



10:30am – 12:00pm

Risk communication and engagement with the public in the nuclear, climate and artificial intelligence sectors

Panel Organizers: April Killikelly

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Patricia Larkin

Policy Analyst, Institute for Science, Society and Policy,

University of Ottawa

RISK COMMUNICATION AND ENGAGEMENT WITH THE PUBLIC ON NUCLEAR, CLIMATE AND ARTIFICIAL INTELLIGENCE ISSUES

Johnson Shoyama Graduate School of Public Policy
Centre for the Study of Science and Innovation Policy (CSIP)
School of Environment and Sustainability (SENS)
School of Public Health

November 2018

CLIMATE CHANGE AND RISK COMMUNICATION

This isn't what climate change looks like

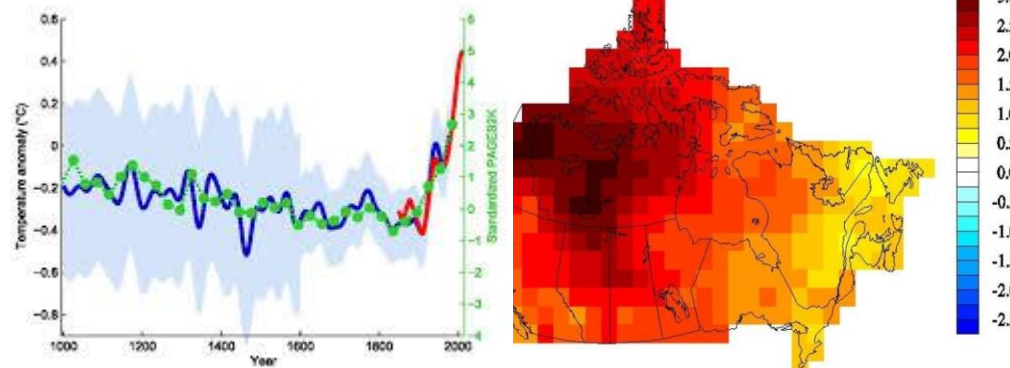
Joseph Brean , The Leader Post, NP2 October 10, 2018



This is what climate change looks like



to set up seven cooling centres during this summer's heat wave, including one at Metro Hall
Bruce Reeve/CBC) Mortillaro 2018 CBC

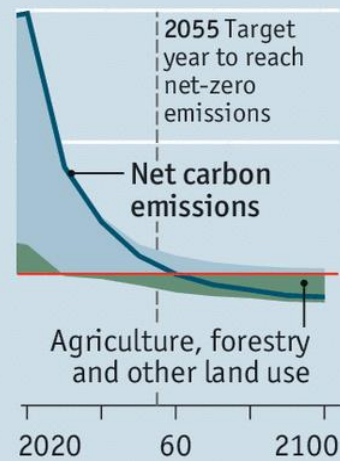


Aim lower

Pathways to limit global warming to 1.5°C

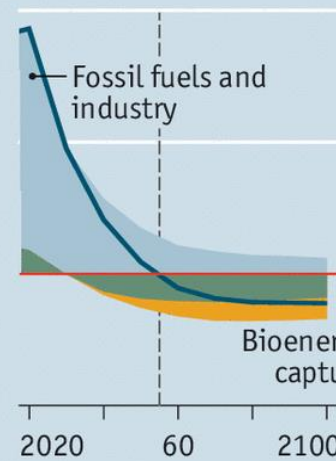
Worldwide carbon-dioxide emissions, gigatonnes per year

Radical change



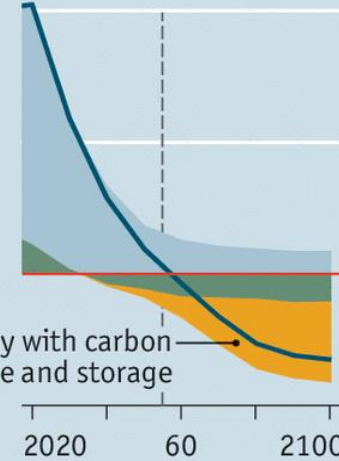
Business, technology and society as a whole change, dramatically reducing demand for energy. Apart from **changed land use and reforestation**, no carbon removal is needed

Improved sustainability



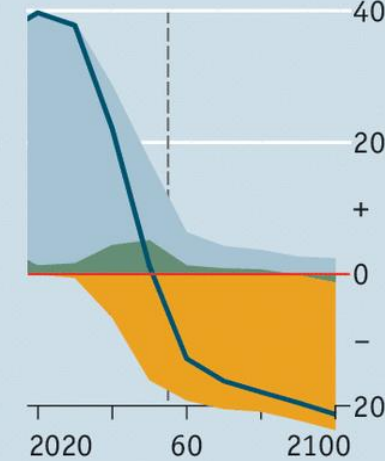
A worldwide focus on sustainability keeps energy demand stable. Renewable energy largely replaces fossil fuels. **Carbon capture** compensates for the remaining emissions

Managed transition



Energy demand rises at a moderate pace, in line with historical trends. More renewable-energy production and the intensive use of carbon capture keep emissions in check

High growth



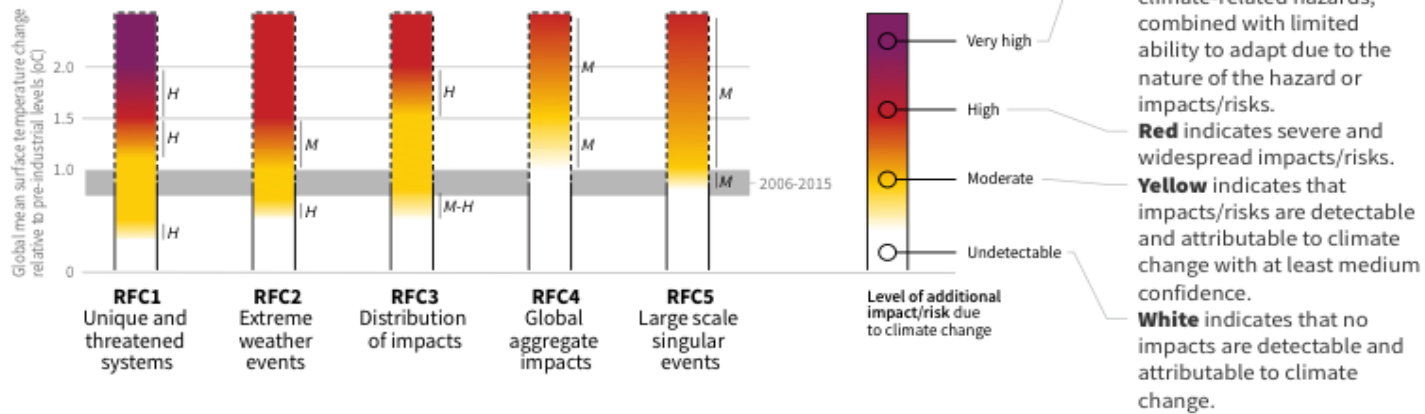
Rapid economic growth drives global energy demands ever higher, keeping emissions up. Technological fixes and zealous use of carbon capture ultimately claw back carbon emissions

Source: IPCC

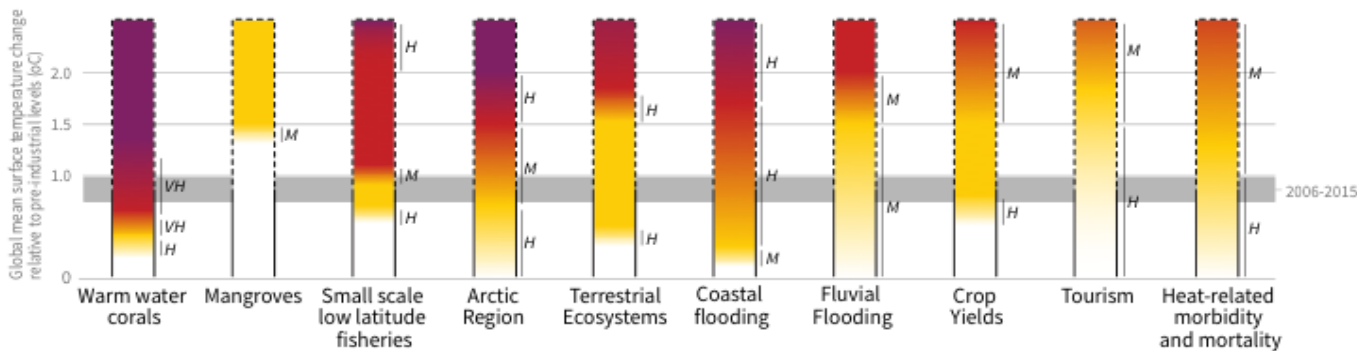
The Economist

Five Reasons For Concern (RFCs) illustrate the impacts and risks of different levels of global warming for people, economies and ecosystems across sectors and regions.

Impacts and risks associated with the Reasons for Concern (RFCs)



Impacts and risks for selected natural, managed and human systems



Confidence level for transition: L=Low, M=Medium, H=High and VH=Very high

IT IS ALMOST CERTAIN THAT A 2DEGREE TEMPERATURE INCREASE WOULD WIPE OUT MORE THAN 99% OF CORAL.

A rise of 1.5 would leave 10-30% of coral alive and with that, the hope of regeneration, if temperatures subsequently stabilize.



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CLIMATE RISK COMMUNICATION QUESTION:

The Intergovernmental Panel on Climate Change (IPCC)

- Underestimate
- Overestimate

threats from climate change

The IPCC has frequently underestimated threats from climate change exhibiting preferences for conservative estimate of climate change impacts and scholarly reticence.

Climate science has succumbed to the norm of most physical sciences to refrain from any speculation that cannot be grounded in empirically determined probability calculations.

Spratt, B., 2017. What Lies Beneath: On the Understatement of Climate Change Risks. National Centre for Climate Restoration. Melbourne, Australia.

Anthony, K.W. et al. 2018. 21st Century Modeled Permafrost Carbon Emissions Accelerated by Abrupt Thaw Beneath Lakes. Nature Communications. (9)3262..