



Climate Crisis is Here:

Why can't society deal with it?

How can we deal with it?



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Earth Science and Climate Change

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(Betts, 2021: Climate Change and Society

AIMS Geosciences, 7(2): 194–218. DOI: 10.3934/geosci.2021012)

Betts (2022): "The Earth's View of Climate Change"

AIMS Geosciences, 8(2): 224–232. DOI: 10.3934/geosci.2022013)

Earth's climate sustains life

- Greenhouse gases keep Earth warm
 - Increase of CO₂ warms oceans
 - Evaporation of more water vapor triples warming
- Ice & snow melt; less reflection of sun
 - Poles warm faster
 - Winters warm
- Oceans store heat & get warmer
- *Extreme weather is increasing as Arctic warms; westerlies slow down*

January 4, 2012: NASA



My Wake-up Call: Gardening in January, Pittsford, VT



January 7, 2007

December 2006:

- Warmest on record
- (Gardening since 1977)



January 10, 2008

Warm Fall:

- Record Arctic sea-ice melt
- Snow cover in December,
ground unfrozen



January 2, 2012



March 11, 2012



October 2011– March 2012

- **Warmest 6 months on record**
- **My garden frozen only 67 days**
- **January 15, 2013** →



February 5, 2016

(Digging in Feb. first time ever)



January 3 and Feb 5, 2020



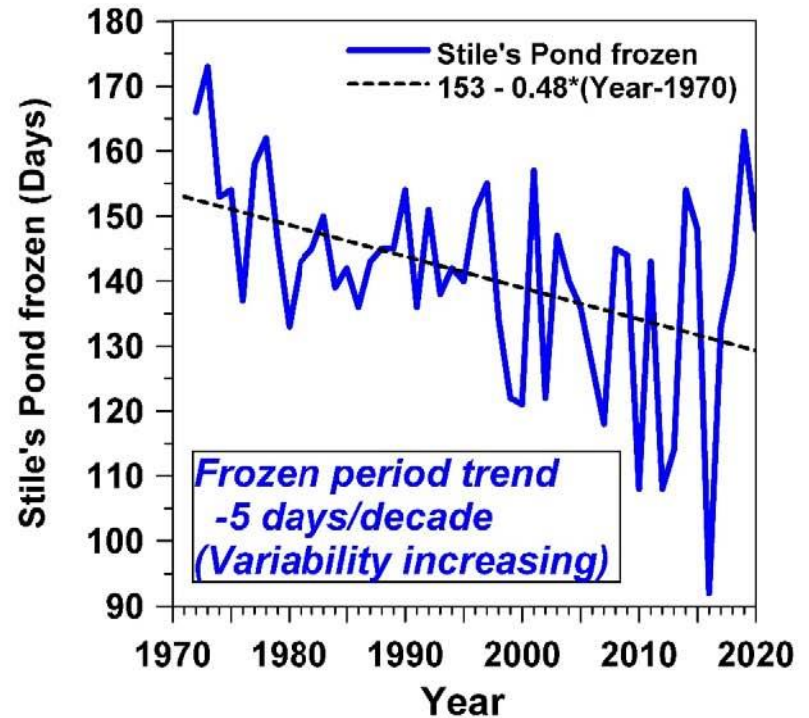
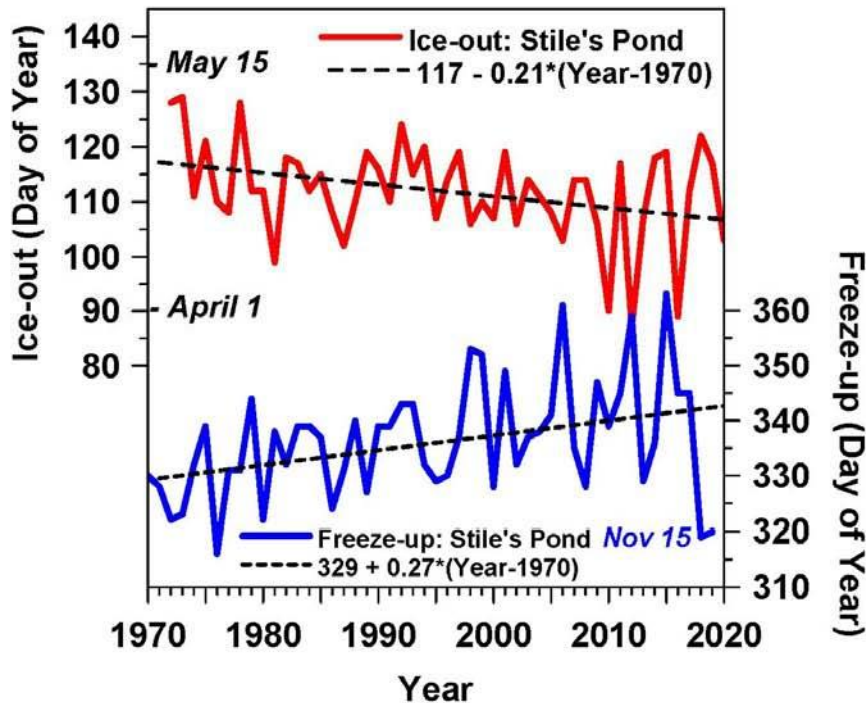
January 3, 2020
Digging cover crop
(smart resilience)



February 5, 2020
Soil still unfrozen
(despite T_{\min} to -5F)

Marker: Lake Freeze-up & Ice-out

Frozen Period Shrinking: variability huge



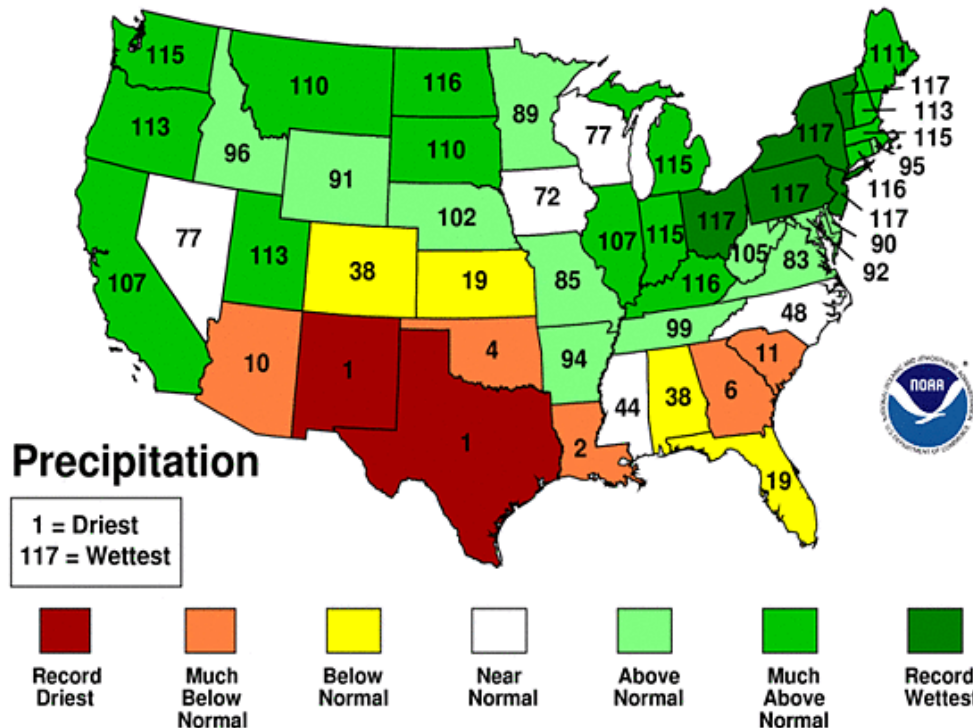
- Freeze-up later by **+3 days / decade**
 - Ice-out earlier by **-2 days / decade**
 - Lake frozen period trend **- 5 days/decade**
 - Interannual variability now huge \approx 40 year trend
- Stiles Pond**

2011 Floods: VT and NY

- Record spring flood: Lake Champlain
- Record flood with Tropical Storm Irene

March-August 2011 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



March-August, 2011

- Record wet : OH to VT
- Record drought: TX & NM
- Pattern nearly stationary

Outline-1

- **Climate Science “policy”**
 - Policy dictated by “rich and powerful”
 - Global Climate Crisis has arrived
 - Indigenous* world-view needed - but ignored
- **The Fossil Empire dictates policy**
 - “Corporations with fossil fuel interests”
 - Webs of lies confuse public, and bribed politicians; lied about climate change: for 40yrs
- **Misuse of human power is historic**
 - *Goes back to the Council of Nicea in 325 AD*
 - *And the destruction of indigenous* world-view*
 - *Through the rise of ‘western’ science*

Are Science & Policy ‘separate’?

- *Separation was the traditional frame*
 - How scientists are trained
 - It helps protect the integrity of science
 - Invaluable for global cooperation
- *We cannot solve global challenges with this dualist mindset* Betts, 1976, BAMS- alanbetts.com
 - *Dates back to Greek and Roman period*
 - *Drove the rise of science, but also driving destruction of the Earth*
- *Fifty years ago, I realized “science” was not enough: needs wisdom – direct insight*
 - *I went searching (see later)*

2011 Blue River Declaration

Oregon's Blue River

- *“A truly adaptive civilization will align its ethics with the ways of the Earth. A civilization that ignores the deep constraints of its world will find itself in exactly the situation we face now, on the threshold of making the planet inhospitable to humankind and other species”* - *Indigenous world-view*
 - *Not our ‘We are in charge – we can exploit the earth and the people for profit’*
 - Reality: Earth is far more powerful

Indigenous Mindset - 2

- *Holistic teachings of the indigenous Aramaic prophet Yeshua (whom we know as Jesus)* [The Hidden Gospel: Douglas-Klotz]
 - *Indigenous teachings framed not in terms of human power: the Creator is within all Creation*
 - *Join the Creation to see the Truth of the web of life and be set Free to act on behalf of the Creation—not human self-interest*
- *Absolutely true, but heresy to power*
 - *Critical to survival of Earth now*
 - *The “Truth that sets you Free”*
 - *True at all levels – Earth is watching!*

Christianity lost this heresy

- Jesus executed as Truth is heresy to power
 - Christianity survived, persecuted, till 325 AD
- Council of Nicea: Emperor Constantine dictated
 - Persecution will end if
 - *Destroy the Aramaic gospels; keep the Greek*
 - *Greeks understood Imperial power*
 - *Established “human power over nature” till now*
- Aramaic Christians (Jewish, Assyrian) became the heretics. In 2 centuries a million (?) killed
 - **Persecution of Jewish Christians - in time became the persecution of the Jews**
- The Roman church carried “Human power over nature” through Middle Ages (Priests over people)

Science adopted Frame

- Science rose with great success within the “Power over Nature” frame
 - *Without moral standards and wisdom*
- Europeans travelled with world, exploiting and killing indigenous people (eg for gold, land) with church support; & enslaving people
- *European societies controlled by rich & powerful*
 - Capitalism arose within frame (no moral standards)
- *US controlled global oil supply/price for 70yrs*
 - *Fueled ‘fossil’ capitalism and exploitation of the Earth and the poor*

Oil, Power and War: Matthieu Auzanneau
The New Climate War: Michael Mann

Deceit by Exxon-Mobil

- Impact of burning fossil fuels known 40 years
- 1978: Exxon senior scientist James Black modeled impact of doubling CO₂ on climate
 - Told management that man has a time window of five to 10 years before hard decisions on energy strategies become critical
 - Exxon silenced him and started a web of lies: first denial, later to shift responsibility to individuals
- **Bribed US politicians to deflect legislation**
 - 139 Republican deniers cost a mere \$61 million
 - Still claiming govt. not oil companies responsible (!)
- Global ecocide by Fossil Empire to keep profits flowing, with political help & large subsidies (US)

Review-1

- ***Burning fossil fuels: transforming climate***
 - *Many water cycle amplifying feedbacks*
 - *Climate extremes increasing; stationary patterns*
 - *Floods and drought, heatwaves and fires*
- **Avoidance of responsibility for decades**
 - Stable Climate is incompatible with business-as-usual
 - Fossil Empire dictates rules, bribes US politicians
- **Technology/economics: *misuse of human power***
 - Soluble by changing system guidelines (*moral choice*)
 - Create efficient society, based on renewable energy
- **Choices are value based: moral issue**
 - Needs shift to indigenous world-view [*Betts, Planet: 1/18/2020*]
 - Must value the future of life on Earth
above global ecocide for current profit

Alan Betts (BAMS 1976)

- **“Scientists should do what society says”**
- Consider this hierarchy of allegiances of a researcher
 - 1) to the planet Earth
 - 2) to mankind
 - 3) to science
 - 4) to the United States
 - 5) to one's own science (e.g., atmospheric science)
 - 6) to one's own specialization
 - 7) to a specific research contract
 - Most research appears to owe allegiance to the lowest level
 - *The mess that our technological society is in is clear evidence that its assumptions are unsound*
 - *alanbetts.com for discussion with Dave Atlas*
- I was unsatisfied, so I set out searching

Glimpses of the Journey

- In 1980 when I asked: “How can science be merged with wisdom” I was told “*Ask Yogi Ramsuratkumar in Tiruvannamalai – he would know*”
- Before I saw him I sat in the meditation room of another saint *Ramana Maharshi* and slipped into meditation – it was 30 years after his passing
 - I was picked up within minutes and connected with all that is – the Earth and the Creation, and taken through my life for an hour; and emerged ecstatic and joyful for days
 - As a scientist I had no concept that a place could be so sacred that all I had to do was surrender (*‘Silence is Truth’*)
 - I then sat with a living saint *Satya Sai Baba* for weeks - and I was on my way
 - I learnt the indigenous mindset from *Ven. Dhyani Ywahoo*
 - Later I learnt about the indigenous *Aramaic teacher Jesus*
 - *Join the Creation: see the “Truth that will set you Free”*
 - *Betts (2022): “The Earth’s View of Climate Change”*

Shift to Earth-system Frame

- Earth-system or Fossil Empire?
 - Obvious choice, but few understand it
 - Earth is in charge: indigenous frame
 - Even watching our choices!
- Explore recent climate disasters from Earth system perspective
 - ***WHAT?*** *Earth doesn't have 'perspective'*
 - *Earth Day is our "token" day!*
 - ***WE are smart (& destroying it for profit!)***
 - Reality: We are stupid++

2021 Climate Catastrophes

- *Obviously not under our control*
- *Appears Earth is selecting modes*
 - Aug 21: TS Henri floods NYC: new records
 - Sept 1: Remnant Ida, breaks records again
 - Floods NYC subways, roads, basements
 - Flood till finance/banks grasp it is ecocide to fund Fossil Empire
 - *Makes perfect sense: how long will it take?*

Texas infrastructure

- **Lynch-pin of Fossil Empire**
 - With thousands of off-shore wells
 - 2017: Cat 4 Harvey floods Houston; damages wells; cost \$125B+ – very fitting
 - 2020: Hurricanes Hanna, Cat 4 Laura and TS Beta
 - 2021: Cat 4 Hurricanes Nicholas and Ida
 - Mar. 2021: Record-breaking Arctic blast destroyed power grid and refineries (\$100B) – fitting
 - Since TX refuses to close its oil industry, hurricanes, freezes must destroy them
 - *["Refineries in the US are not at capacity"]*

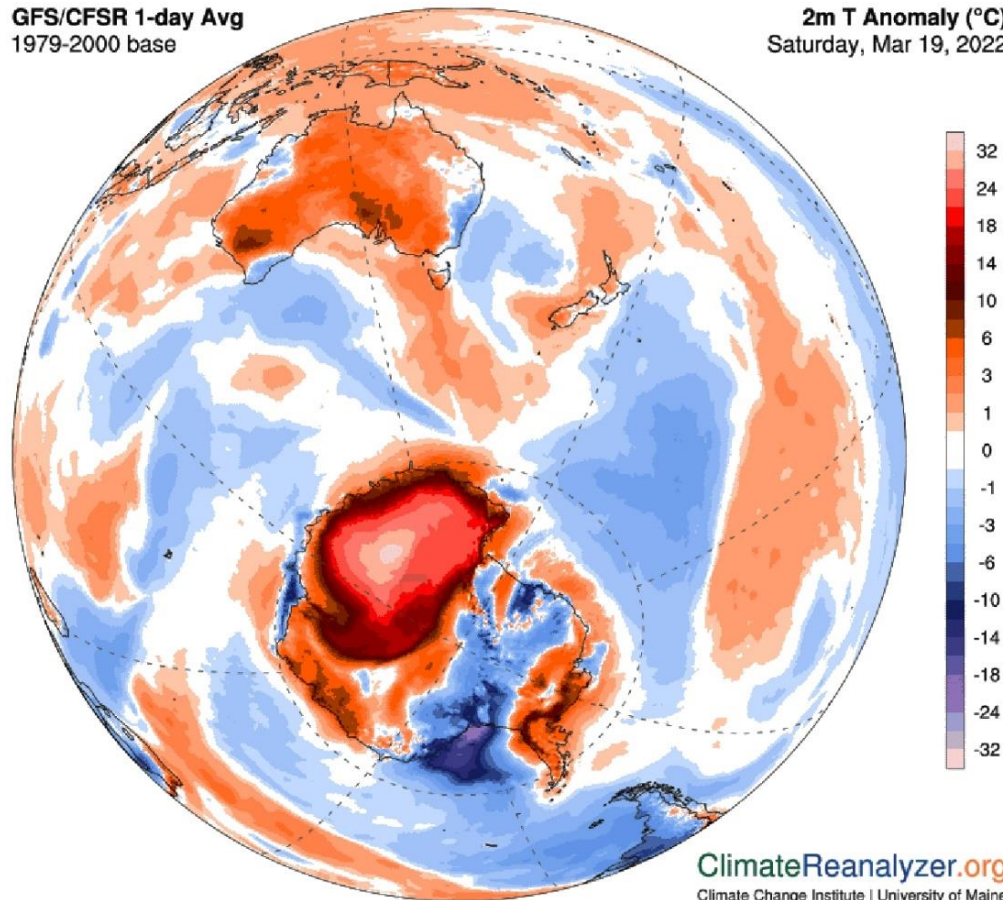
Northwest US and British Columbia

- **Extremes of 27-29 June 2021**
 - Temperatures were 4 to 5°C above historic maxima – described as
 - **“Most anomalous regional extreme heat event to occur anywhere on Earth since temperature records began” (Chris Burt)**
 - Broke all Canadian record that had stood for 80 years by 4.6°C; Ended in fires
- **November: Pacific atmospheric river**
 - A month of rain in 2 days on burnt region in BC
 - *Landslides closed TransCanada highway & railway*
 - ***Cutting off the export of liquid natural gas***

Antarctica: Extreme T Record

GFS/CFSR 1-day Avg
1979-2000 base

2m T Anomaly (°C)
Saturday, Mar 19, 2022



World
+ 0.5 °C

Northern Hemisphere
+ 0.8 °C

Arctic
+ 2.3 °C

Tropics
+ 0.3 °C

Southern Hemisphere
+ 0.3 °C

Antarctic
+ 3.7 °C

- March 19, 2022
- New Antarctic record
- +40°C (70°F)
- (1979-2000 base)
- *Weather station in Concordia over the Antarctic plateau with 66-year record*
- Coming melt gives 20-30 ft sea-level rise***
- [Some stations near the North Pole reached 30°C above normal]

Perspective challenges us

- **Earth is generating extremes that we must deal with, but forecasting challenging on all timescales**
- **Watch the weather, and the living Earth and prepare**
 - **Realize the Earth is aware of your choices**
 - **Surrender to the Earth's frame if you can**
 - **The Earth will communicate to you in ways you may barely grasp**

Global crises

- Finance industry waiting for ‘economic growth’ to drive more destruction of planet for profit
 - No help at all
 - Global crises, floods, droughts and wars
 - Manufacture scattered, connectivity crumbling
 - Global trade is struggling
- Emergencies everywhere
 - Floods in China set new records
 - Nearly destroying the Three Gorges Dam
 - Siberian fires are bigger than all the fires on Earth together
- Global protests by youth and indigenous people
 - Right to stop “business as usual” from destroying the Earth
 - To stop the “rich and powerful” from killing our children

Review - 2

- The Climate Crisis needs new perspective
 - *An indigenous* perspective of the Earth*
- Earth's physical climate system can be analyzed and modeled after the fact
 - *But the Earth is now selecting extreme modes to damage our fossil and industrial infrastructure*
- Step into the indigenous perspective
 - *Connect with what the Earth is doing daily*
 - *This feeds us inspired choices through intuition and serendipity and deepens our web of connections*

My suggestions to you

- **Discuss this talk yourselves**
 - *listen to the spread of different reactions*
- **Ask who feels connected to the Earth and would like to explore deeper**
 - *Encourage them to seek guidance*
 - *Needs surrender to the living Earth*
 - *To “See the Truth that will set you Free”*
- **Read Betts (2022): “The Earth’s View of Climate Change”**

