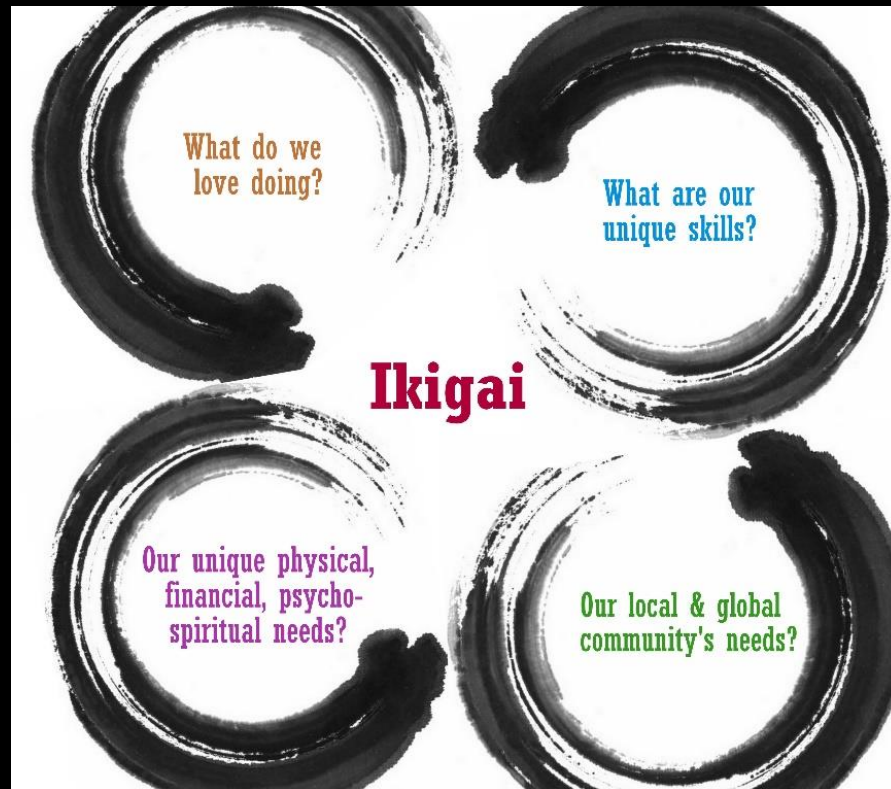


A discussion with Kritee (Kanko)
Climate crisis and role of youth



Dr. Kritee (Kanko)

Website boundlessinmotion.org

Twitter [@KriteeKanko](https://twitter.com/KriteeKanko)

Gratitude practice

How was your week? What are you grateful for?

Interactive question

What do you know about global climate change?

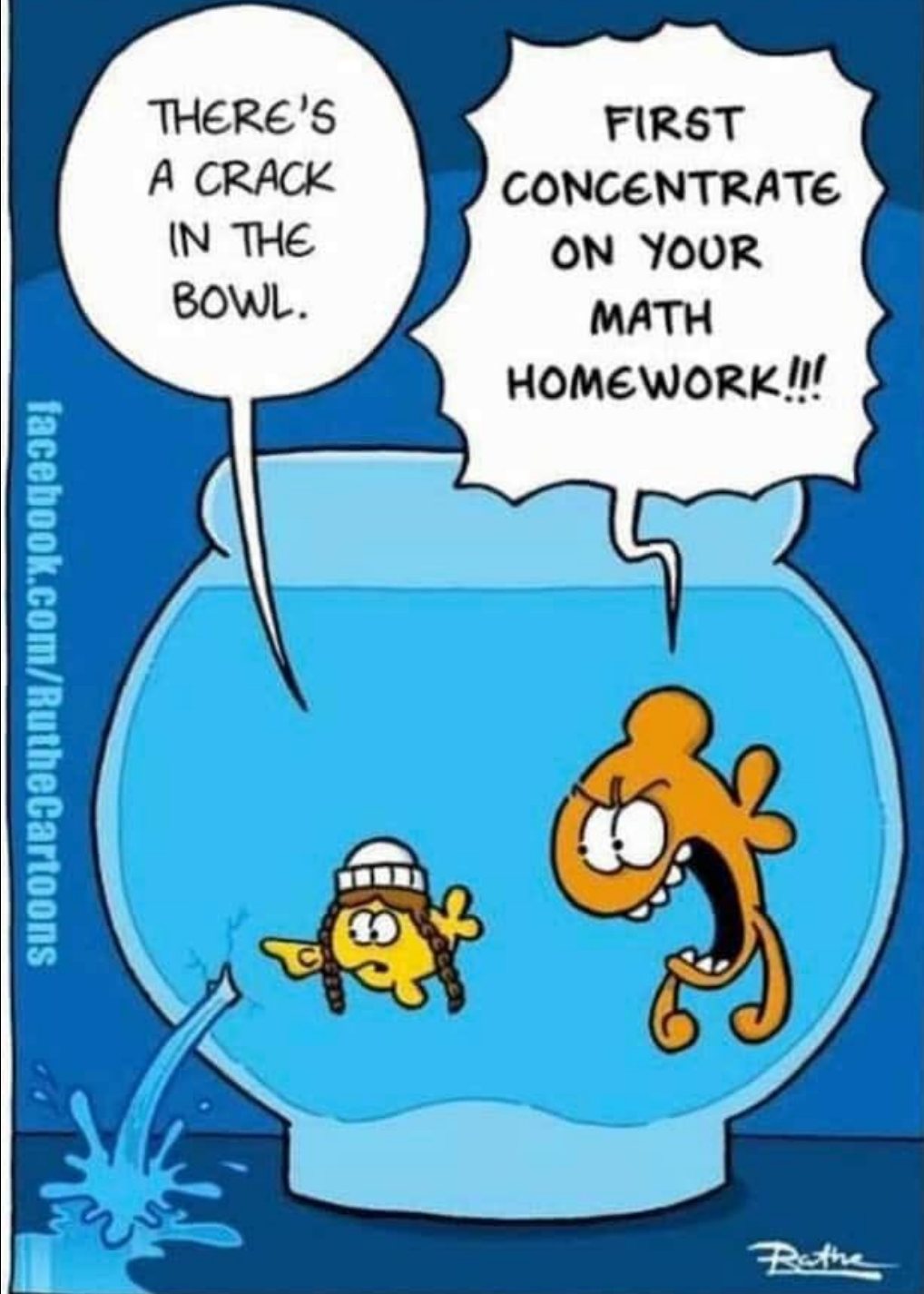
OR

How has climate change impacted Thailand so far?

THERE'S
A CRACK
IN THE
BOWL.

FIRST
CONCENTRATE
ON YOUR
MATH
HOMEWORK!!!

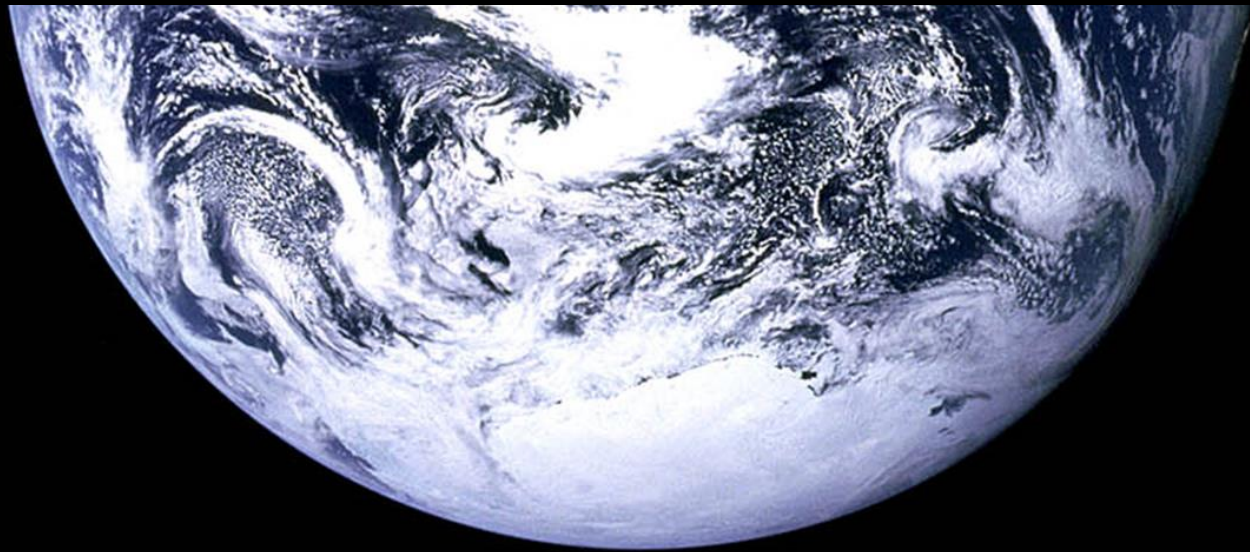
facebook.com/RuthCartoons



Ruth



Science



What ultimately makes all life possible?

Thin inter-connected layers

Freshwater

50-100 miles sphere



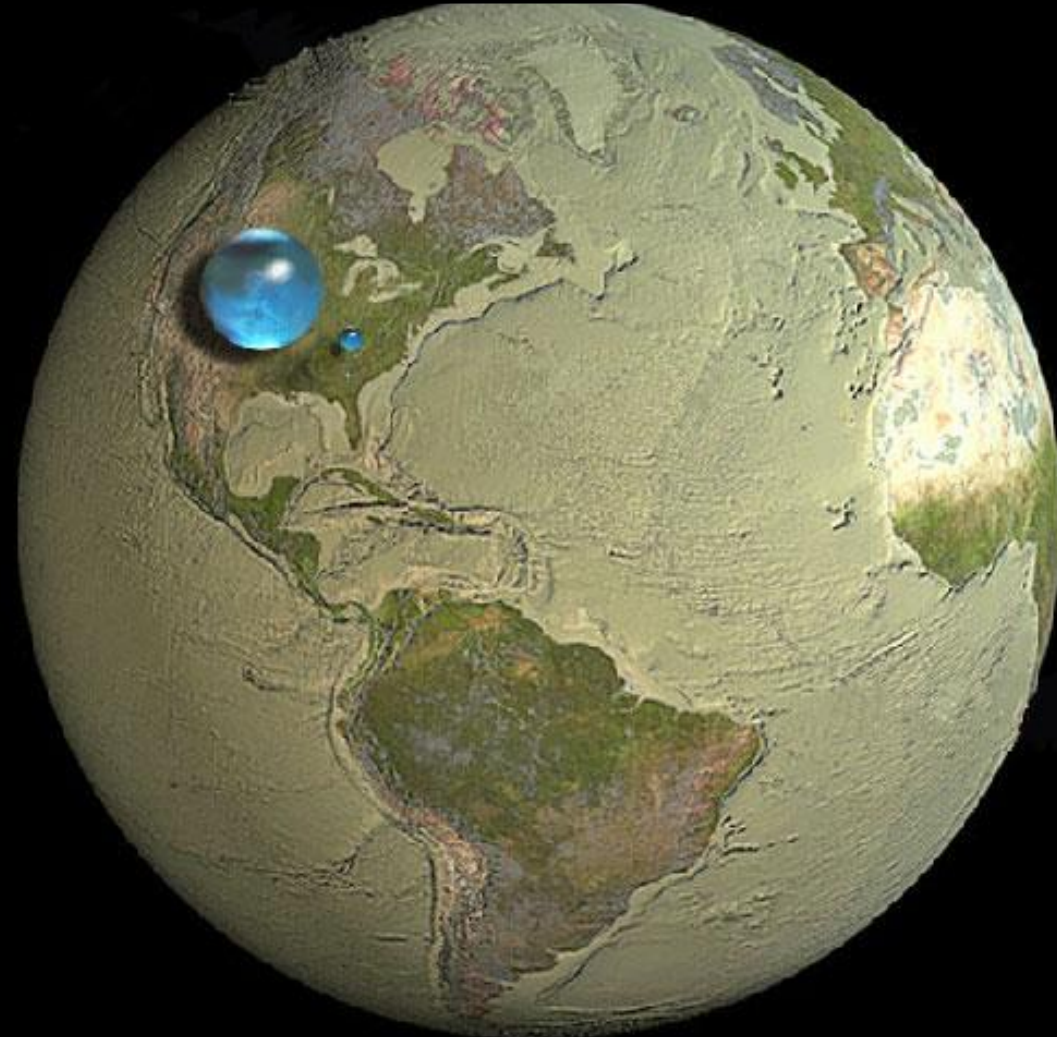
Topsoil:

2-8 inches



Atmosphere:

20 miles

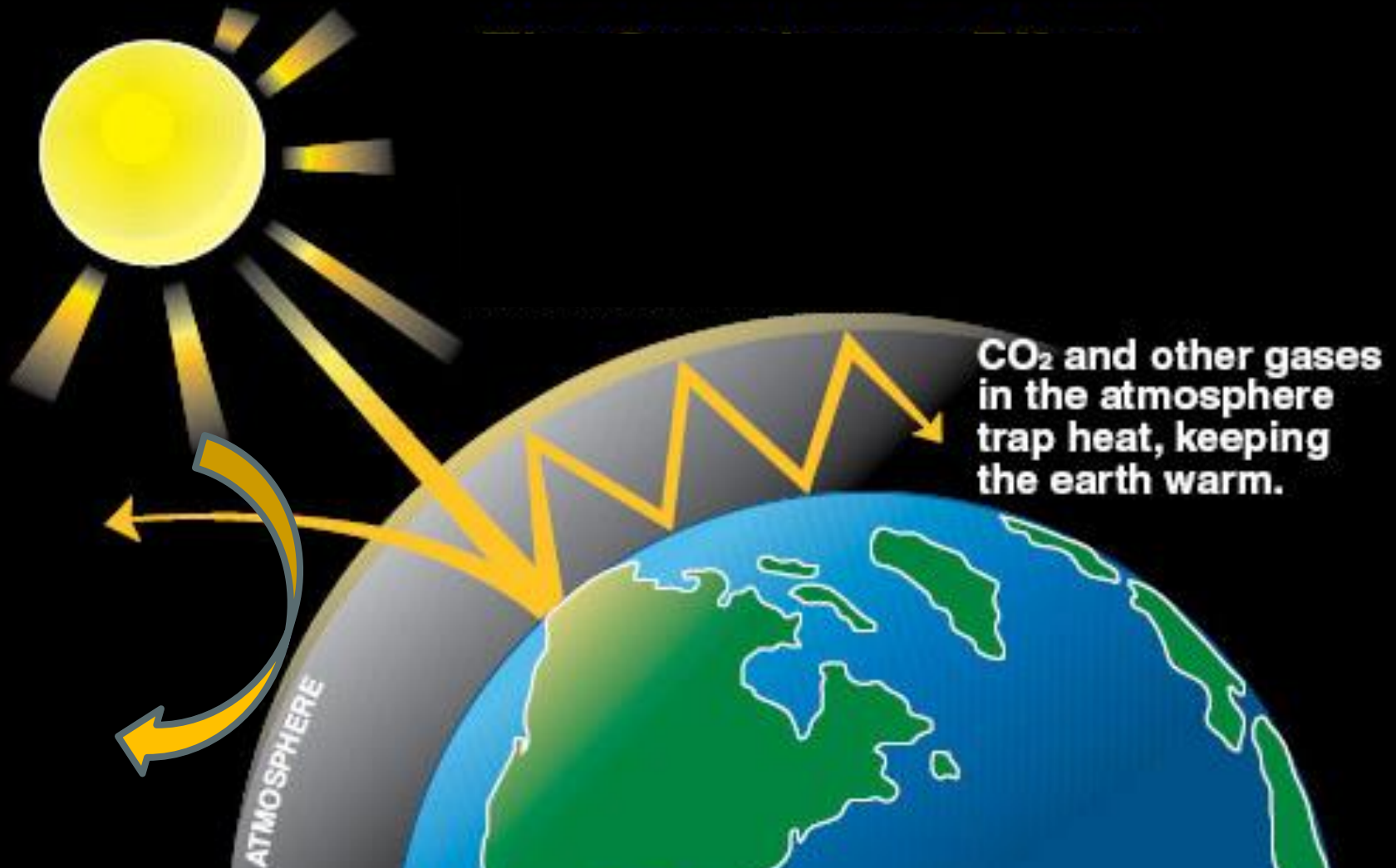


Water in, on, and above the Earth

• Liquid fresh water

Basic Law of physics

Greenhouse effect and climate forcings

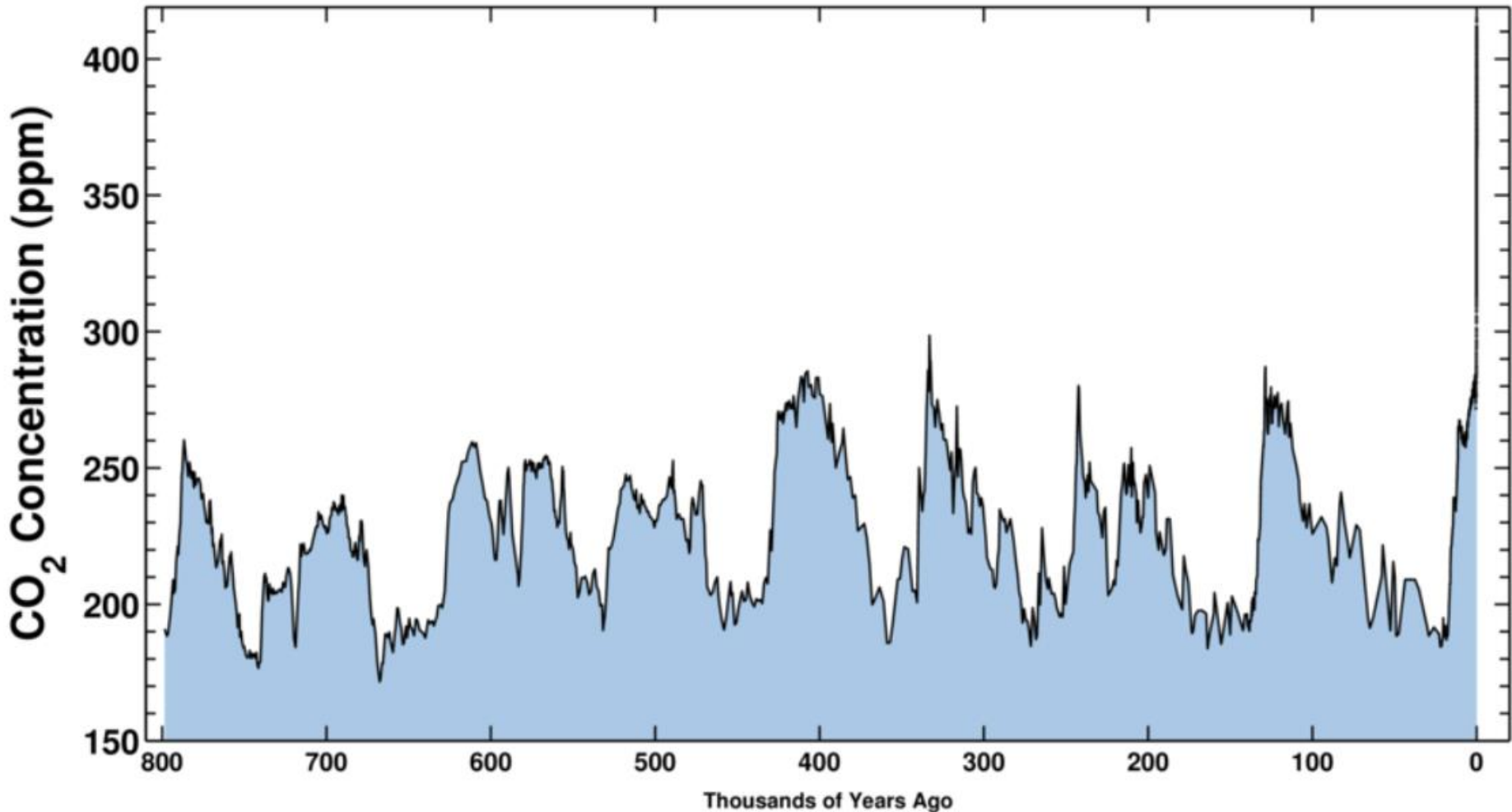


Our planet's atmosphere's EKG

180-280 ppm circle & the 400 ppm tangent

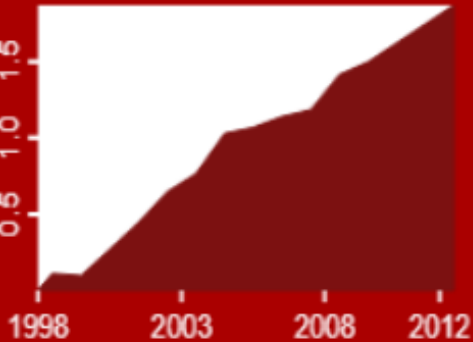
September 26, 2019

Ice-core data before 1958. Mauna Loa data after 1958.

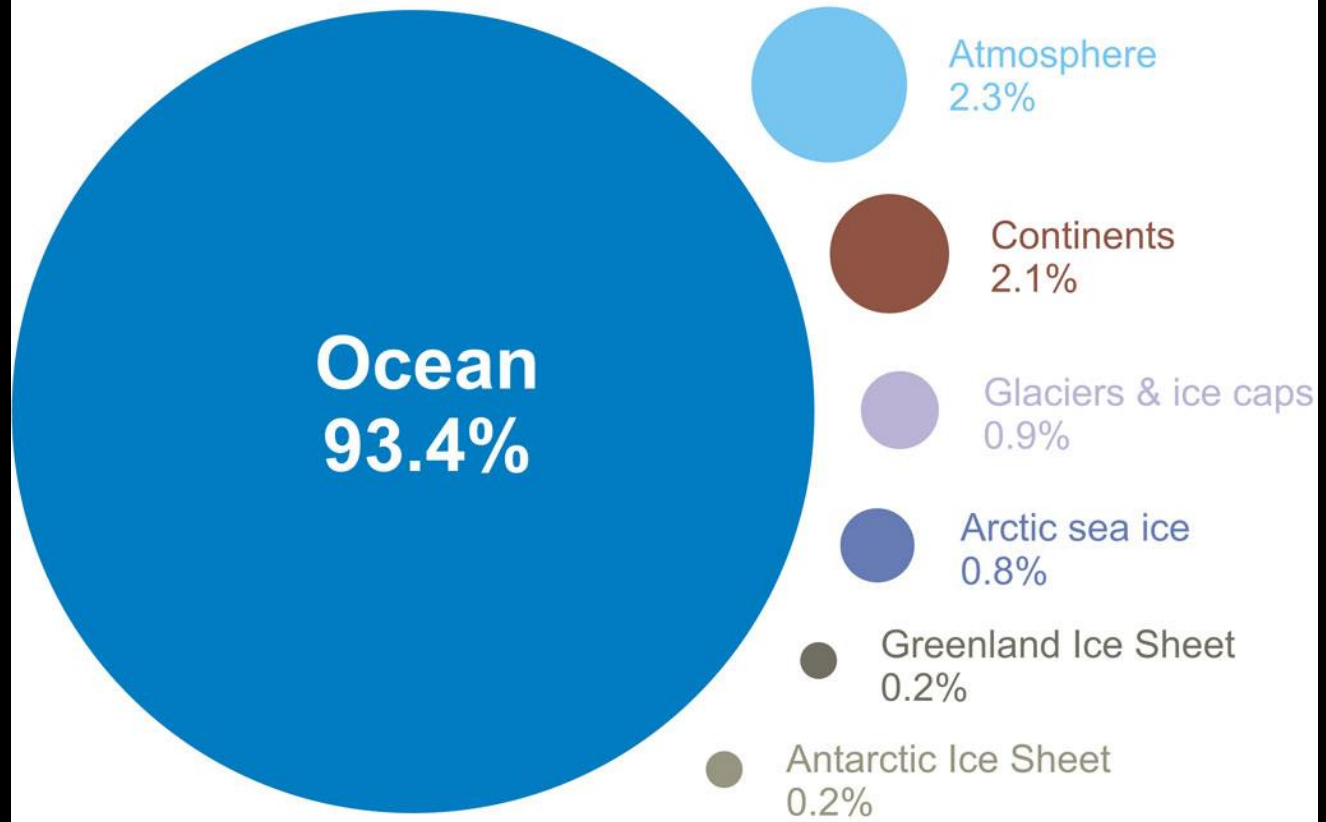


Heat = 4 atomic bombs per second

Our climate has accumulated
2,606,137,704
Hiroshima atomic bombs
of heat since 1998



Where is global warming going?



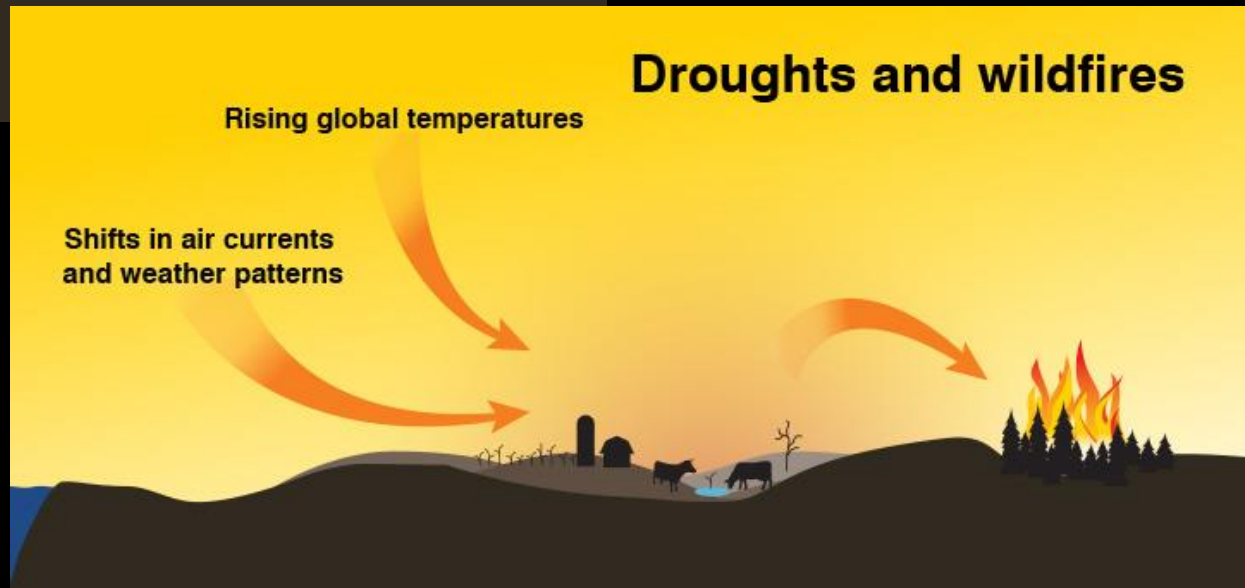
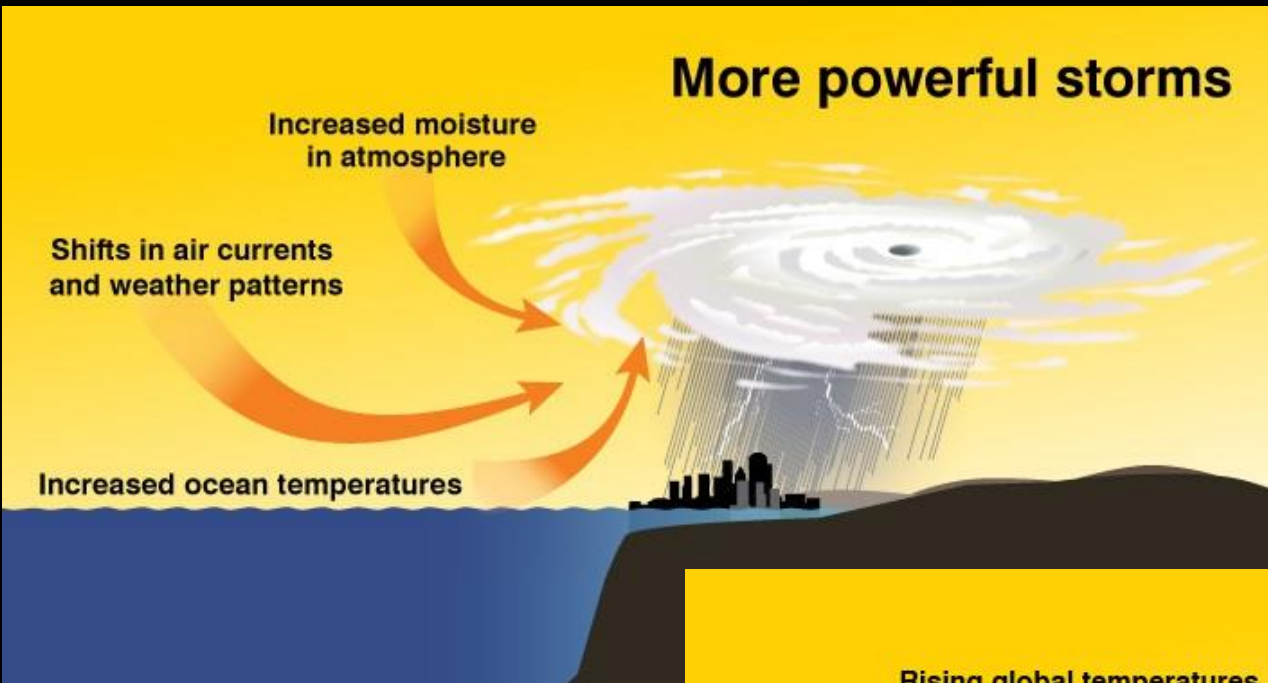
Temperature

*Heat + Drought +
Fires*



Indirect result

Weather on steroids





Lost & Damage in 2019

*Roi- Et Province
 end of August*



*Ubon- Racha – Thanl
 One week later*





CLIMATE RISKS: 1.5°C VS 2°C GLOBAL WARMING

EXTREME WEATHER

100% increase in flood risk. | vs | **170%** increase in flood risk.

SPECIES

6% of insects, **8%** of plants and **4%** of vertebrates will be affected. | vs | **18%** of insects, **16%** of plants and **8%** of vertebrates will be affected.

WATER AVAILABILITY

350 million urban residents exposed to severe drought by 2100. | vs | **410 million** urban residents exposed to severe drought by 2100.

ARCTIC SEA ICE

Ice-free summers in the Arctic at least once **every 100 years**. | vs | Ice-free summers in the Arctic at least once **every 10 years**.

PEOPLE

9% of the world's population (700 million people) will be exposed to extreme heat waves at least once every 20 years. | vs | **28%** of the world's population (2 billion people) will be exposed to extreme heat waves at least once every 20 years.

SEA-LEVEL RISE

46 million people impacted by sea-level rise of 48cm by 2100. | vs | **49 million people** impacted by sea-level rise of 56cm by 2100.

OCEANS

Lower risks to marine biodiversity, ecosystems and their ecological functions and services at 1.5°C compared to 2°C.

COSTS

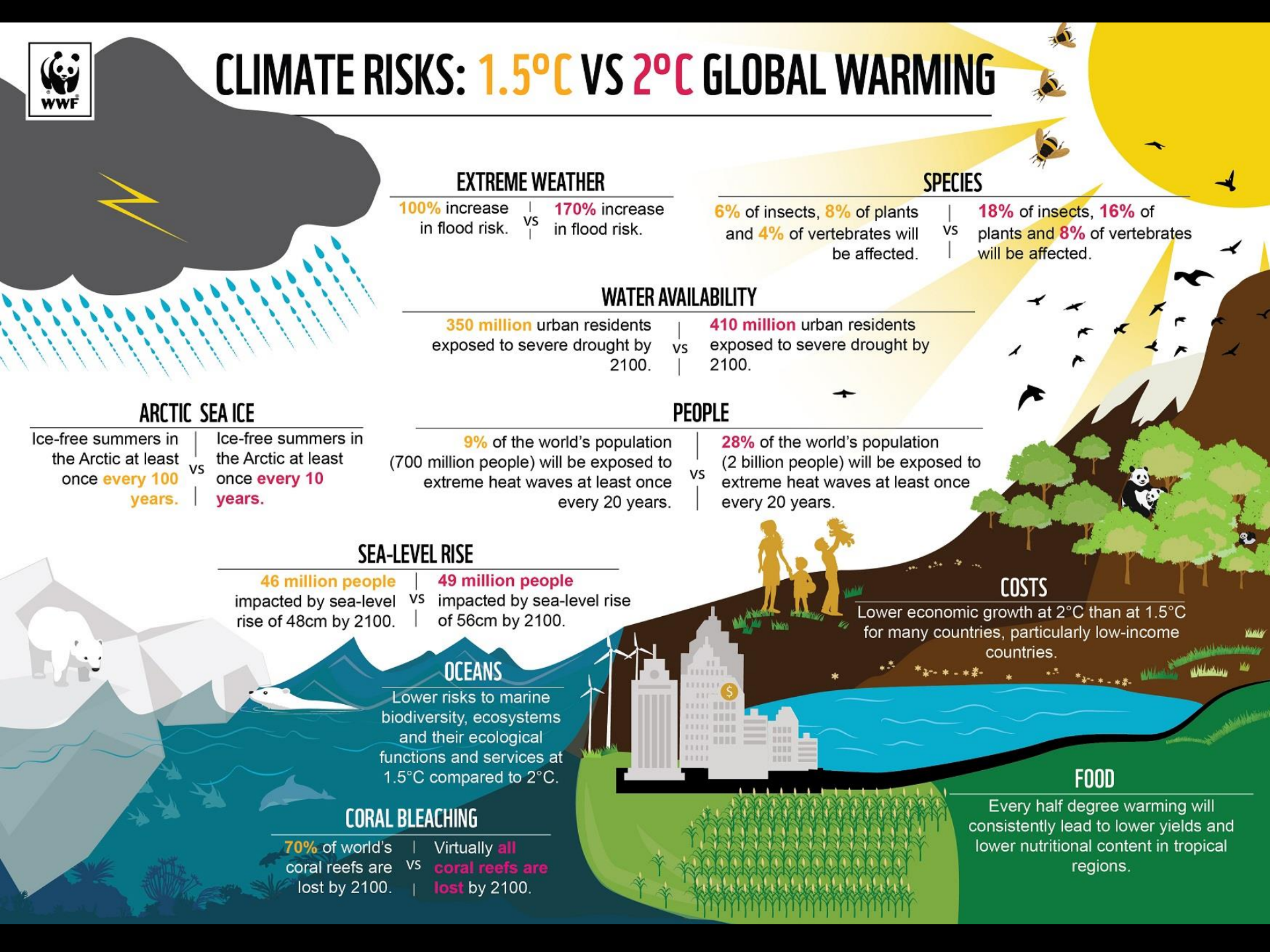
Lower economic growth at 2°C than at 1.5°C for many countries, particularly low-income countries.

CORAL BLEACHING

70% of world's coral reefs are lost by 2100. | vs | Virtually **all coral reefs are lost** by 2100.

FOOD

Every half degree warming will consistently lead to lower yields and lower nutritional content in tropical regions.

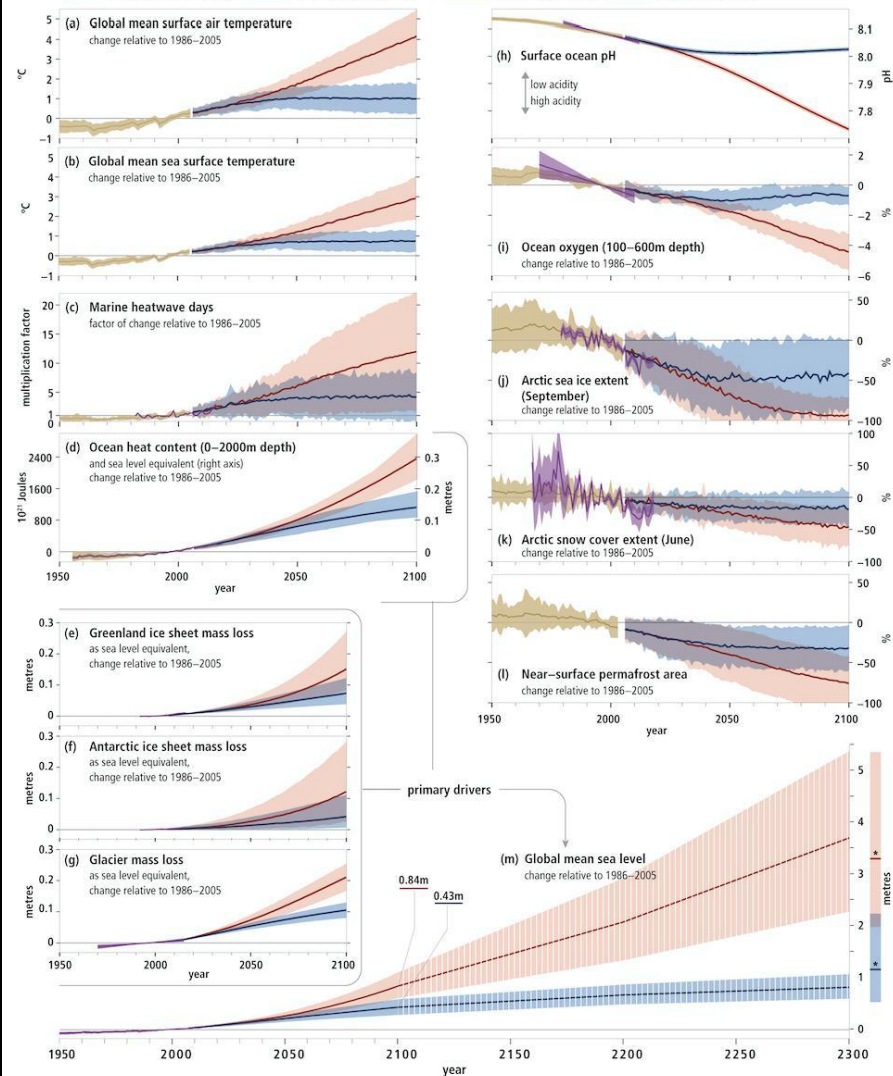


Recent special report on oceans

Past and future changes in the ocean and cryosphere

Historical changes (observed and modelled) and projections under RCP2.6 and RCP8.5 for key indicators

Historical (observed) Historical (modelled) Projected (RCP2.6) Projected (RCP8.5)



Soundscapes



MATTER

Birds Are Vanishing From North America

The number of birds in the United States and Canada has declined by 3 billion, or 29 percent, over the past half-century, scientists find.



theguardian.com/environment/2019/feb/10/plummeting-insect-numbers-threaten-collapse-of-nature

Insects

This article is more than 7 months old

Plummeting insect numbers 'threaten collapse of nature'



Damian Carrington
Environment editor

@dpcarrington

Sun 10 Feb 2019 18.00 GMT



IMPLICATIONS FOR BIODIVERSITY OF GLOBAL WARMING: 2°C

One ice-free
Arctic summer
per
10 YEARS

Limiting warming to
1.5°C rather than 2°C

**OCEAN
ACIDIFICATION**
will further impact the
growth, development,

18% 8% 16%
insects vertebrates plants
with further impacts
on ecosystem function

ALPINE SPECIES
adaptation to warmer
temperatures limited
by mountain height
and habitability

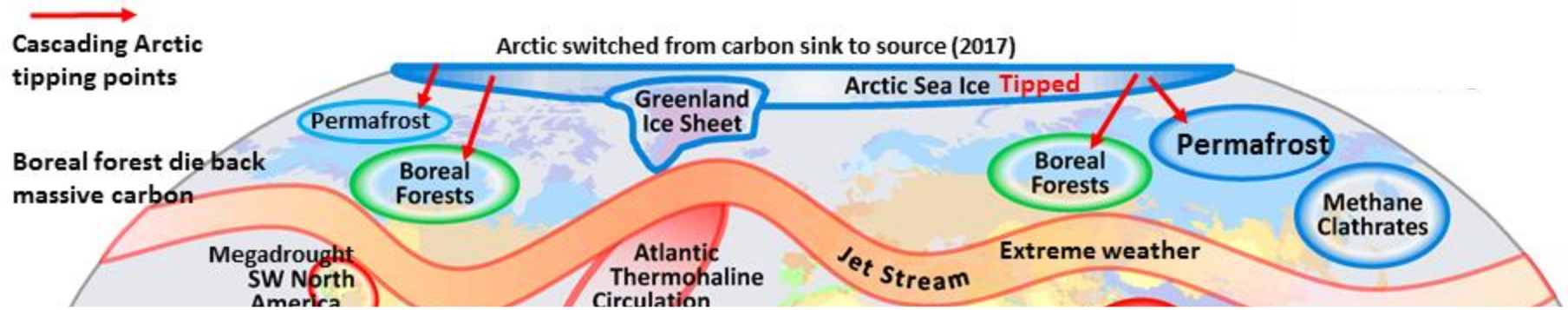
**One million plant and animal species on the verge
of extinction because of us**

100%
decline of
CORAL REEFS

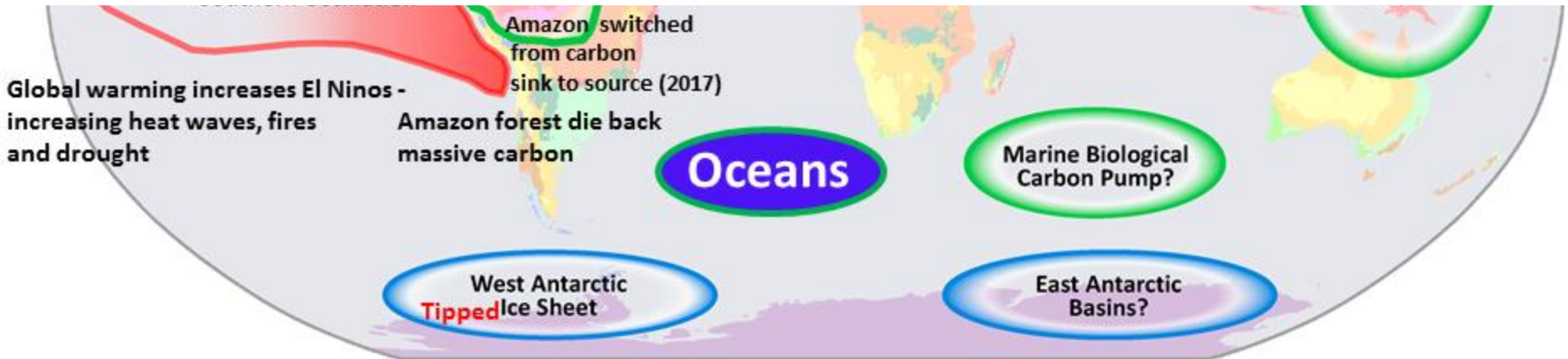
Timing of
phenological events
could change more
for primary
consumers than
higher trophic levels

Global Warming Vulnerable Tipping Points

- Cryosphere Entities
- Circulation Patterns
- Biosphere Components



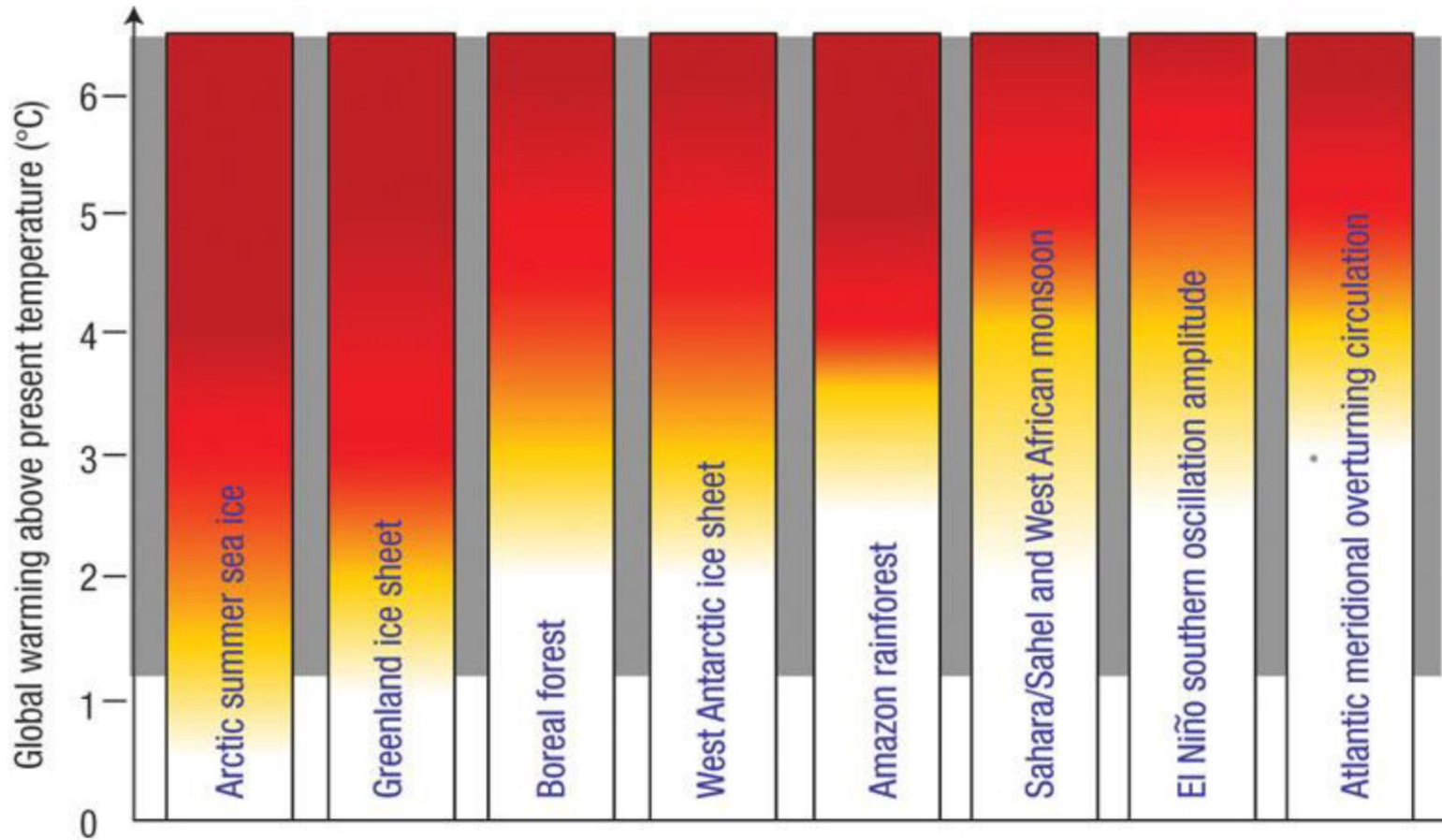
Lungs & heart of our biosphere are hurting



Adapted from Potsdam Climate Institute
Tipping Elements the Achilles Heels
of the Earth System

Is it too late?

Tipping point or tipping points?



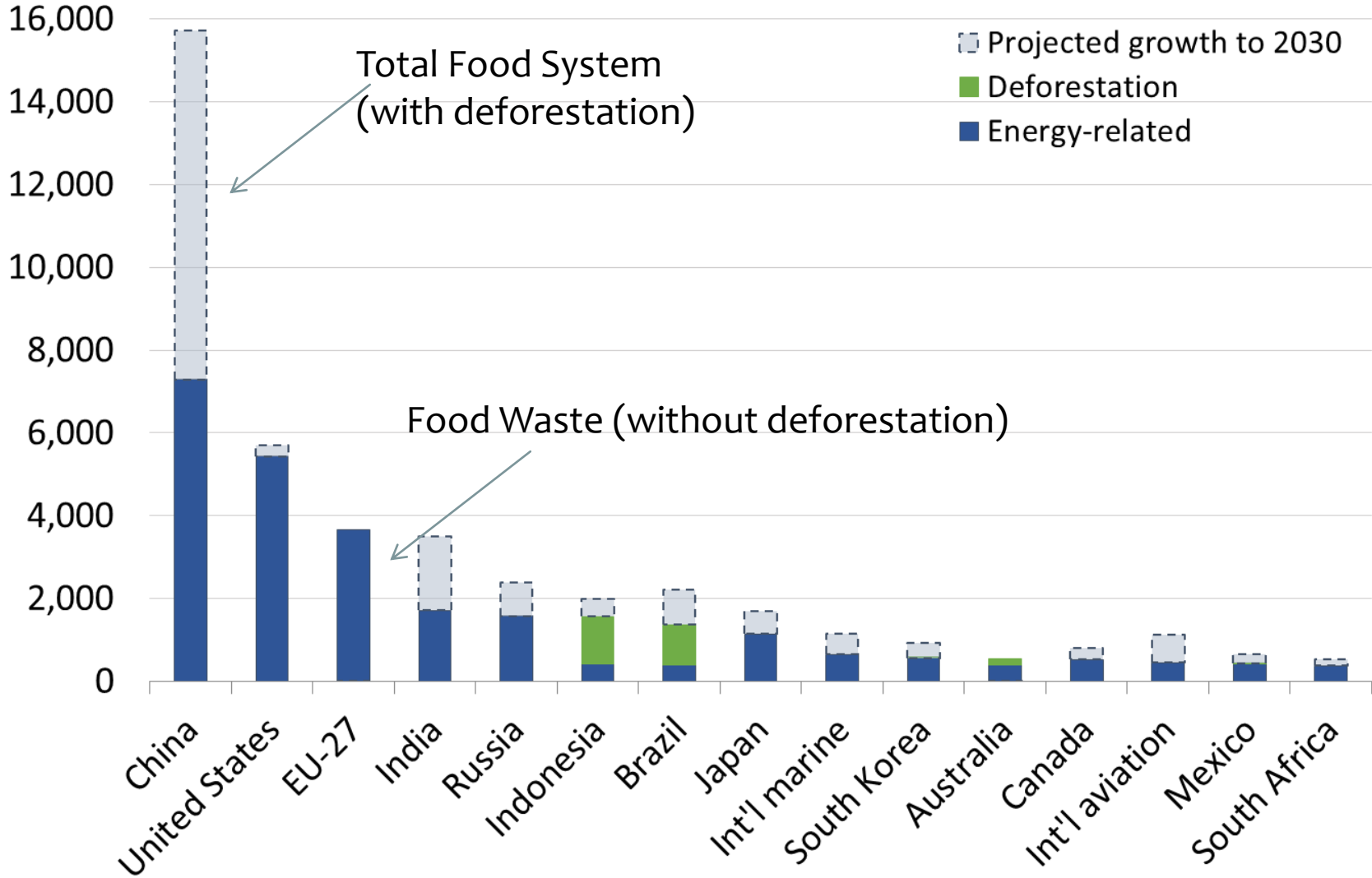
Melting of Methane hydrates & permafrost?

Effect of increasing temperature on Earth's life-sustaining features and processes, from a NRCC Commentary)

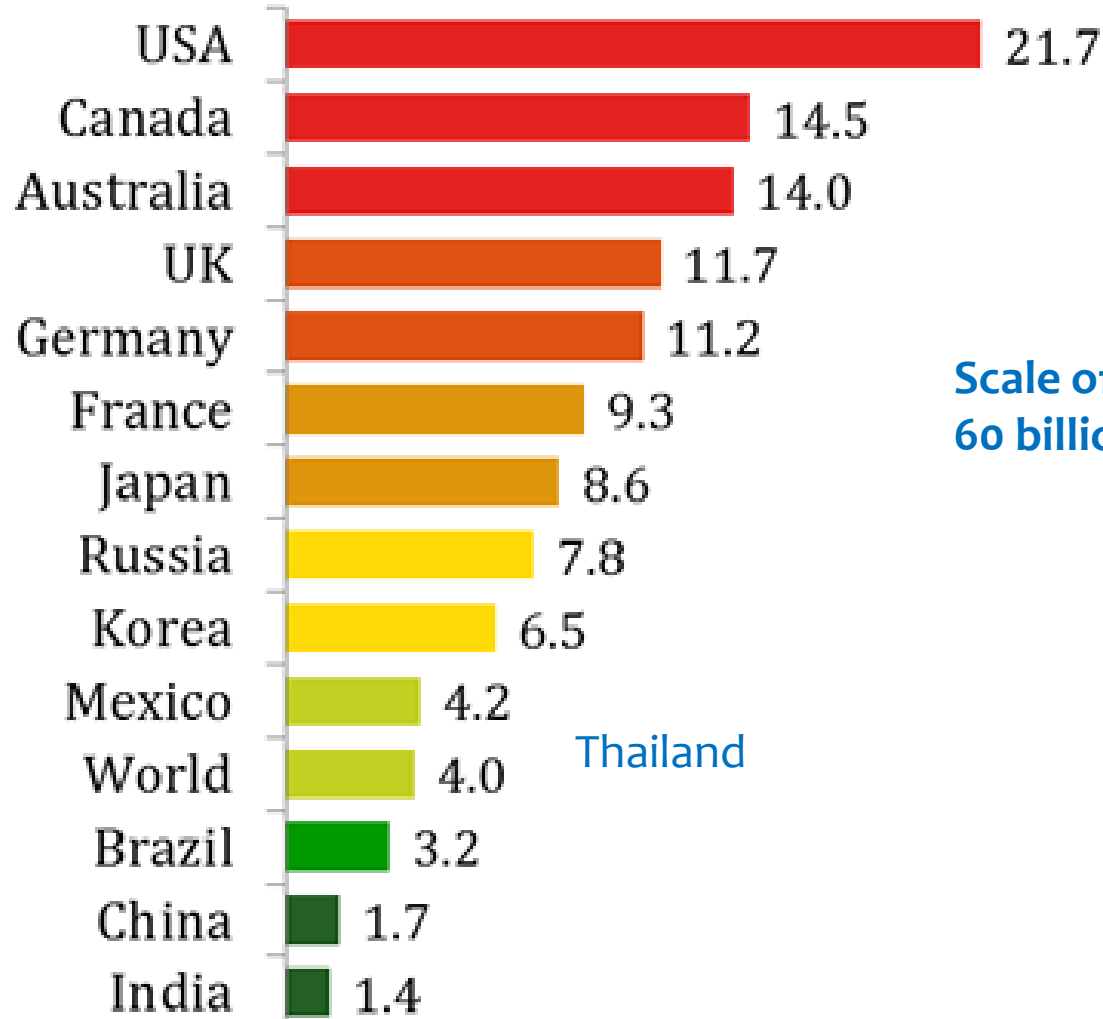
What countries produce most GHGs

Top 15 emitters in 2010, with growth to 2030

MMTCO₂



Personal Carbon Footprints: t CO₂e (2001)



Scale of problems:
60 billion tons.

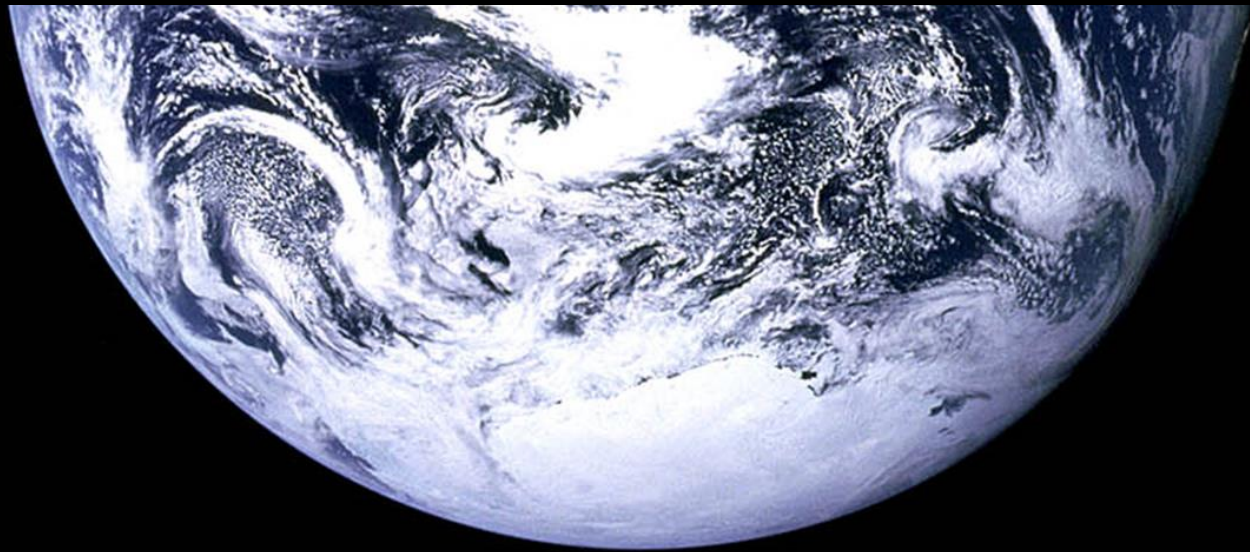
Thailand

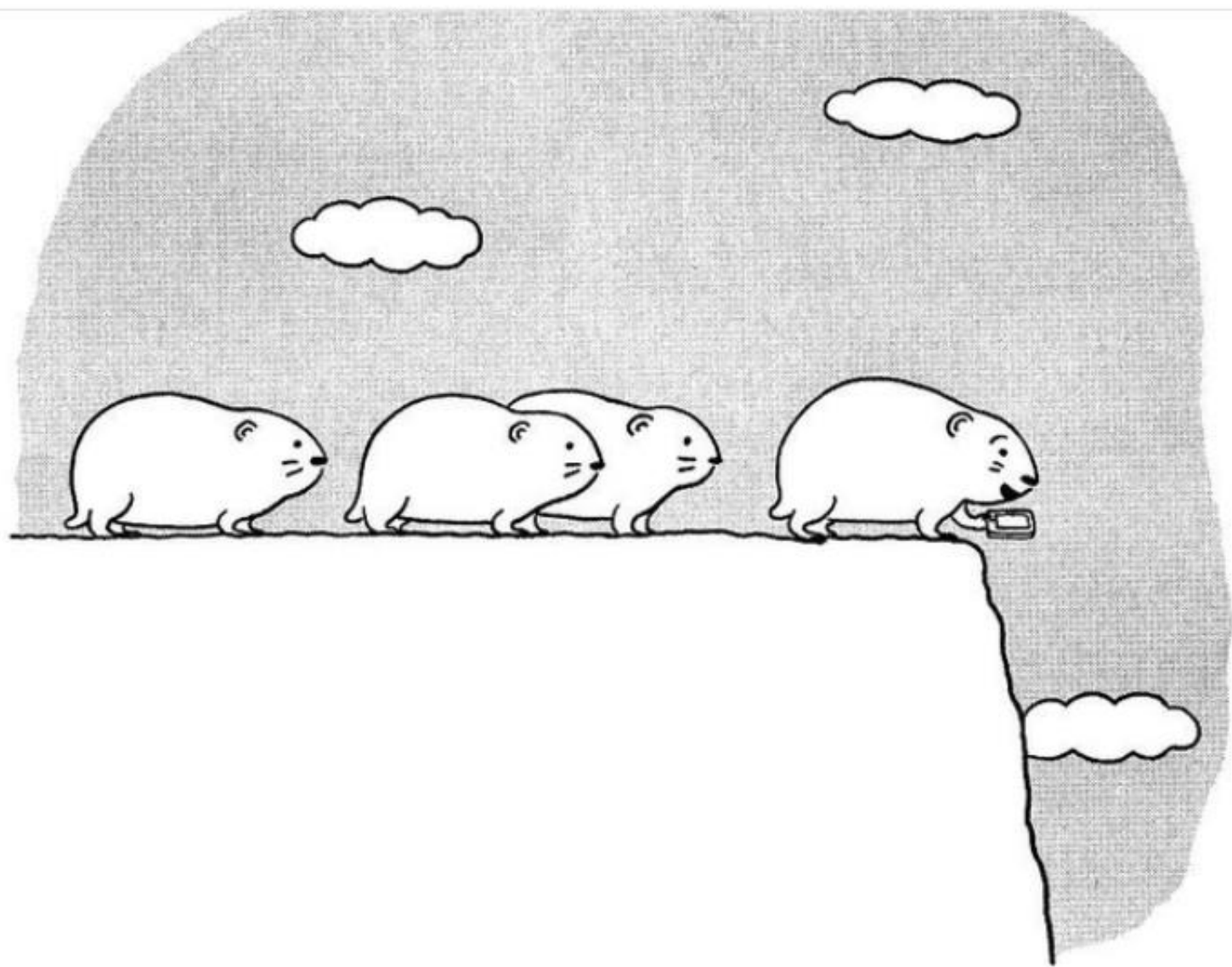
Note: The personal carbon footprint represents the combined emissions from personal consumption, including housing, travel, food, product and service emissions. It excludes capital, government and land use emissions.

Sources: Hertwich & Peters 2009



Ethics





m.e. menair

"Hey, I just got my thousandth follower!"




YOUR CHOICE

IS

OUR

FUTURE

An aerial photograph of a densely populated island city, likely Malé in the Maldives, showing a large body of water, a runway, and a large stadium. The text "1.5°C TO STAY ALIVE" is overlaid in large white letters.

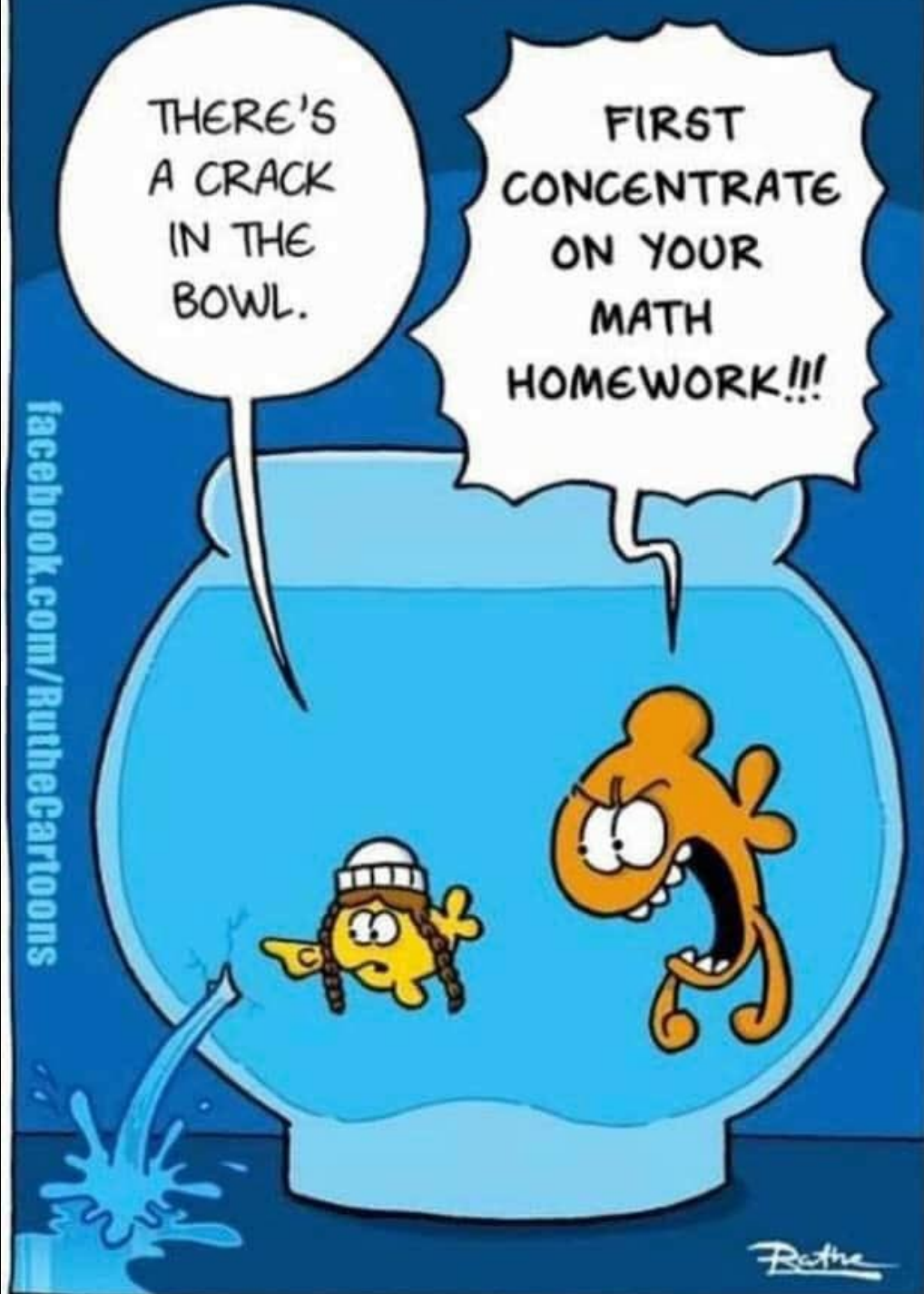
1.5°C
TO STAY
ALIVE



THERE'S
A CRACK
IN THE
BOWL.

FIRST
CONCENTRATE
ON YOUR
MATH
HOMEWORK!!!

facebook.com/RuthCartoons



Ruth

Why millennials are facing the scariest financial future of any generation since the Great Depression.

BY MICHAEL HOBBS

WOMEN WALK FOR HOURS TO REACH A WELL



Drought-hit sell blood to survive

Related: WOR

World | Wed Feb 17, 2016 4:25am EST

Weather-weary Indian farmers resort to new cash crop -

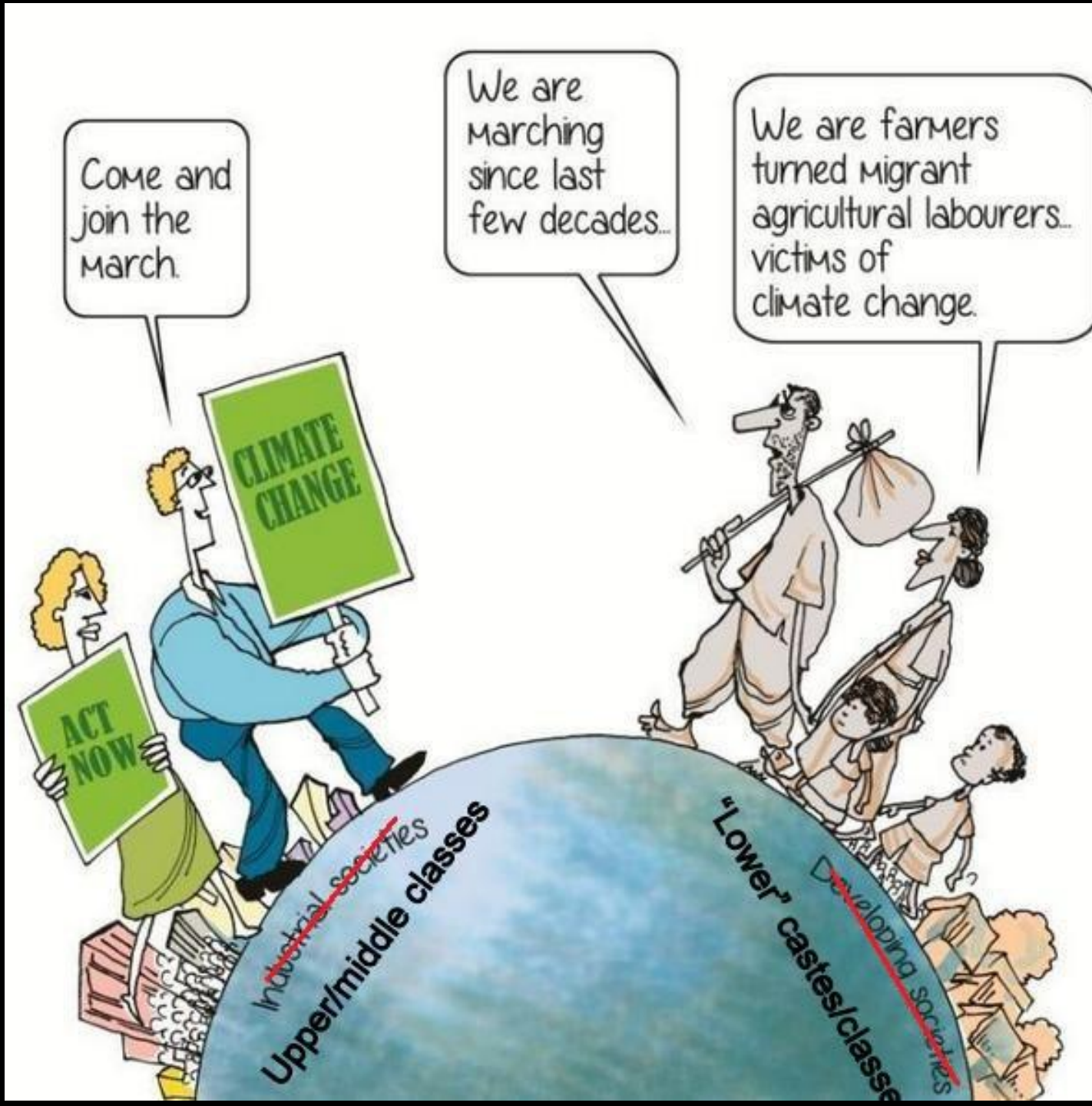
blood



Food Grows Where Water Flows



Justice



Justice



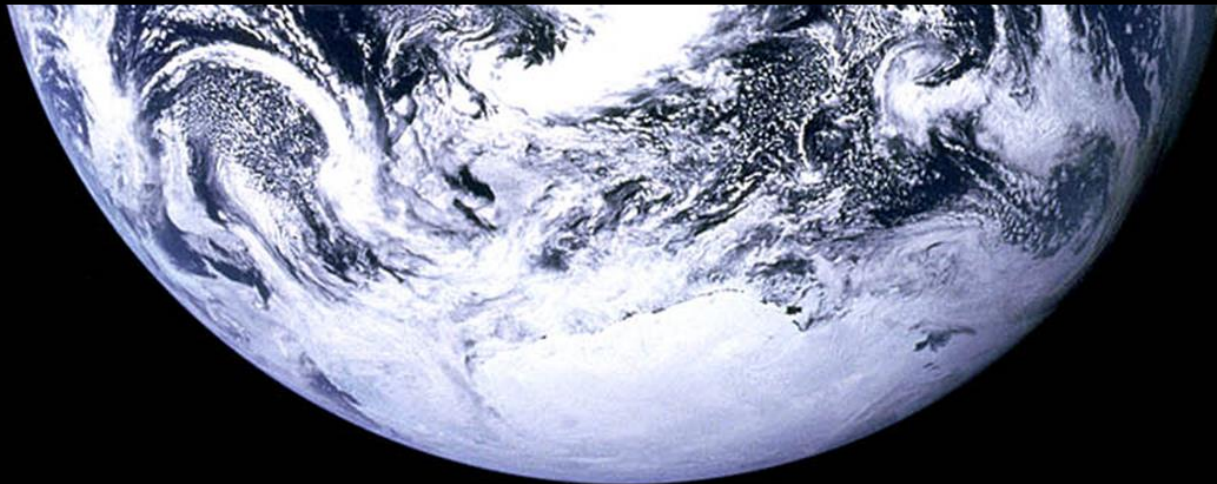
World wildlife falls by 60% in 40 years



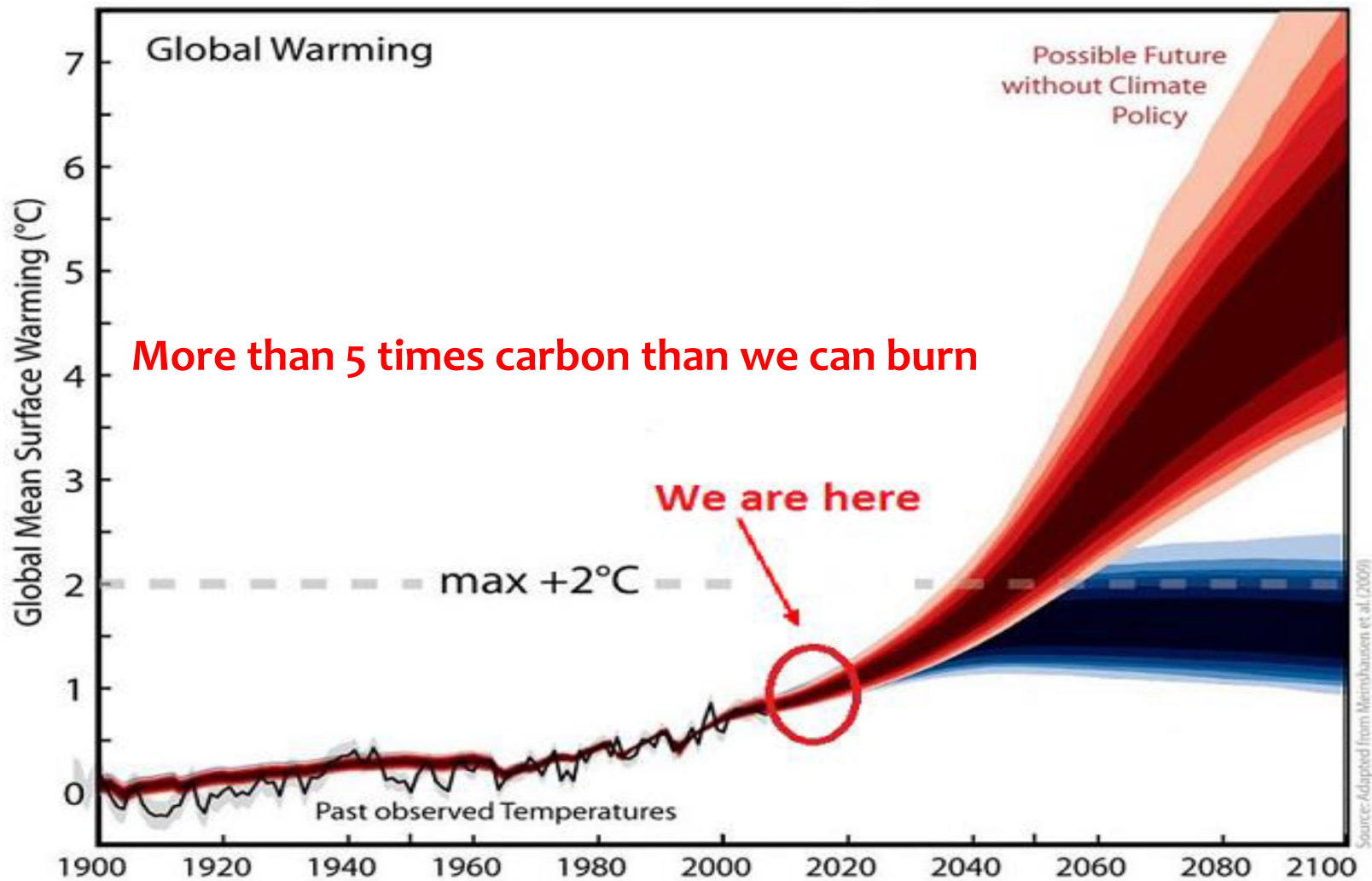


Where will we go from here?

What can young students really do?

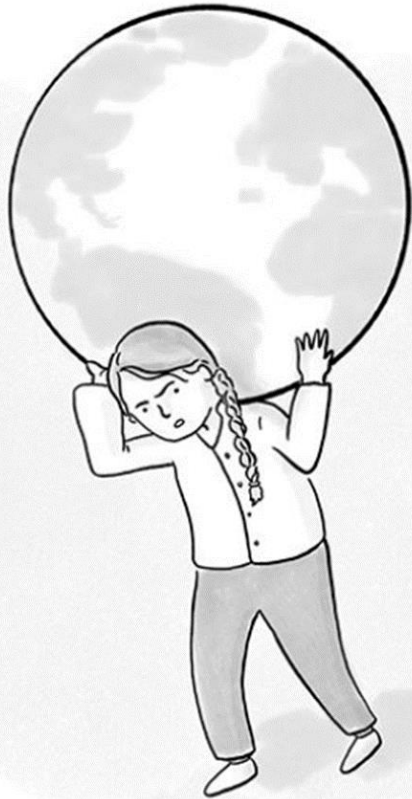


Hope and Challenge



(Figure 3: Fork in our global road: How do we get ready to take the blue, safer path?)

Greta's school strikes one year ago in Sweden



"Somebody's got to do it."



Bangkok's climate strike last week



Sunrise movement





NEW YORK CITY



HAMBURG



AUSTRALIA



LONDON



LOS ANGELES



INDONESIA



SAN FRANCISCO



NORWAY



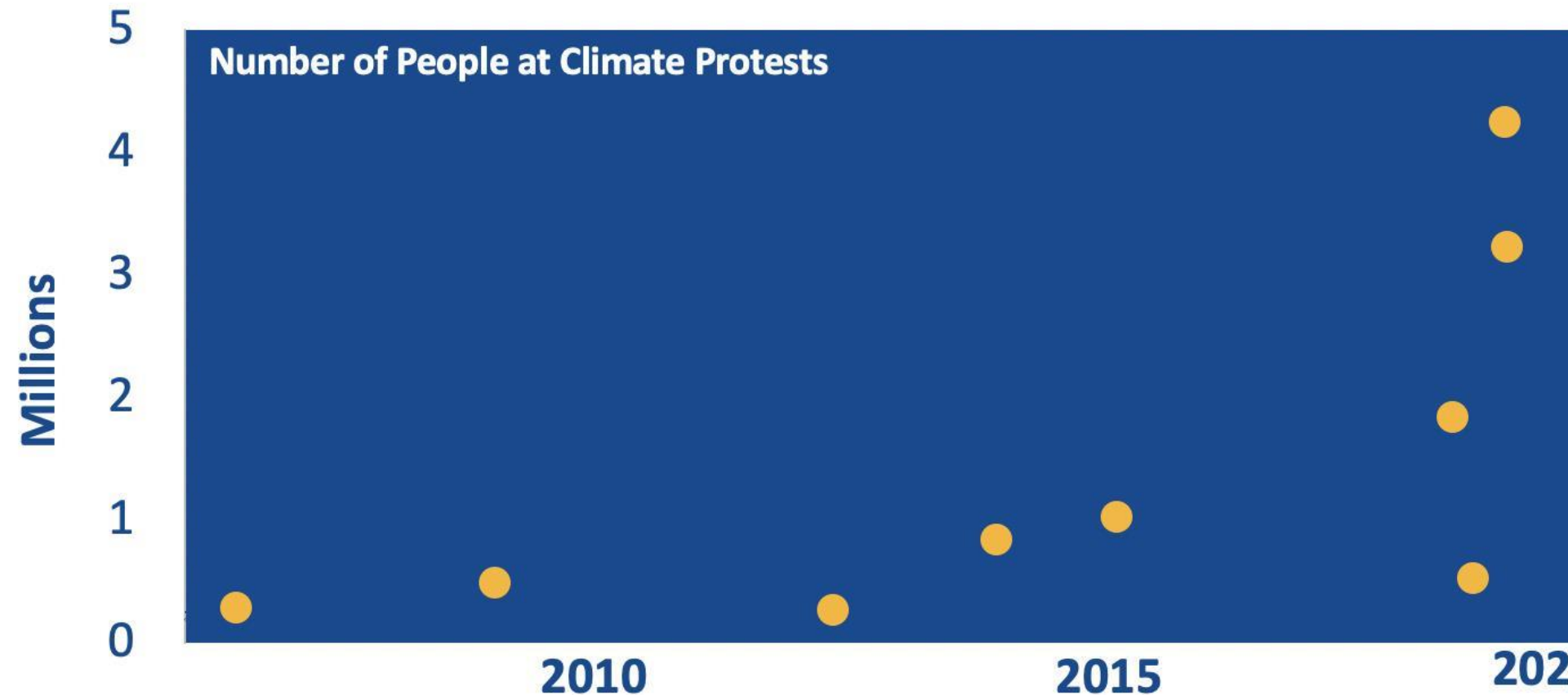
PARIS

**CLIMATE STRIKE: WHEN THE WHOLE
WORLD COMES TOGETHER TO
SAVE THE WHOLE WORLD**

What happened last week!

[HTTPS://WWW.YOUTUBE.COM/WATCH?TIME_CONTINUE=2&V=ZA-S4P4BWQY](https://www.youtube.com/watch?time_continue=2&v=ZA-S4P4BWQY)

Climate movement since 2005



@bethsawin
@climateinteract

Path ahead is hard

Each one of us is needed.....across religion, race
nationality, age and gender.




What do we
love doing?



What are our
unique skills?

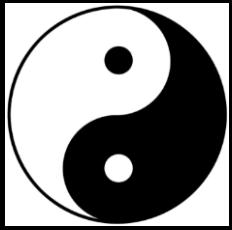
Ikigai



Our unique physical,
financial, psycho-
spiritual needs?



Our local & global
community's needs?



What problems do we face in the journey?

Need ability to act in the midst of paradoxes

Unyielding when oppressed vs yielding when privileged

Expressing grief-anger vs resilience & courage

Living in joy/gratitude vs distraction & complacency

Community's wisdom-resilience vs dogma-conservatism

Urgency vs panic

Resignation vs patience

Expressing uniqueness vs being in community

Emergence

Murmuration of starlings

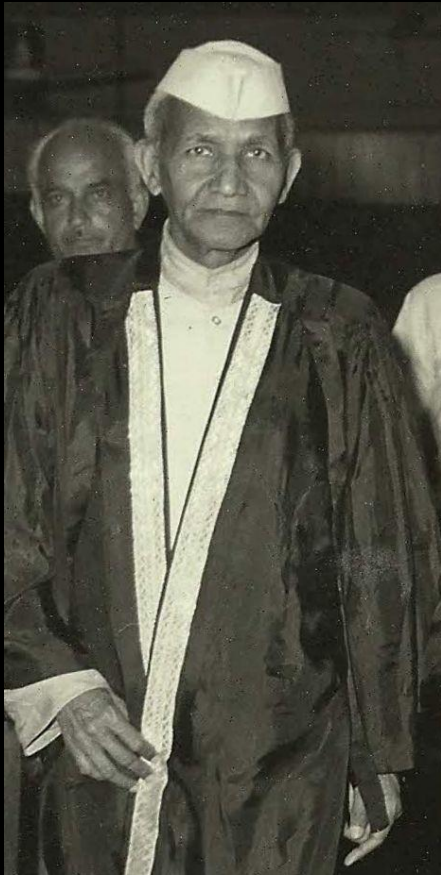
Posted by Linda Robinson



[HTTPS://WWW.FACEBOOK.COM/LINDA.ROBINSON.9404/VIDEOS/10160054878540092/UZPFSTUWODM0MTG2OTOXMDE1NJI0MJMXNTGZJG3MA/?Q=STARLINGS](https://www.facebook.com/Linda.Robinson.9404/videos/10160054878540092/uzpfstuwodm0mtg2otoxmde1njl0mjmxntgzjg3ma/?q=starlings)

Nonviolence

Activism that heals....



Resources

Ecodharma, grief, resilience articles boundlessinmotion.org

Responses to skeptical question skepticalscience.com/

Spiritual/Buddhist responses

- Greenfaith & Interfaith Power & Light
- Joanna Macy
 - Work That Reconnects
 - Paradigm of Great Turning and our role in it

Solutions/advocacy

Personal shrinkthatfootprint.com/

Big Greens edf.org renewables100.org/ 350.org

Climate Disobedience Center

East Point Peace Academy

Jerusalem Farm

New Community Project -Vine & Fig

Cultural Catalyst Network

Evening Star Farm

Joyfield Farm

Possibility Alliance

EXTRA SLIDES

Greta “Shame on you” video

<https://www.youtube.com/watch?v=TMrtLsQbaok>

Greta and George Monbiot video

<https://www.youtube.com/watch?v=-Q0xUXo2zEY>

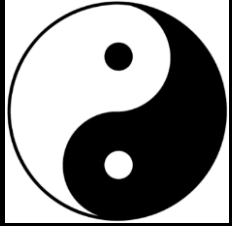
Nail and Hammer.



"Somebody's got to do it."

How did we get here?

- **Education:** We don't know what we are spewing into our bigger body. We know cellphone models not our soils or farmers.
- **Denial:** Too bad but science isn't clear or technology will fix it.
- **Guilt:** We know but we feel pressure to be loved and approved and continue with lifestyles that we think our society approves.
- **Anger without action:** Society approves advertised lifestyles that corporations promote for their profits. It is corporate greed.
- **Hunger for approval/love:** I'm not lovable enough. Lack of genuine wise communities.
- **Values:** Lack of sense of oneness, connection & interdependence



What is our psychological + spiritual need?

Ability to act in the midst of paradoxes

Unyielding when oppressed vs yielding when privileged

Expressing grief-anger vs resilience & courage

Things getting better and better vs worse and worse

Living in joy/gratitude vs distraction & complacency

Community's wisdom-resilience vs dogma-conservatism

Urgency vs panic Resignation vs patience

Expressing uniqueness vs being in community

Being in the moment vs recognizing history/trajjectory

Education vs intellectualization

Psycho-spiritual basis for a path forward

(Neglecting any one of this tripod's legs is not wholesome...)



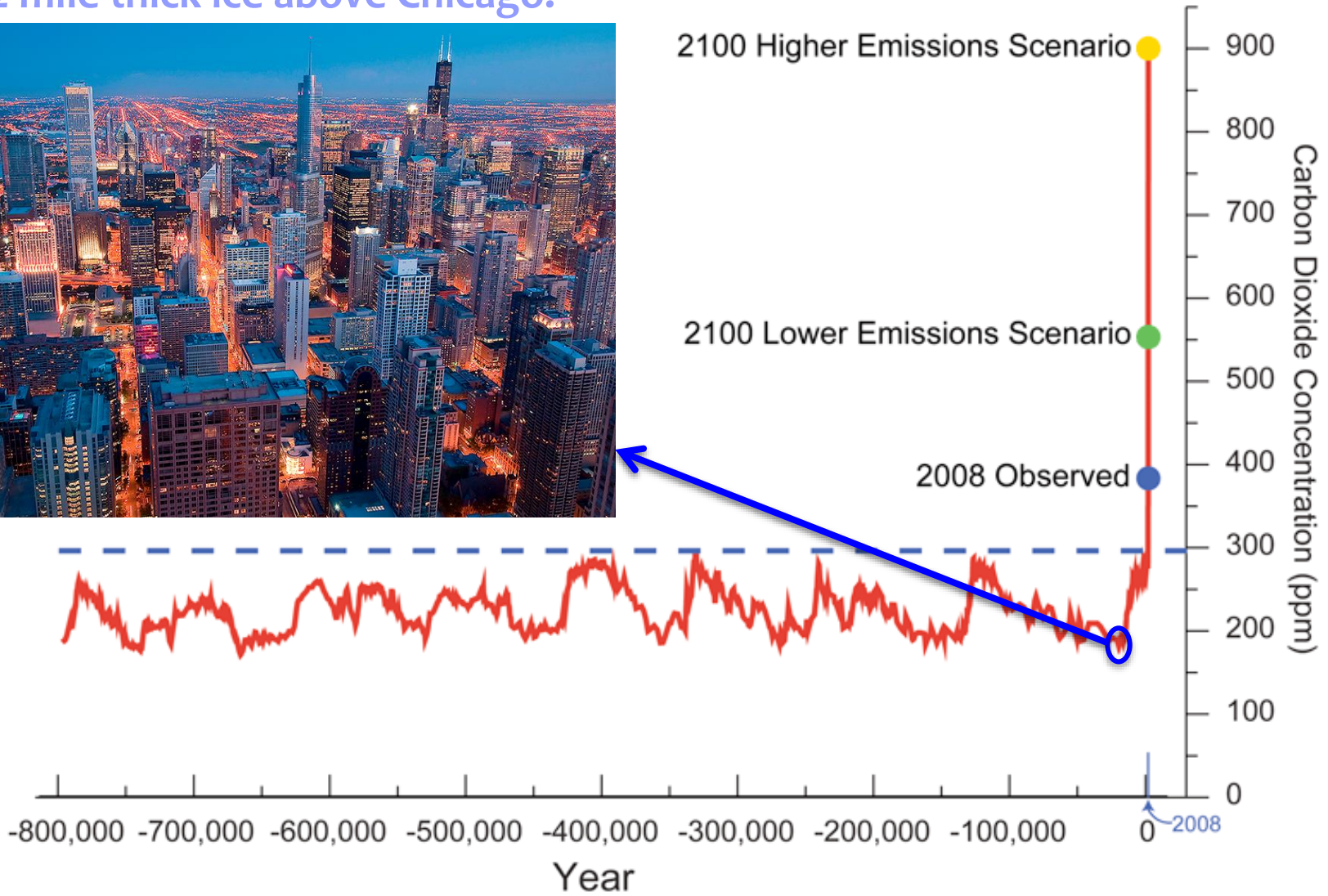
**Dalit Man Digs Well In 40 Days
After His Wife Was Caste Shamed
*And his well is “open to all”***



Our planet's EKG: One hockey stick

Circle and the 400 ppm tangent

2 mile thick ice above Chicago!



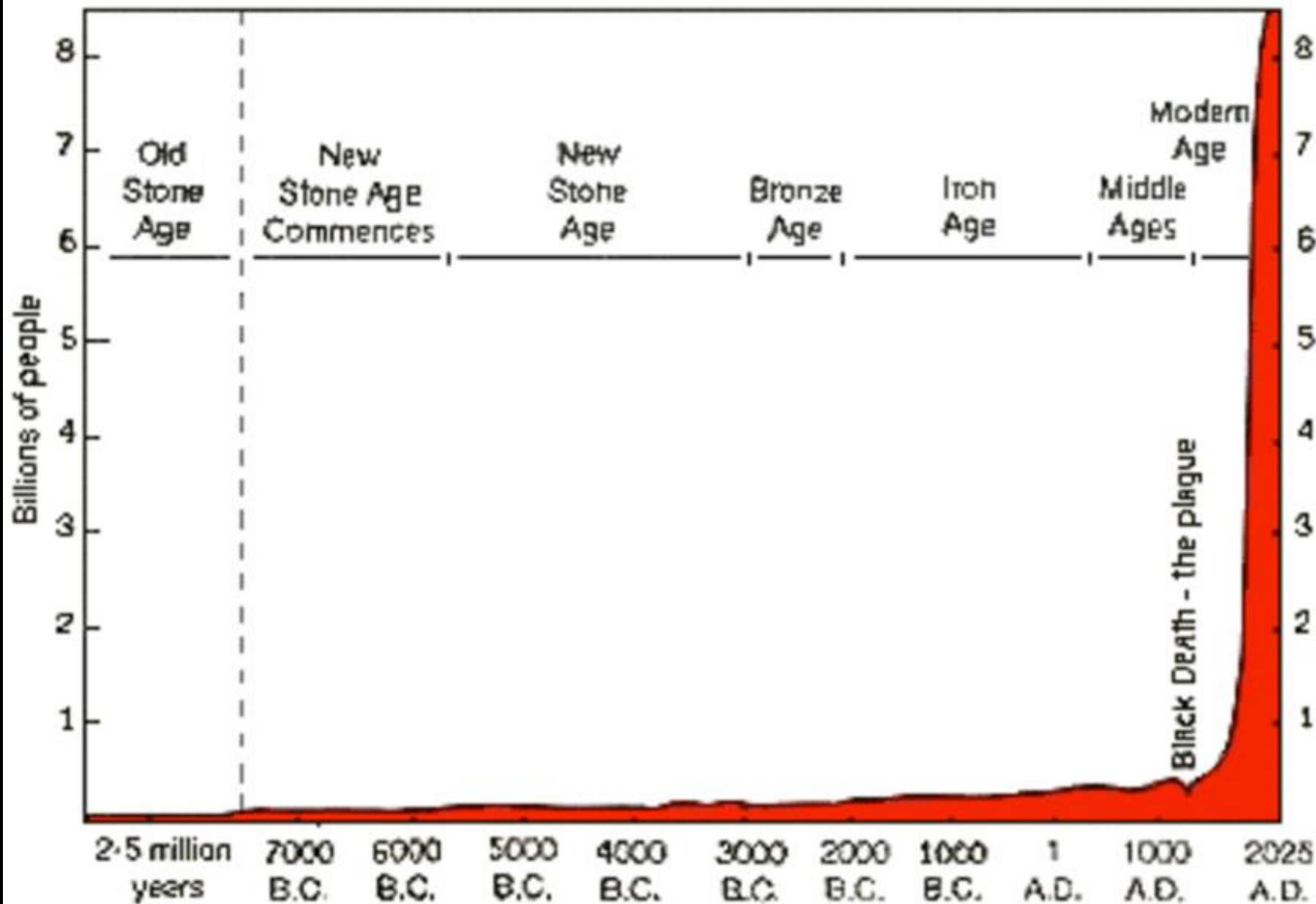
A woman with curly hair, wearing a wide-brimmed straw hat and a black long-sleeved shirt, is sitting in a meditative lotus position on a purple mat in a grassy field. She has her hands resting on her knees in a mudra. A white sign is suspended in front of her, held up by thin sticks. The sign contains the text: "The Future of All Life Depends on our Mindful Steps". To her left, a black bag is lying on the grass. The background is a vast field of green grass with scattered yellow wildflowers.

The Future
of All Life
Depends on
our Mindful Steps

May 2017
Meditate-pray the frack out of Boulder



World Population Growth Through History

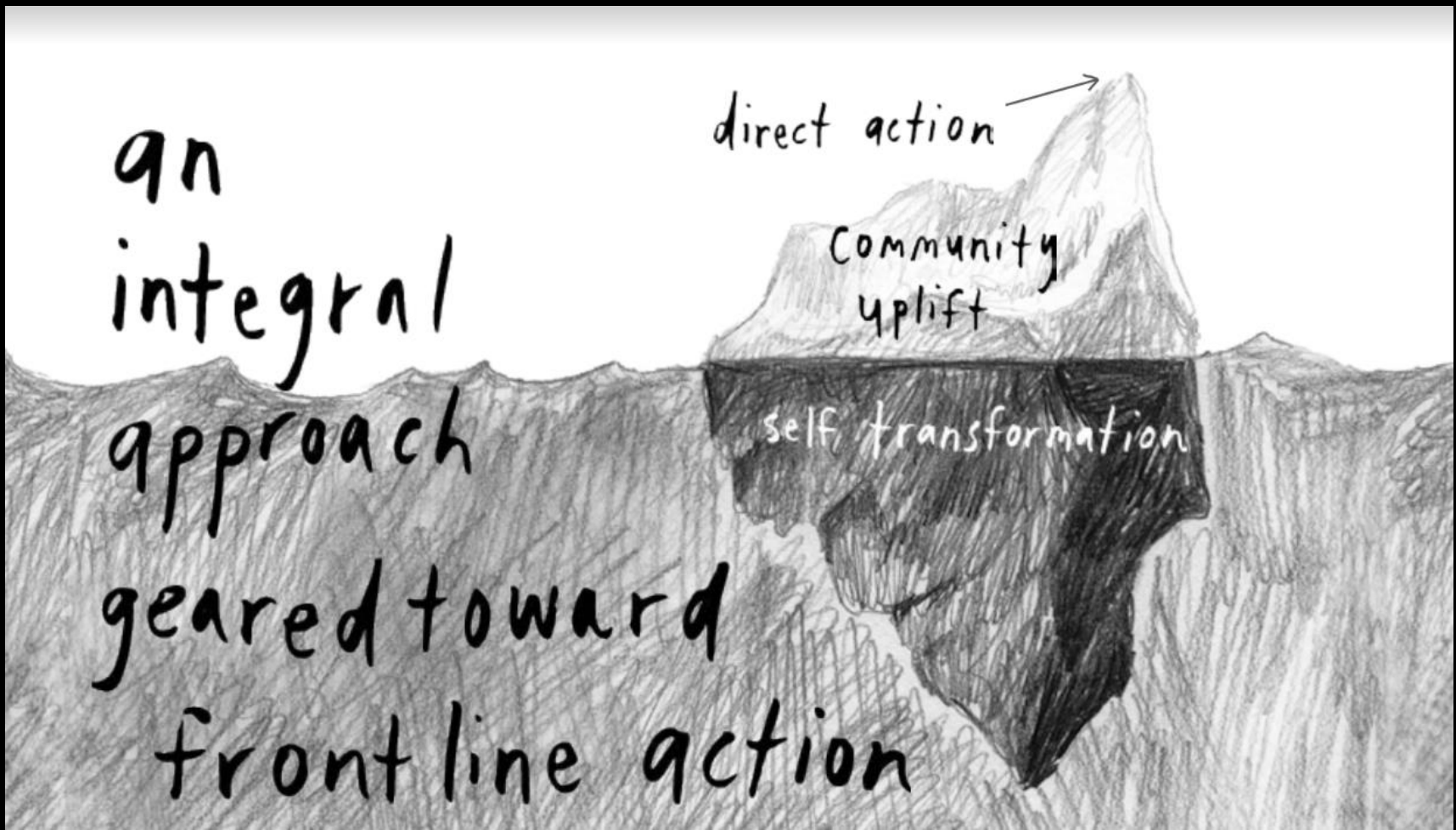


What does the world truly need?

Reforming a system

VS

deeply transforming all parts of life + economy?



It isn't just about climate! Geoengineering will not heal us!

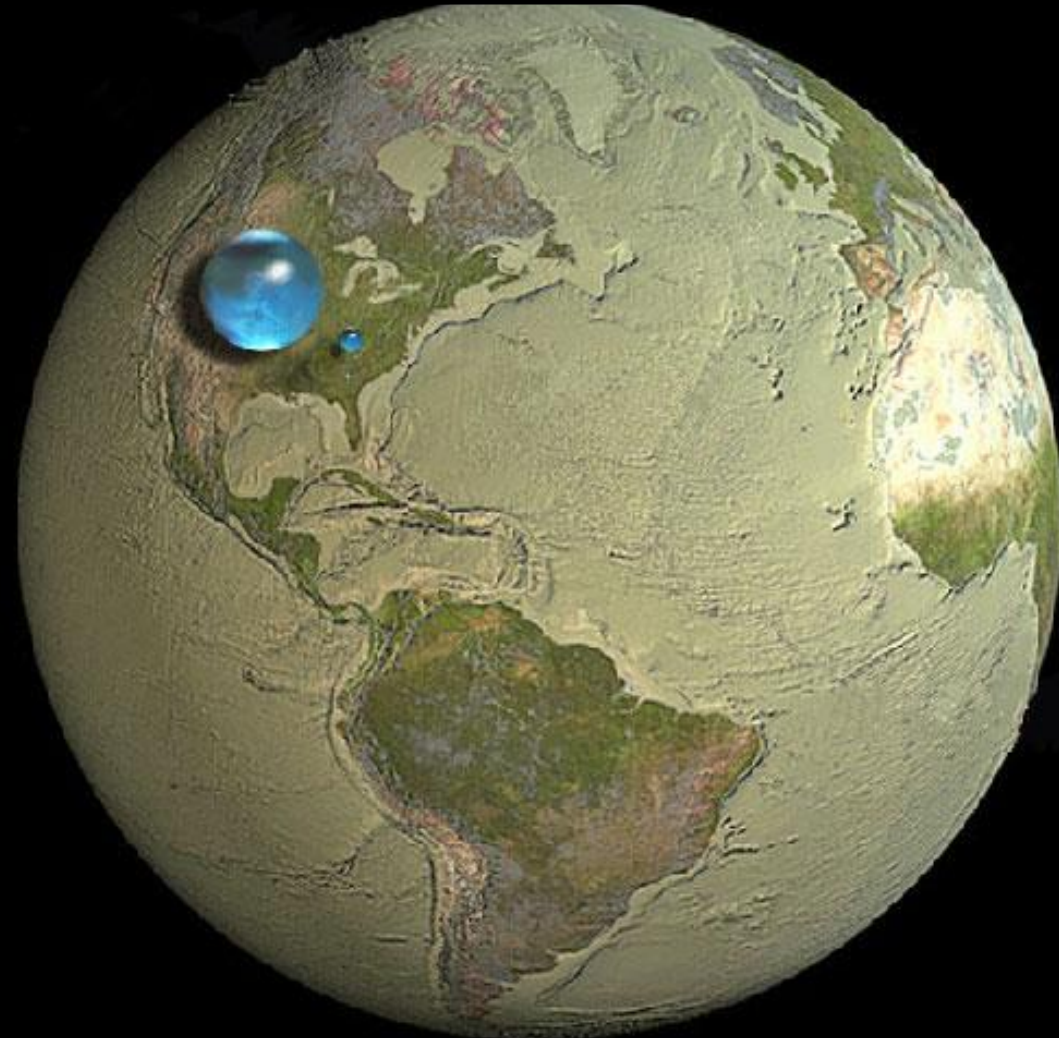
Freshwater
50-100 miles sphere



Topsoil:
2-8 inches



Atmosphere:
20 miles



Water in, on, and above the Earth

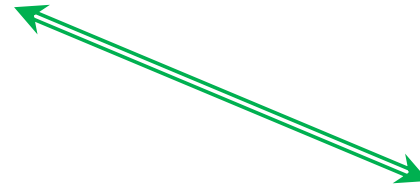
• Liquid fresh water

Resilient mindful individuals

Work on physical, psycho-spiritual and economic health

Loosen grip of consumerism & speed: Mindful conservation

Transform consciousness via connection with nature or Buddha mind



Wise communities

Question our values & spiritual institutions

Bear witness to grief, confusion, gratitude & joy

Stand in solidarity with the most vulnerable members

Model harmonious relationship to nature for society



Strategic Actions (Constructive & Obstructive)

Communicate & build coalitions across difference & diversity

Use socio-political & economic levers to curb pollution & injustice

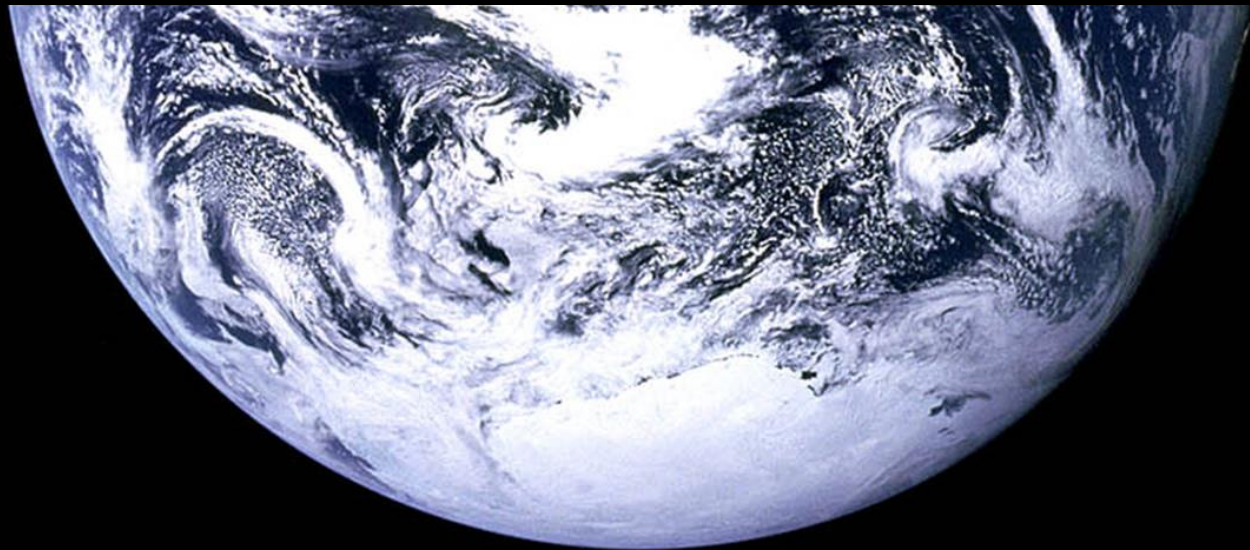
Transform economy through local investment and/or non-financial capital

Buildings, art, governments, educational & media institutions that serve all beings

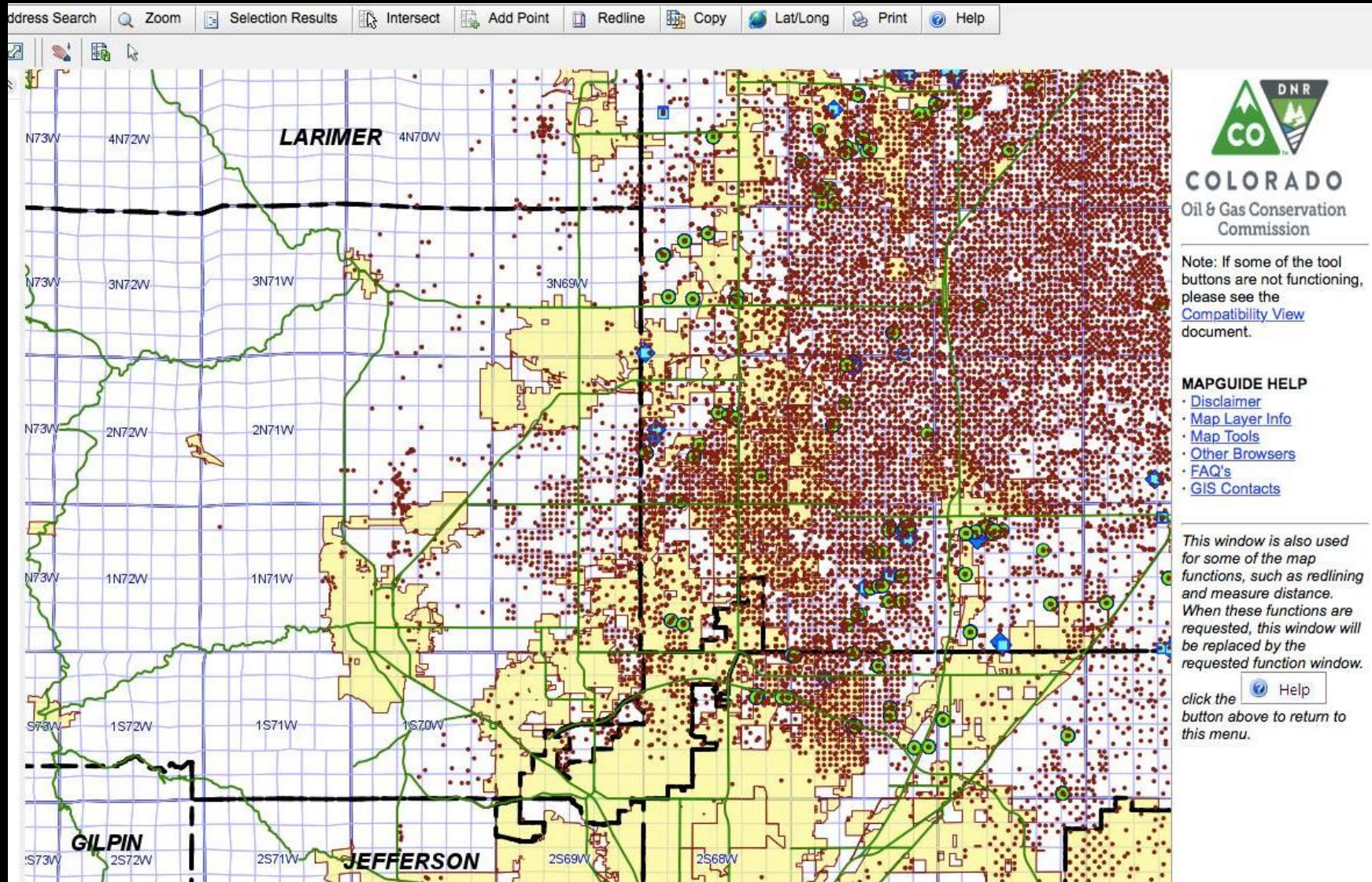




Trump, women and youth!



Rape of mother Earth in Boulder, Colorado



Meditate-pray the frack out of Boulder



**We worked hard for 1.5 years
&
failed to limit fracking in
Colorado**

Satyagraha = Asserting Truth



Grandpa with Vinoba Bhave, Gandhi's foremost satyagrahi

People gonna rise like water

We gonna calm this crisis down

I hear the voice of my great granddaughter

Please keep it in the ground (1)

Please know your neighbors now (2)

Get native history right (3)

Remember Black'n Chica-na lives (4)

Sing & dance with birds & winds (5)

Learn to be simple & still the mind (6)

 Check for updates

This Issue



Climate change in the Fertile Crescent and implications of the recent Syrian drought

Colin P. Kelley^{a,1}, Shahrzad Mohtadi^b, Mark A. Cane^c, Richard Seager^c, and Yochanan Kushnir^c

Author Affiliations 

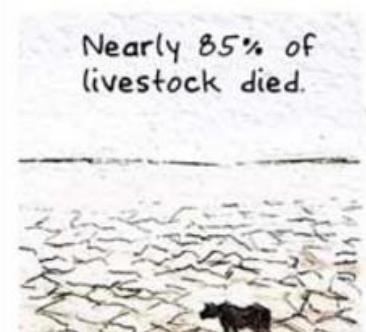
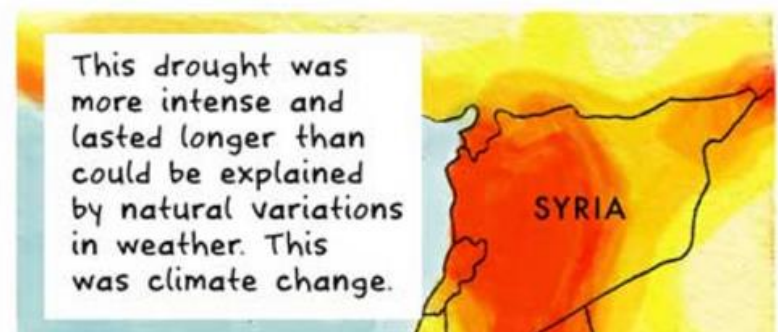
Syria's Climate-Fueled Conflict, In One Stunning Comic Strip  

Edited by Brian John Hoskins, Imperial College London (received review November 16, 2014)

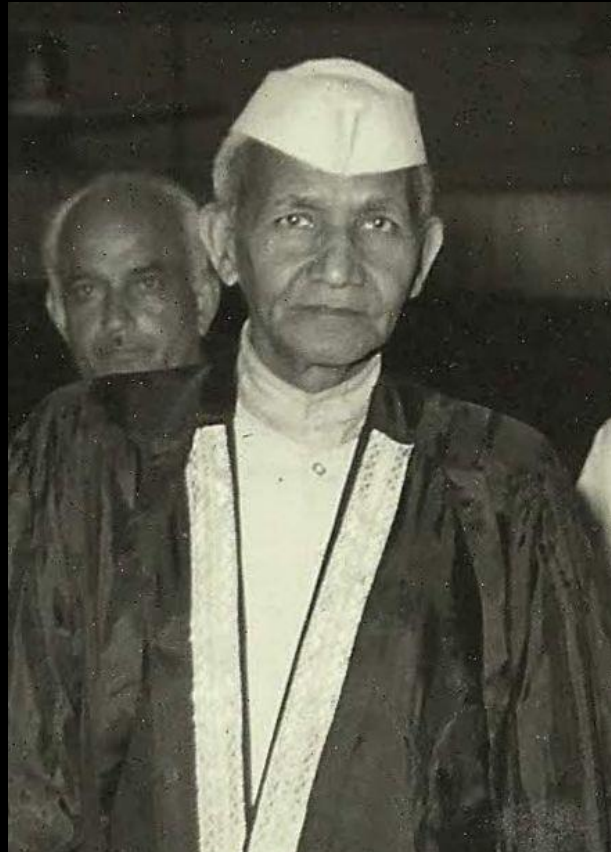
Abstract Full Text Authors

Significance

There is evidence that the recent drought in the instrumental Fertile Crescent forced rural families to urban centers. Climate change pressure, supported by climate models, increased the probability of a 3-year drought as severe as the one that occurred alone. We conclude that human-induced climate change fueled conflict.



My roots -- My grandpa



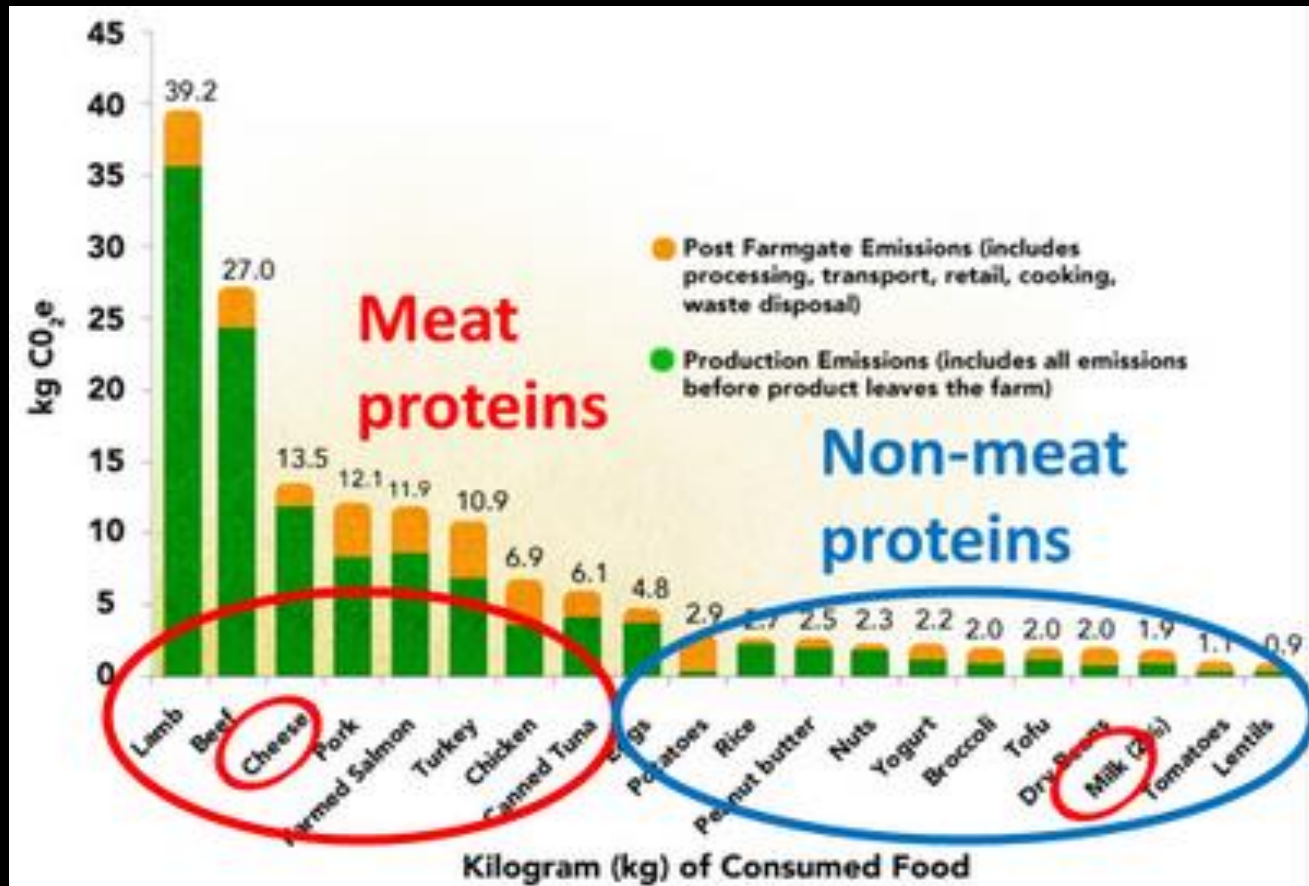
"One can not play safe and hope that a corrupt system will change itself. To weaken the cycle of corruption, it is essential that wise & courageous individuals step out of it and build public opinion even if it involves physical and financial harm". - Babuji

Lawyer, Gandhian, National leader: moolchandjain.org

SHIFTING DIETS AND REDUCING WASTE

- **Food waste:** ~25 % of the world's food calories and 50 % of total food weight are lost or wasted before they can be consumed. (**Rich vs. poor**).
- Today ~55% of the world's crop calories feed people
 - 36% to livestock
 - 9% turned into biofuels and industrial products.

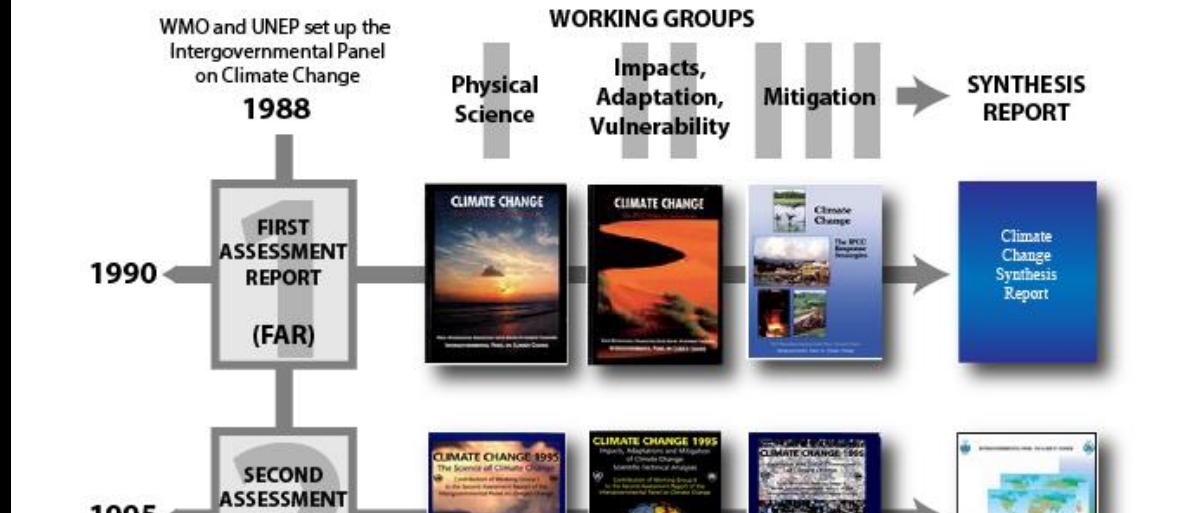
- For every 100 calories of grain we feed animals,
 - 40% as milk,
 - 22 % eggs,
 - 12 % chicken
 - 10% pork, or
 - 3% beef.



Methane & ongoing Extinction

**Please see this video online
(not attached to powerpoint)**

<https://www.youtube.com/watch?v=sRGVTK-AAvw>



Conservative process

~195 countries approve summaries line by line



Trump's Executive Order: More Fossil Fuels, Regardless of Climate Change

Energy and Environment

One of the most troubling ideas about climate change just found new evidence in its favor

Scientists understood the climate 150 years ago better than the EPA head today

Trump has launched a blitzkrieg in the wars on science and Earth's climate

Trump's anti-science budget, anti-climate executive orders, and general disdain for scientific expertise come at a bad time

Executive order to effectively withdraw from Paris climate treaty

Missions

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March 22, 2017

Sea Ice Extent Sinks to Record Lows at Both Poles



Arctic sea ice appears to have reached on March 7 a record low wintertime maximum extent, according to scientists at NASA and the NASA-supported

Naropa peace studies class notes

Roadblocks for activists

Root causes of problems

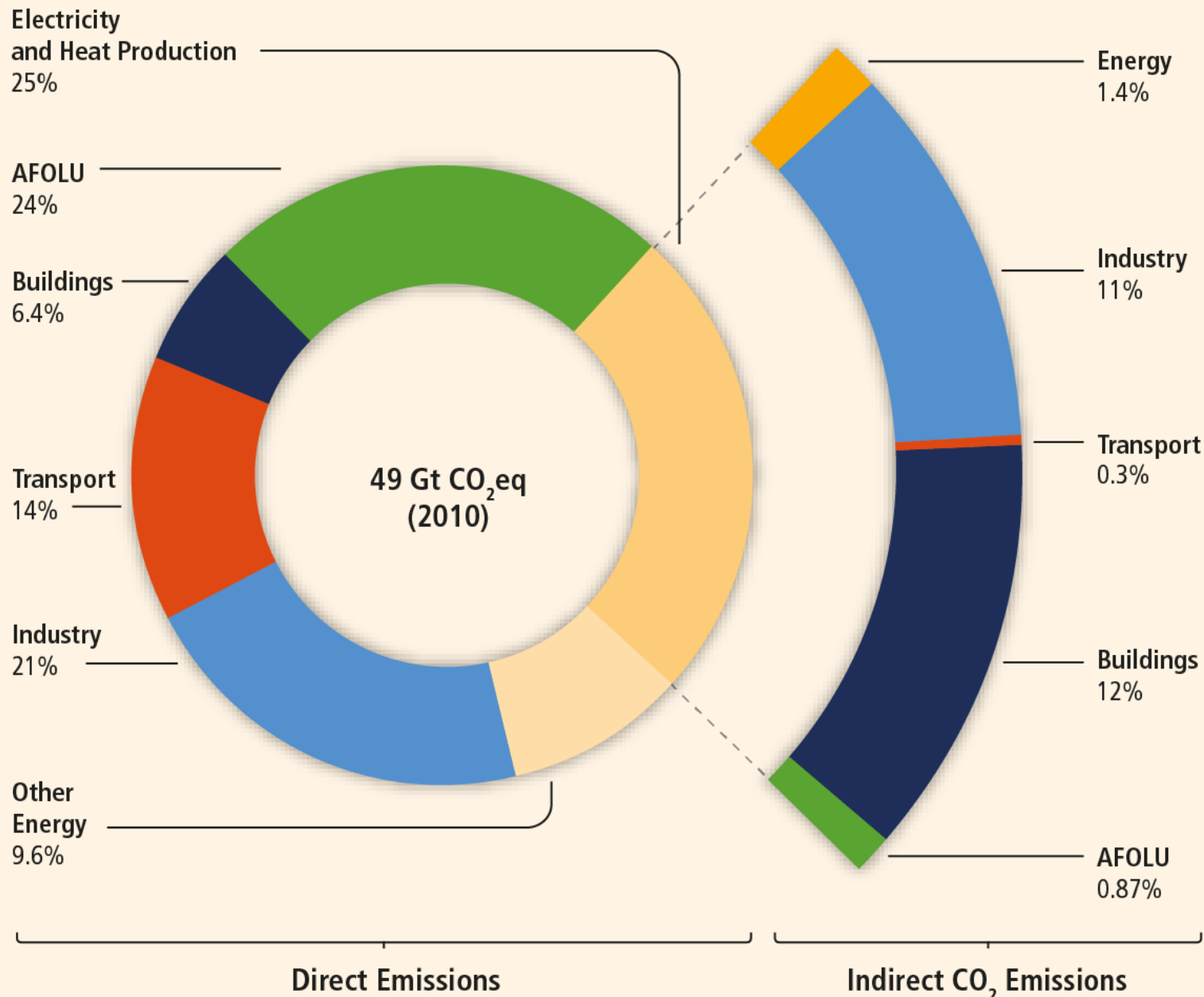
- Us vs them
- Lack of nature connection
- Level of ignorance about science & scale of problems
- Lifestyles
- Extractive economy
- Lack of connection with ourselves
- Aversion to suffering
- Psychic numbing
- Power structures
- Egotistical
- Value systems
- Individual actions don't matter
- Industrialization

- Bodily harm
- Financial harm
- Loss of relationships
- Sadness/grief
- Privileged NIBMY and lack of action on global issues
- Lack of education on law/power
- What is our YES?
- Privatized info/media
- Hierarchy

Path ahead + Solutions

- Step into wilderness
- Urban permaculture
- Mass civil disobedience
- Reconnect and bridge-building with family/friends
- Personal empowerment/meditation
- Sacred communication
- Art of community building
- Sacrifice/courage
- Strategic education

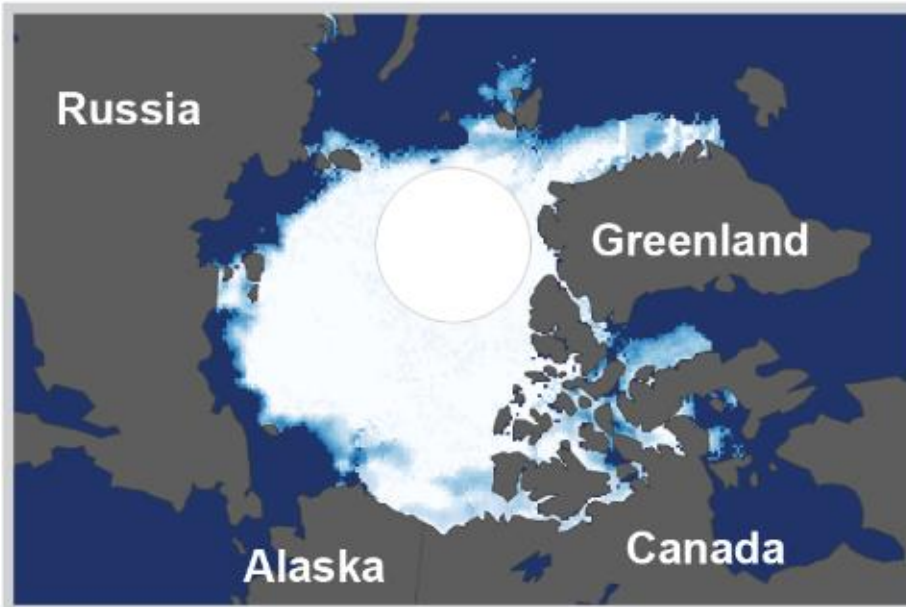
What sectors produce GHGs?



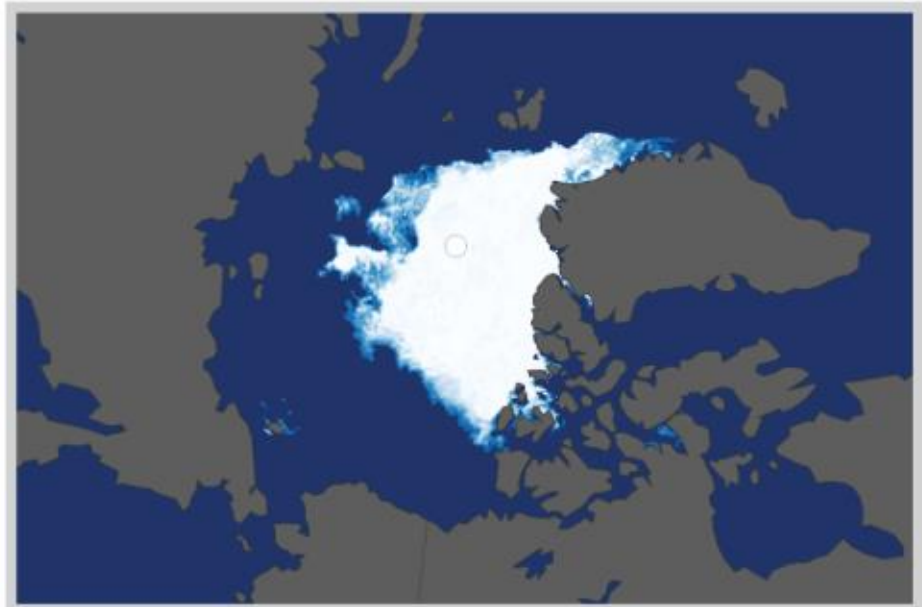
So far....

Direct links: Glaciers shrinkage, heat, drought, fires

Arctic Sea Ice



Sept. 1984



Sept. 2012