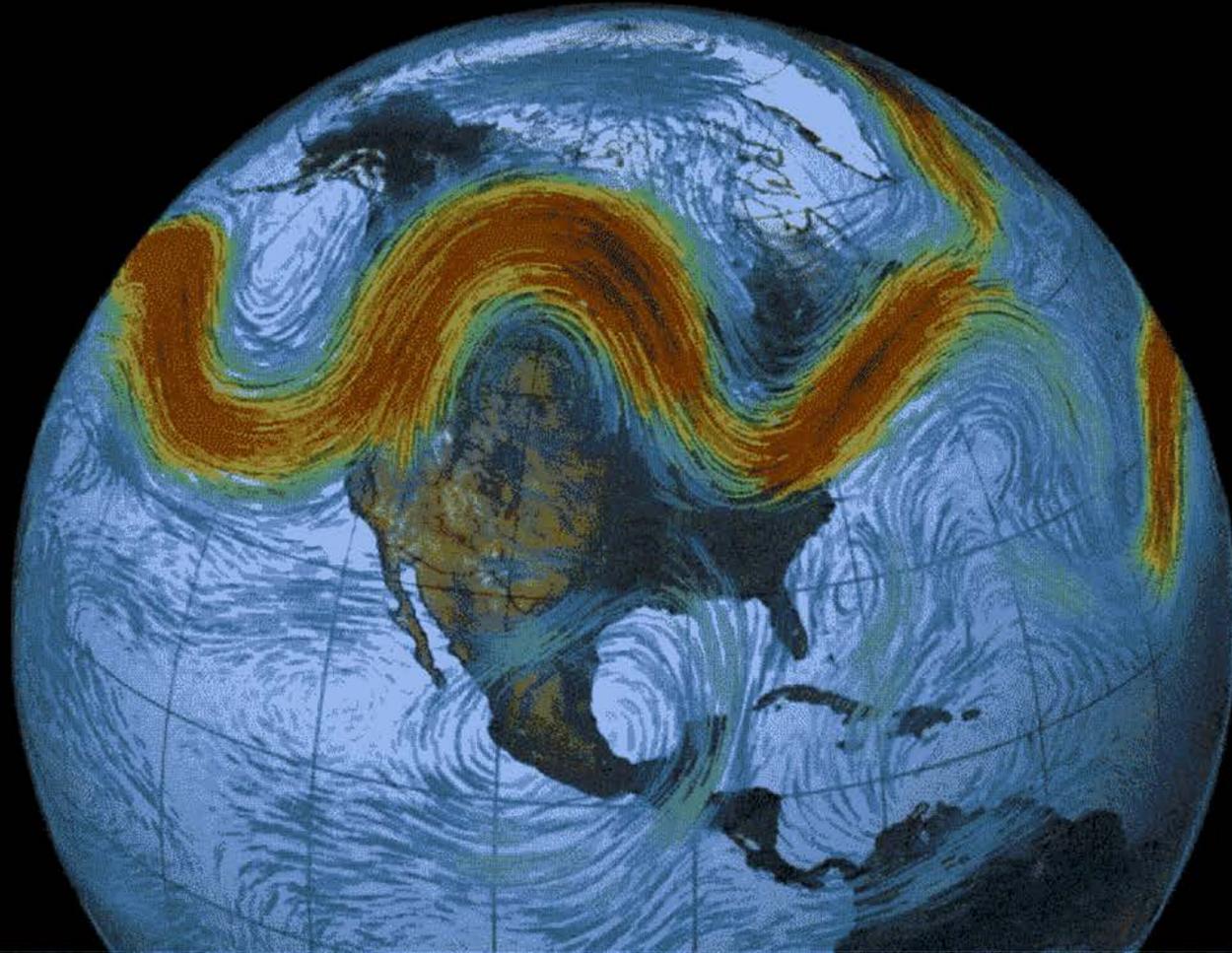
Atmospheric Concentrations of CO2 and CO2 Equivalent
1700 to 2017



From NOAA's Annual Greenhouse Gas Index Spring 2017

**Temperature is
rising relentlessly.**

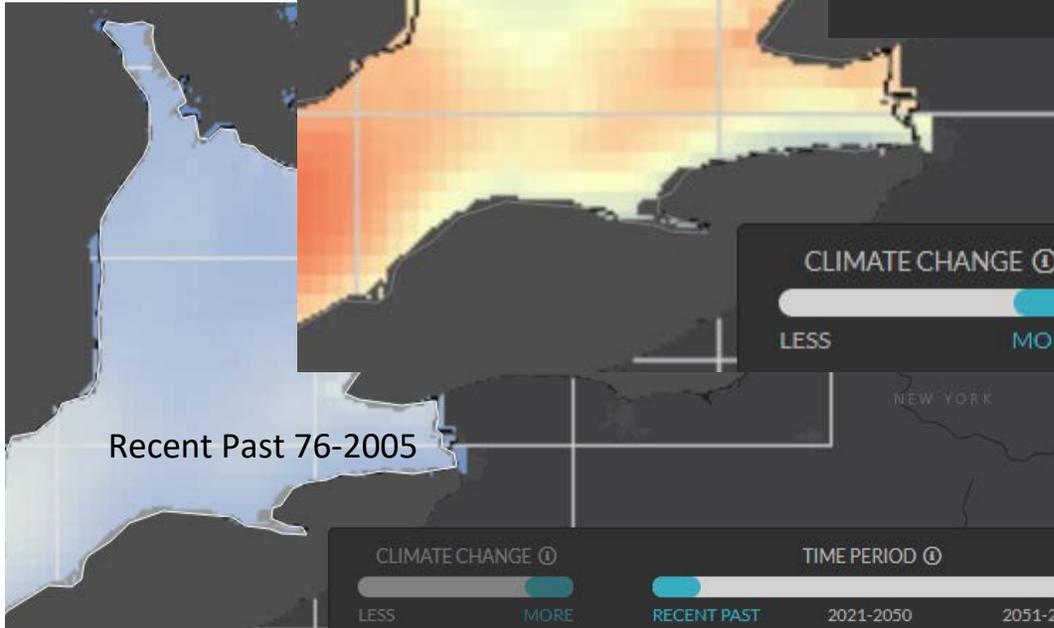
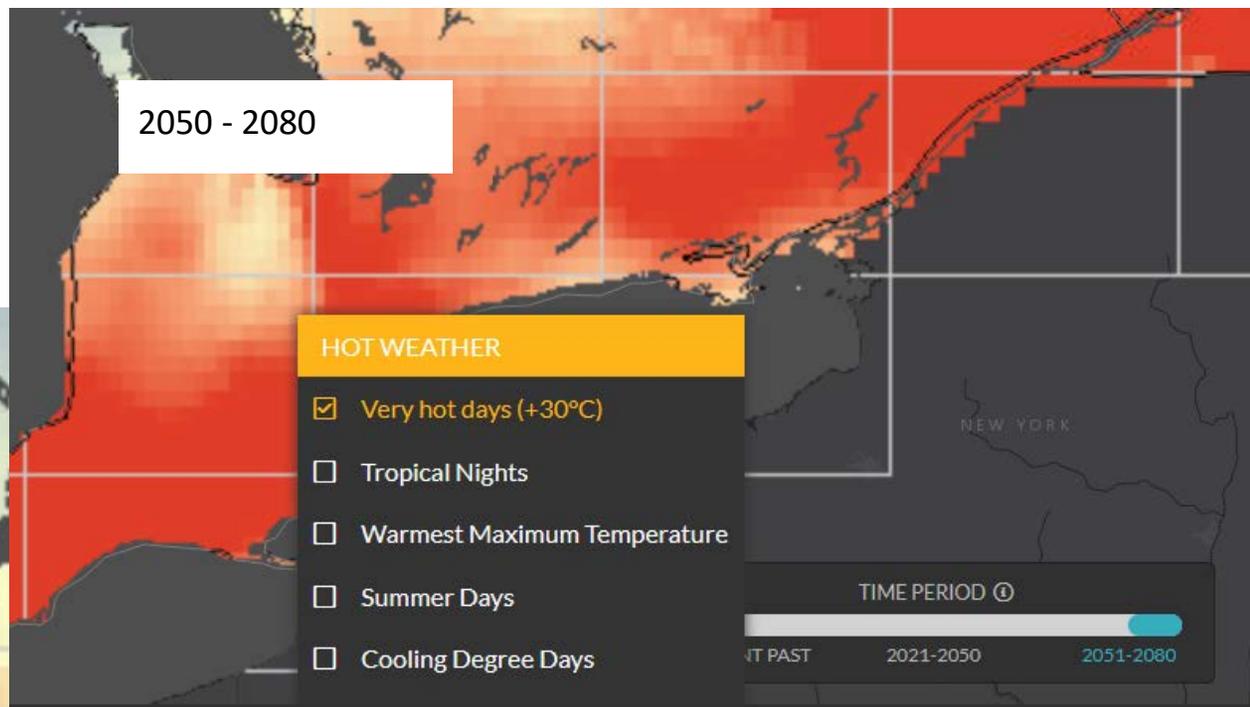
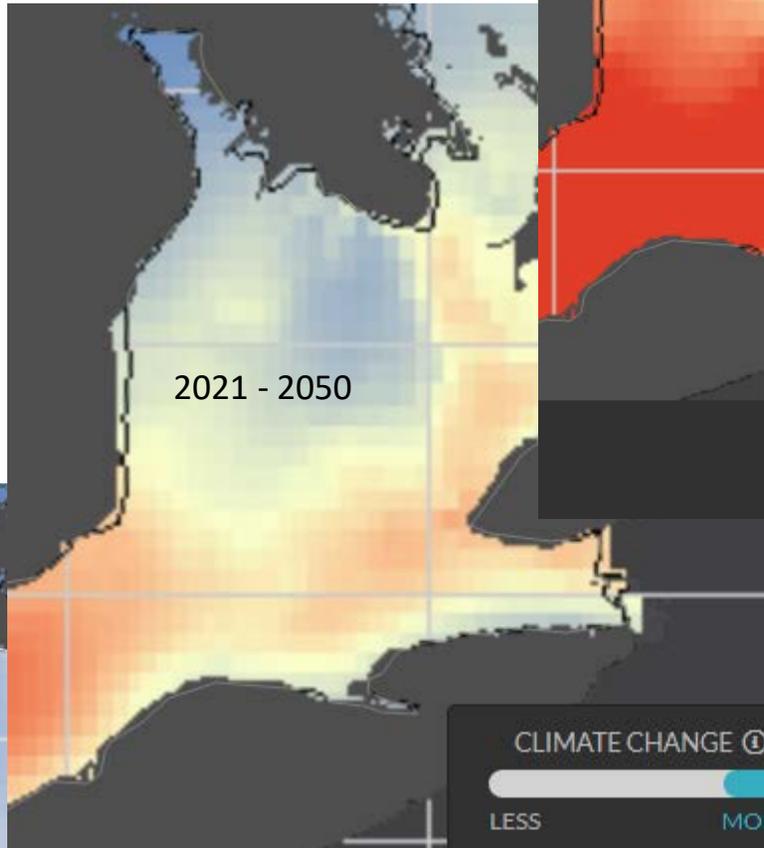




Jet Stream destabilizes when Arctic warms, ice melts

Great Lakes Stress Index

Very Hot Days, GTHA, climateatlas.ca



Region TORONTO

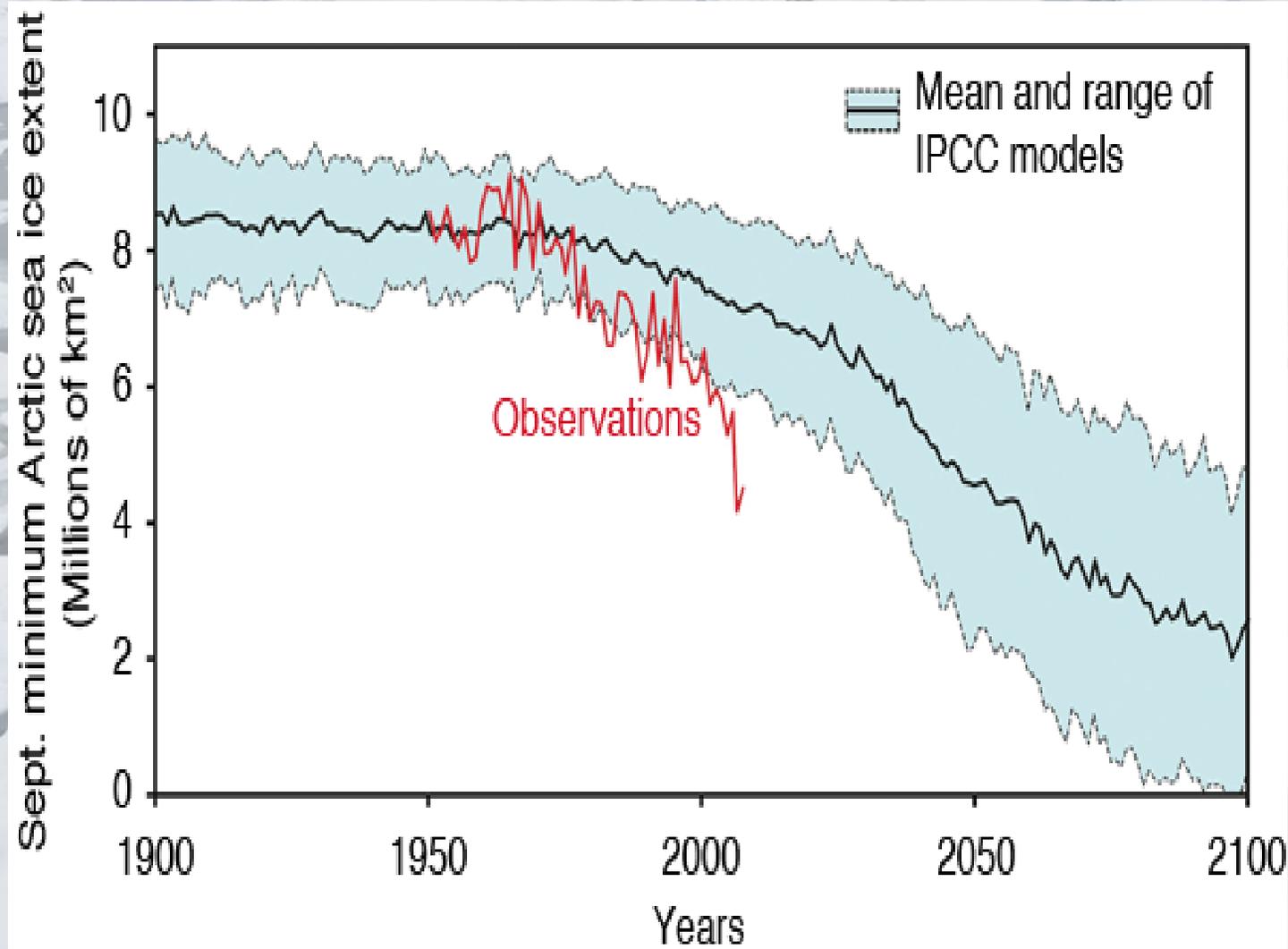
[Display on map](#) | [Download climate report](#)

Format: **Time series** > Variable: **Very hot days (+30°C)** Scenario: **RCP8.5**

Very hot days (+30°C) (RCP 8.5) Mean value

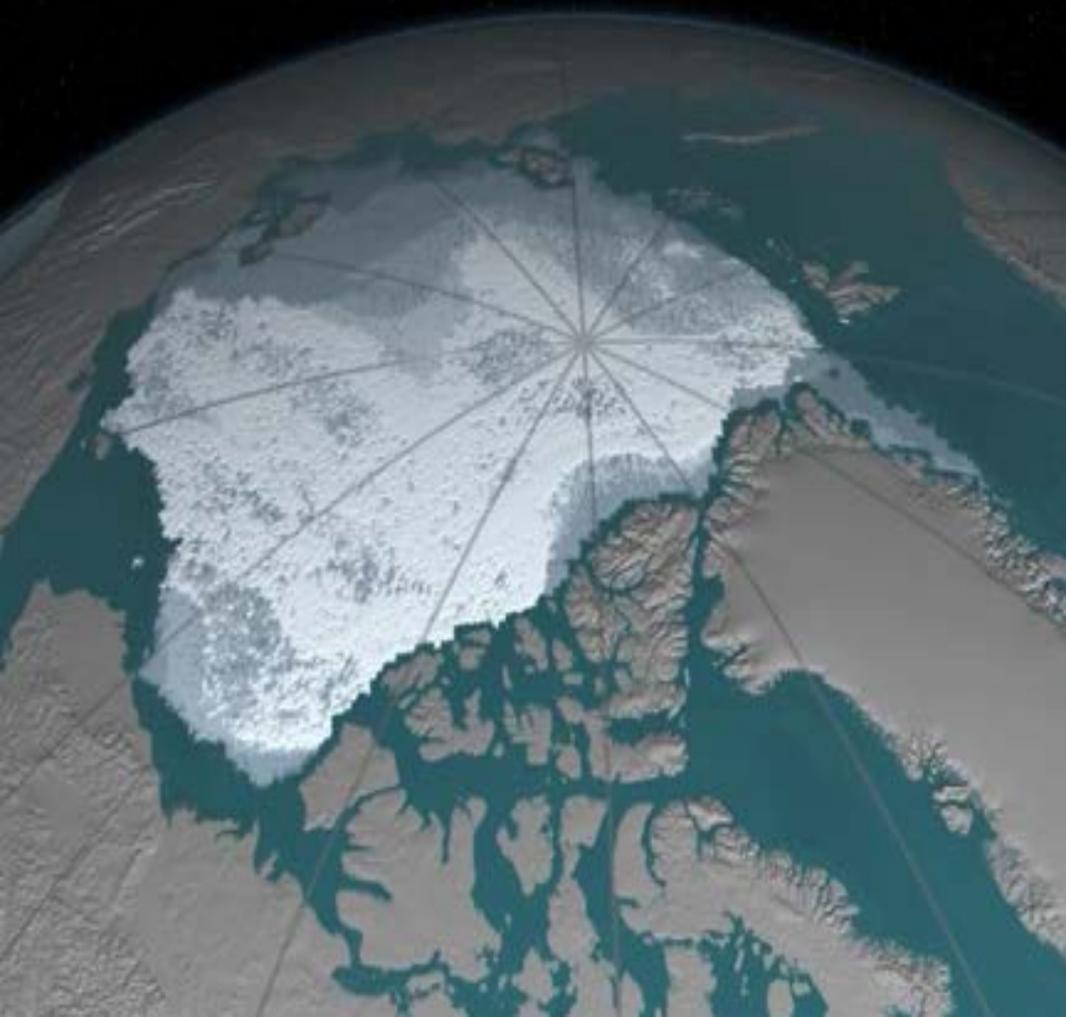


Sea ice now disappearing faster than expected.

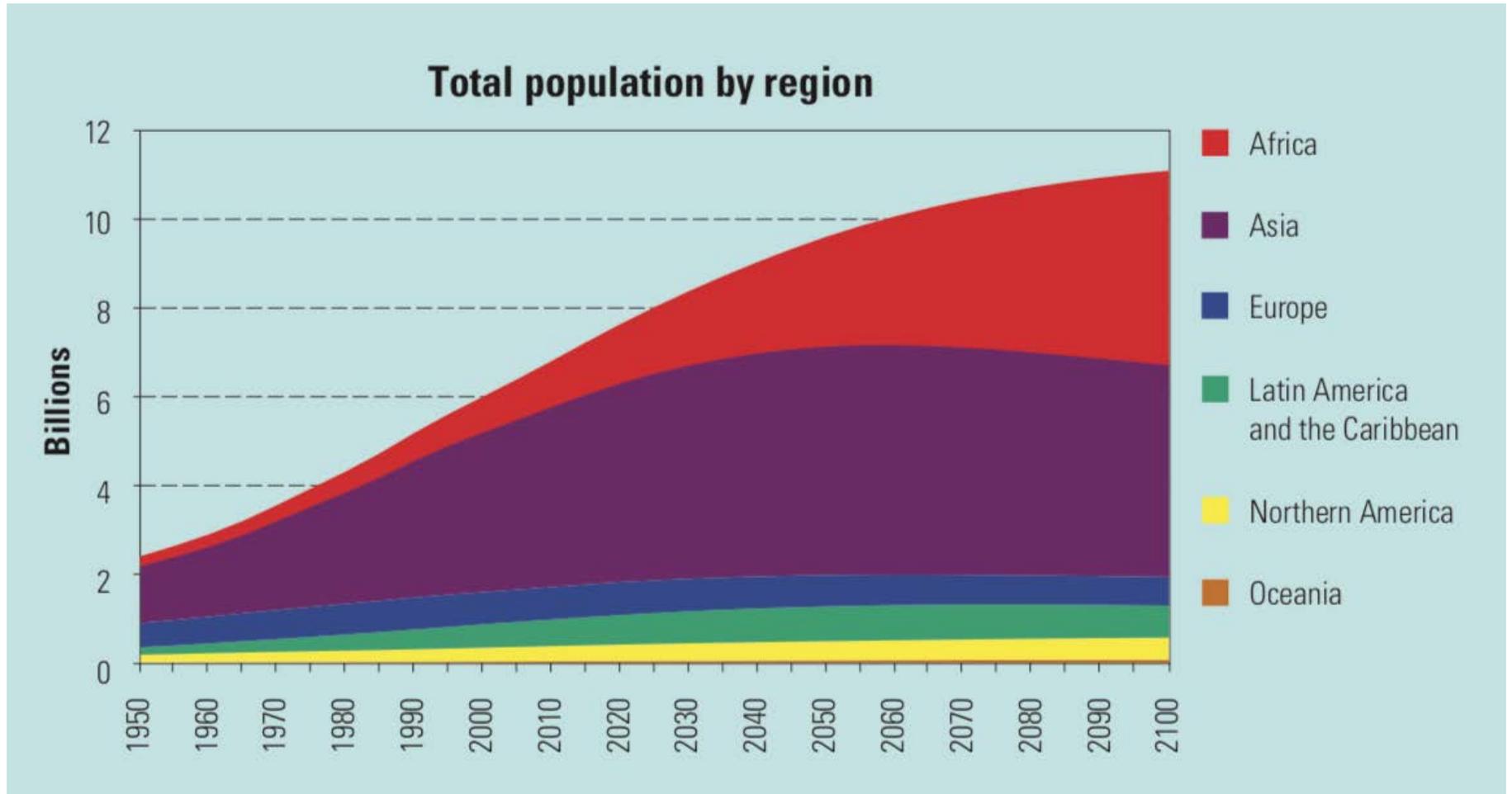


Sep 1984

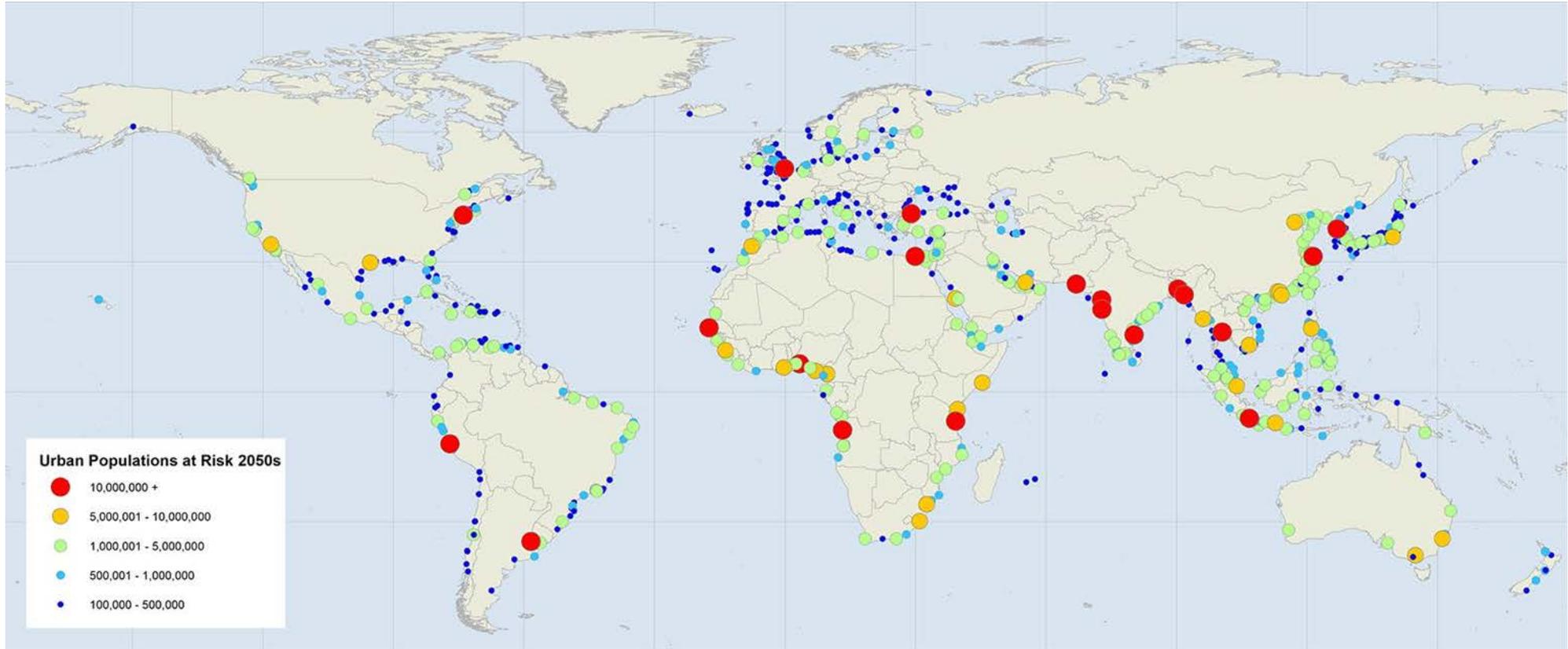
Sep 2016



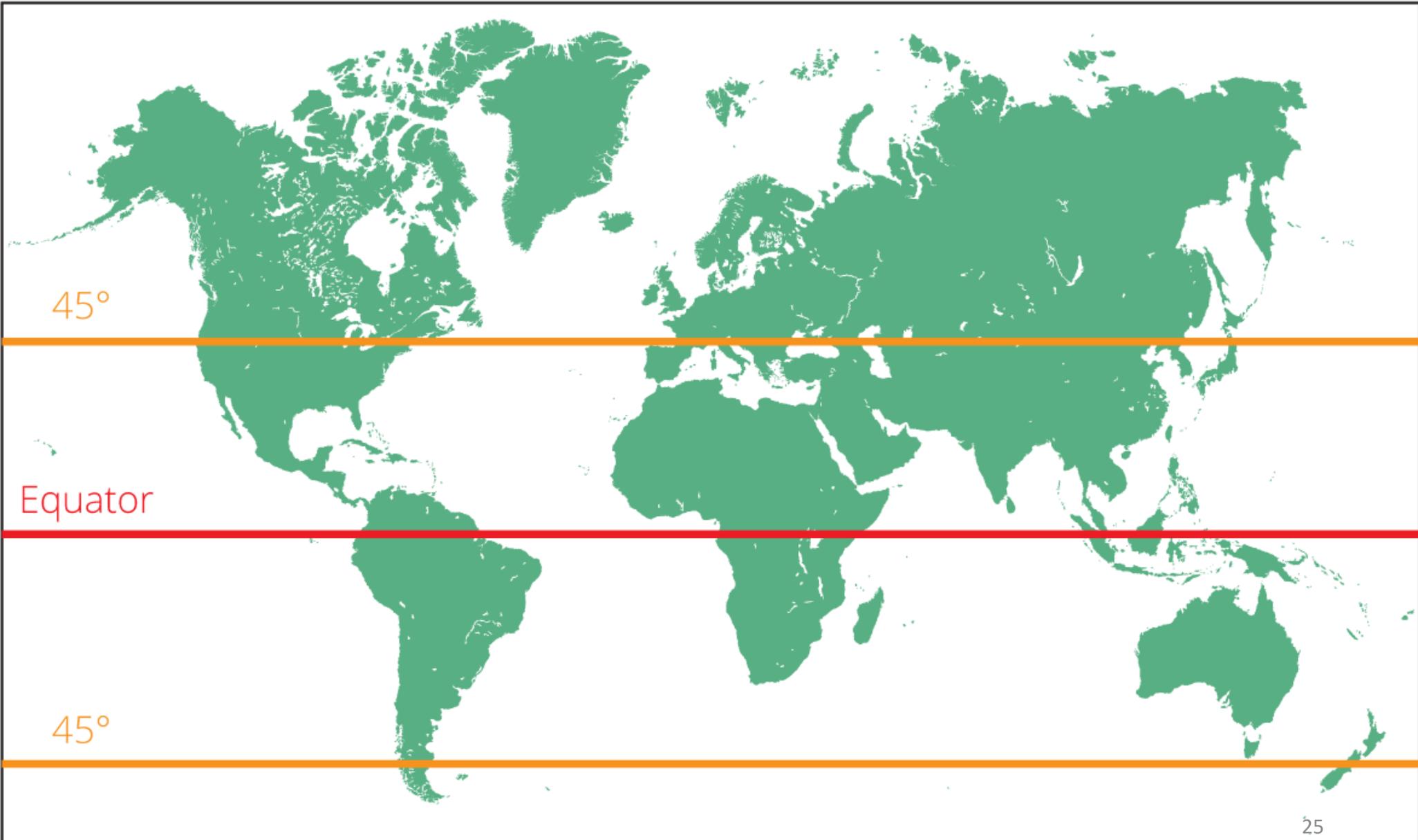
Click to [Watch global population grow](#)



0.6 -1.2 m sea level rise from melting ice in Greenland & Antarctica.

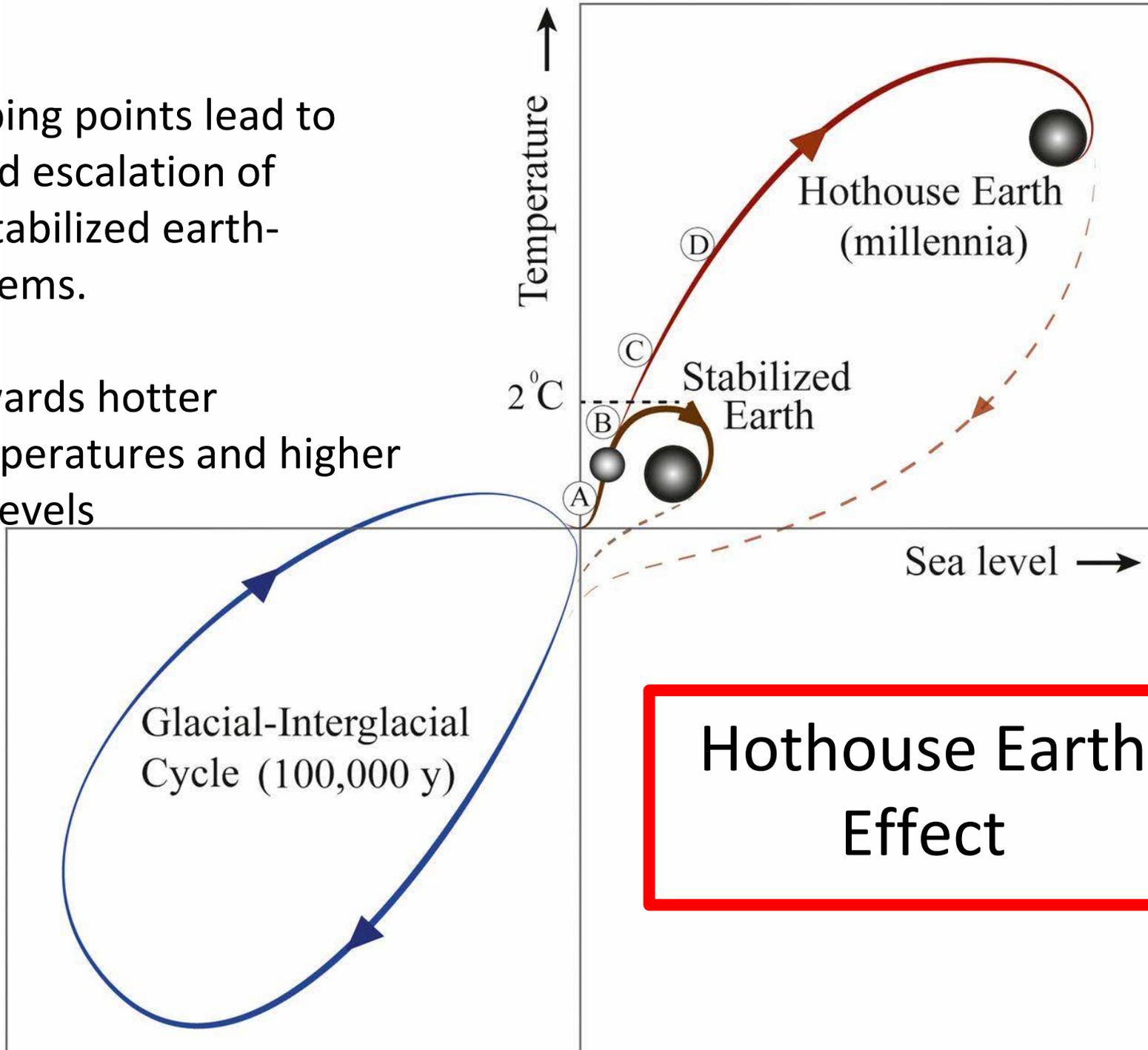


Migrating North or South of the 45th Parallel



Tipping points lead to rapid escalation of destabilized earth-systems.

Towards hotter temperatures and higher sealevels



Hothouse Earth Effect

Temperature projections.



Only 1% chance of hitting
Paris 1.5°C target

Only 5% chance it will
be less than 2°C

Likely range:
2°C - 4.9°C
(median 3.2°C)

University of Washington emissions modelling
and UN warming estimates.

Threat of human extinction.

“By and large the consensus is the same:

We are on track for four degrees of warming, more than twice as much as most scientists believe is possible to endure without inflicting climate suffering on hundreds of millions or threatening at least parts of “civilization.”

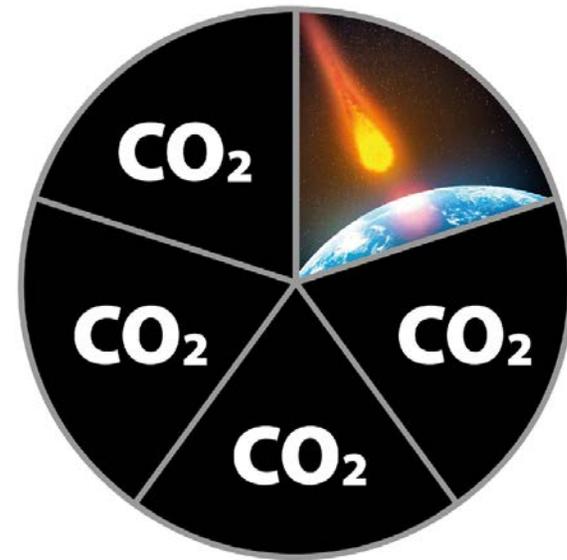
The only thing that changed, this week, is that the scientists, finally, have hit the panic button.”

(Wallace-Wells, NY Intelligencer Oct 2018)

Earth's previous mass extinctions.

Example: the runaway climate change of the Permian-Triassic extinction wiped out 97% of all marine species, and 70% of **terrestrial vertebrate** species.

5 major extinctions



Mass extinction has already begun.

“Between 1970 and 2014, Earth lost nearly 60% of its mammals, birds, fish, reptiles and amphibians, almost all of it due to human activity. The rate at which Earth is losing its biodiversity is comparable only to the mass extinctions... a stinging reminder of the declining health of the planet.”

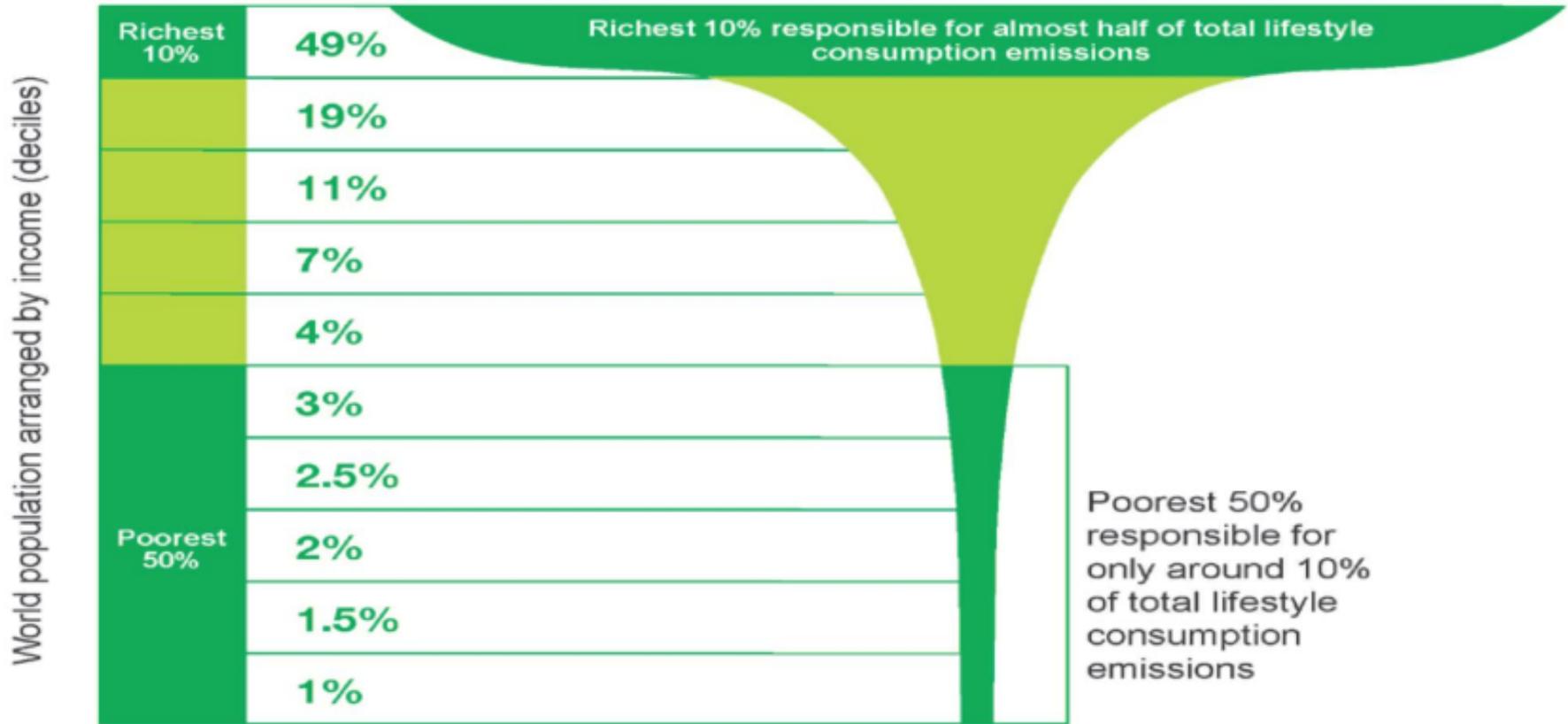
(WWF Living Planet Report 2018, & The CN Traveller)

Climate Justice, Climate Equity

“... we’re in a system that says that black and brown and poor people can be sacrificed for profit. Some people at the climate talks used to say to me ‘you’re too radical; we have to live within the system, we have to work within the system’ and I say to them that’s easy when you’re not dying from that system.” (Asad Rehman, ED of charity War On Want, The Ecologist, Dec 2018)

CO₂ is highly skewed towards the 'few'?

Percentage of CO₂ emissions by world population



Global income deciles & associated lifecycle consumption emissions

Top 10% income earners emit 49% of CO₂, bottom 50% emit only 10%.

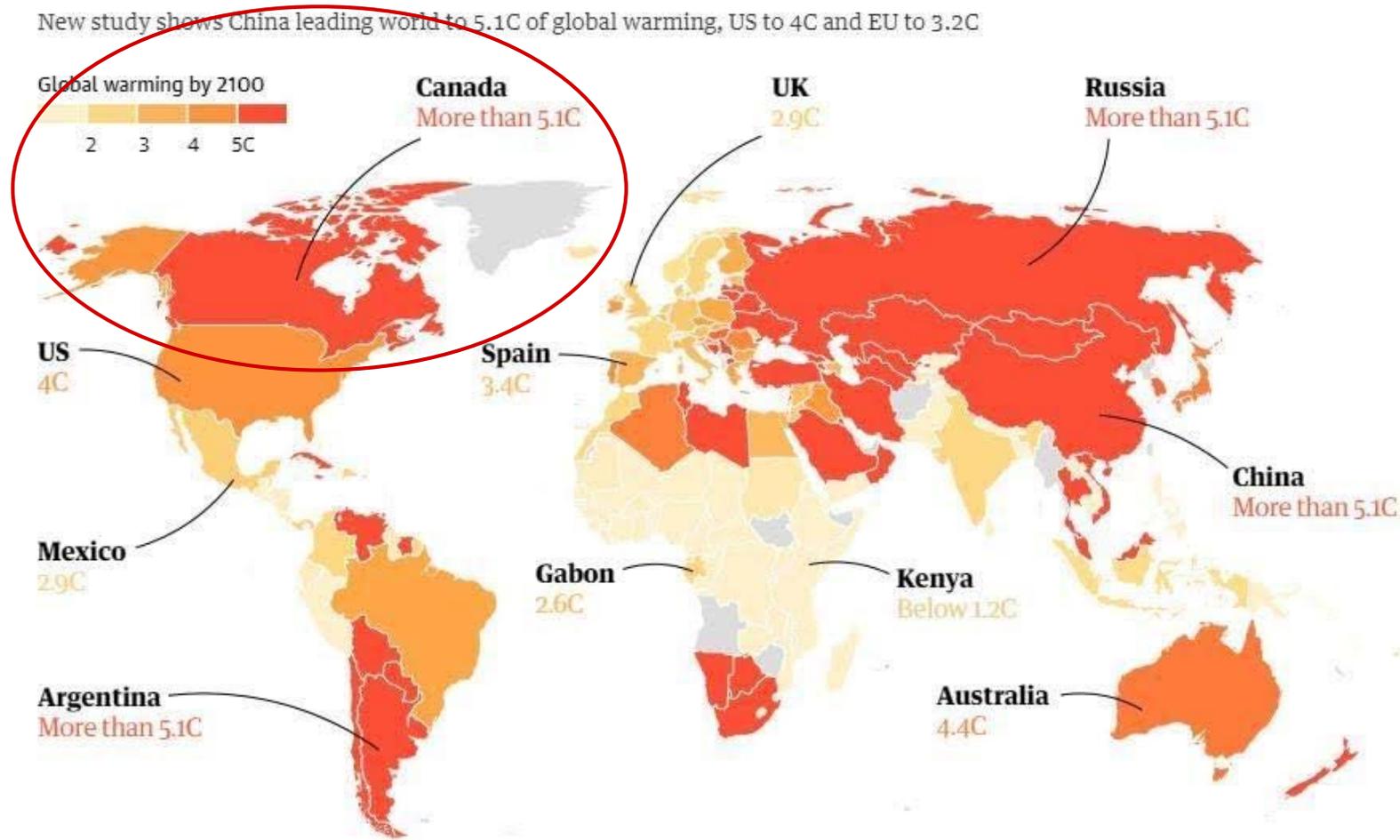


Act Two
Canada: On Thin
Ice

5.1 degrees of global warming? Blame Canada.

Climate goals are off course. Which countries are to blame?

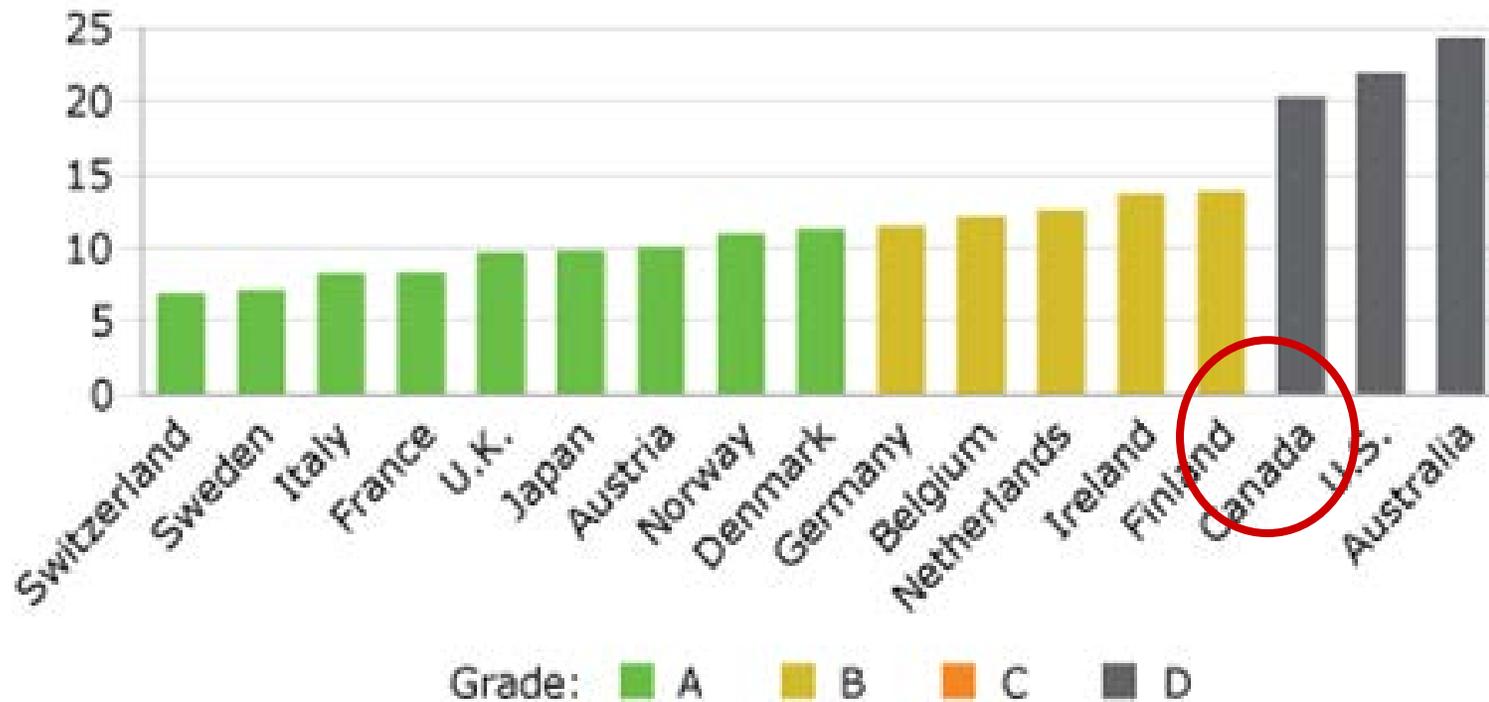
New study shows China leading world to 5.1C of global warming, US to 4C and EU to 3.2C



Guardian graphic | Source: Nature Communications

Third highest per capita emissions in the OECD.

GHG Emissions, 2010
(tonnes of CO2 equivalent per capita)





Subsidized by our tax dollars.

Canadian governments continue to pour billions of dollars into fossil fuel extraction, transport and processing including:

- **~\$15 billion to buy and expand the Trans Mountain pipeline**
- **Billions annually in exploration tax incentives**
- **\$6.6 billion in handouts for just one liquid natural gas facility in BC**



"Over the next twenty years, the industry is set to expand oil production by more in Canada than in any other country. If it continues on this course, Canada could ... drive the atmosphere over the edge.

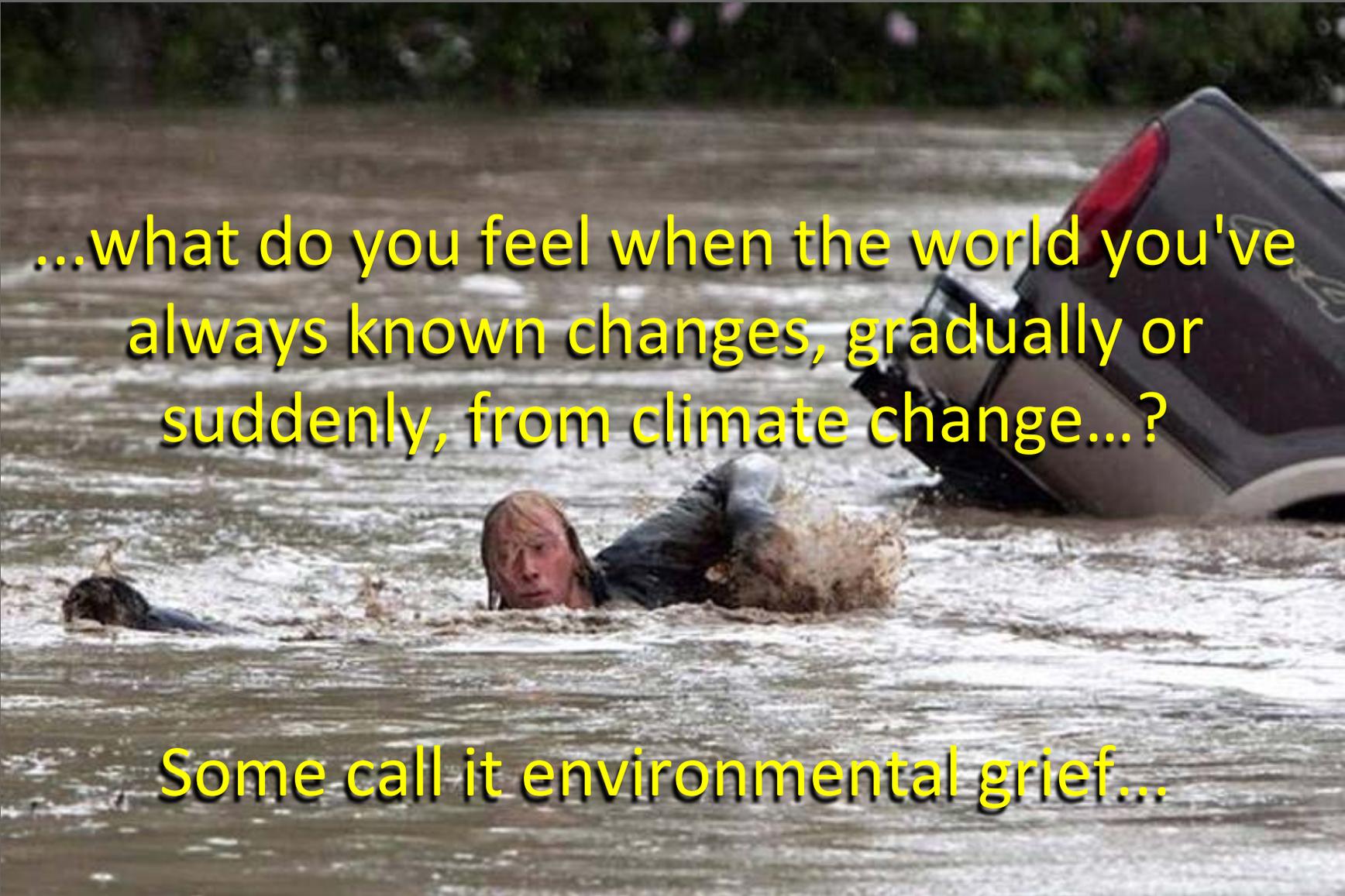
The Canadian government simply cannot have it both ways. There is no scenario in which tar sands production increases and the world achieves the Paris goals." Oil Change International (OCI), "Climate on the Line"

This is what extinction looks like...



This is what extinction rebellion sounds like...



A photograph showing a person struggling in turbulent, brown floodwaters. The person is partially submerged, with only their head and shoulders visible above the water. To the right, the rear of a boat is visible, partially submerged and tilted. The background is a blurred, dark green area, possibly trees or bushes. The overall scene conveys a sense of danger and environmental crisis.

...what do you feel when the world you've always known changes, gradually or suddenly, from climate change...?

Some call it environmental grief...



Question:

What do you do when your government is actively promoting the destruction of the very things vital for life - oxygen, soil and water ... driving extinction events with impunity?

You get into ACTION!

Act, to Reduce Personal Impact

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.



Low Impact

< 0.2 tCO₂e

Moderate Impact

0.8-0.2 tCO₂e

High Impact

> 0.8 tCO₂e

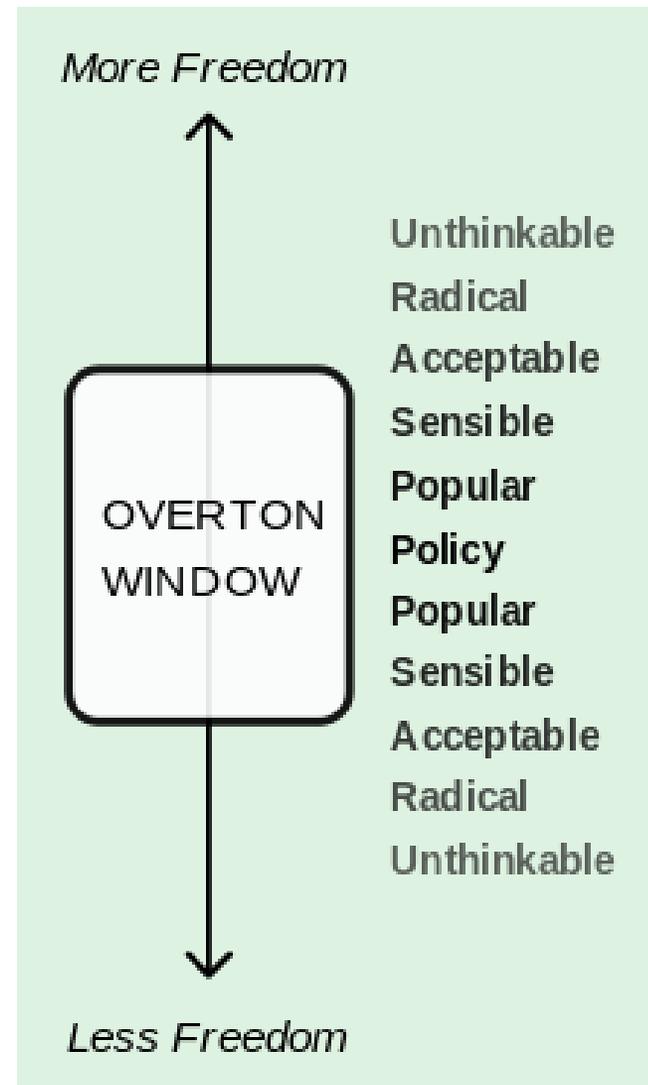
Act, in defence of life itself.

When a government refuses to protect its citizens from harm, it has failed in its most essential duty of stewardship.

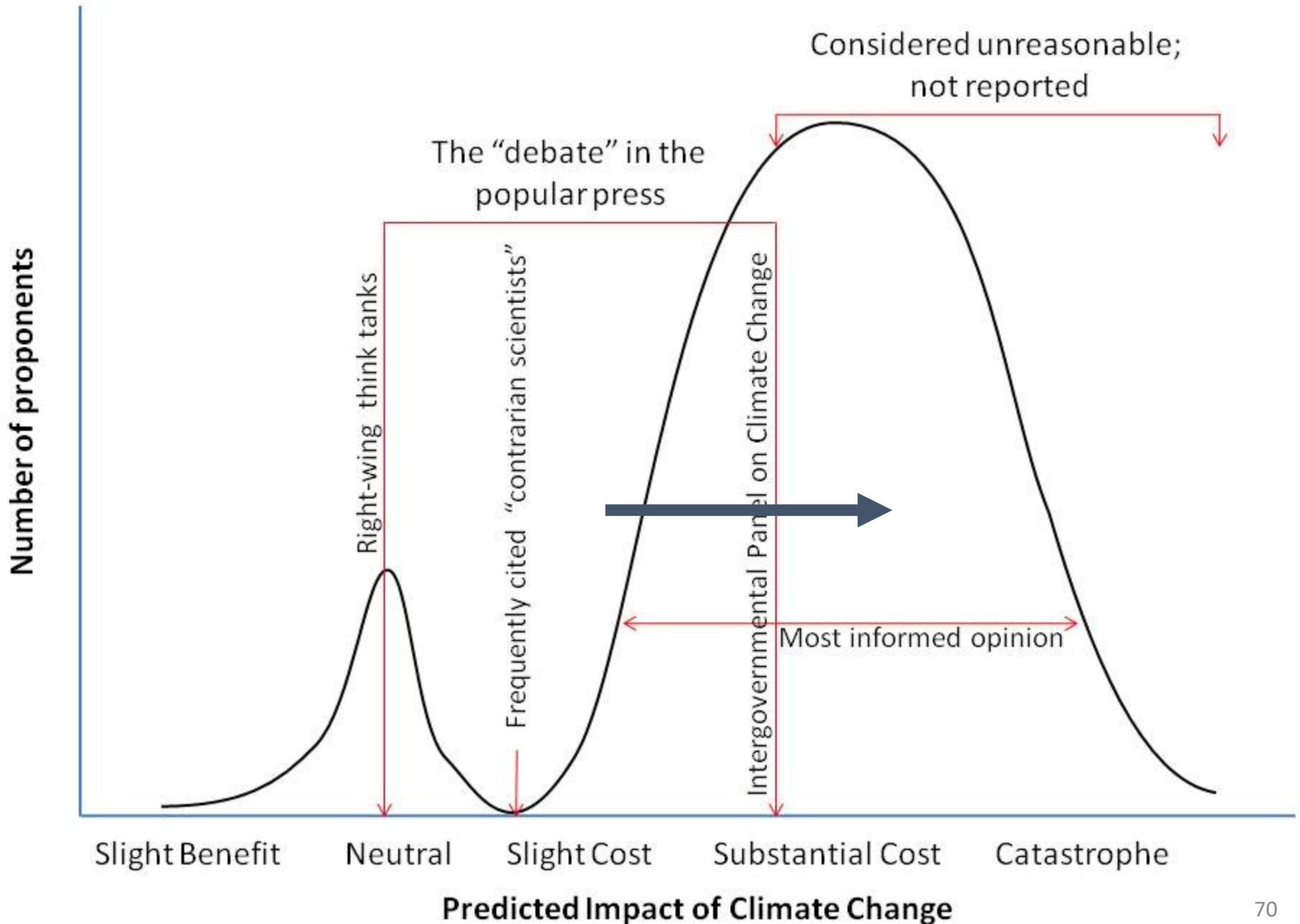
The 'social contract' has been broken and it is therefore not only our right but our moral duty to bypass the government's inaction and flagrant dereliction of duty, and to act in defence of life itself.

- Extinction Rebellion

Step 1: shift the public discussion towards what science is telling us.



Distribution of professional opinion on anthropogenic climate change



XR demands for city, provincial, federal governments

- 1) Declare a Climate Emergency! Tell the truth about the climate crisis, and the imminent risk to human civilization and then act accordingly.**
- 2) Immediately cut carbon emissions to net zero by 2025 by reversing destructive economic policies**
- 3) To form a national assembly of ordinary citizens to see that these demands are implemented by effective policy and action.**
- 4) Respect indigenous land rights and title including free, prior and informed consent according to the UN Declaration on the Rights of Indigenous Peoples**



WWII-level climate mobilization would involve

- **Reducing carbon emissions** to zero within the next decade
- **Reducing consumption** through a carbon rationing program
- **Rebuilding transport** with high speed electrified railroads, new public transit options, new forms of fuel replacement, and car-free cities
- **Transforming agriculture** by moving from industrial agriculture to localized, regenerative and resilient farming with limits on livestock production and a rapid phase-out of factory farming
- **Restoring ecosystems** with a conservation and ocean-protection program to halt the ongoing mass extinction of species and turn back to healthy ecosystems that can absorb carbon



**“WHATEVER IT
TAKES.”**



Grand Chief Stewart Phillip
*President of the Union
of B.C. Indian Chiefs*

WE DO NOT PLAN ON STOPPING.

**NO MONEY IN THE
WORLD IS WORTH
DESTROYING
OUR LAND AND
OUR WATER.**

- SHELLEY A. YOUNG

MIKMAQ



#NOPIPELINES #MIKMAQ

A top-down view of a lush garden bed filled with mature, curly-leafed kale plants. The leaves are a vibrant green with a distinct blue-green hue, showing their characteristic ruffled texture. The plants are densely packed, filling most of the frame. In the lower corners, patches of dark brown soil are visible, along with some smaller, less developed plants. The overall scene is a healthy, productive vegetable garden.

Tools for Action on the Farm