

Bold Action

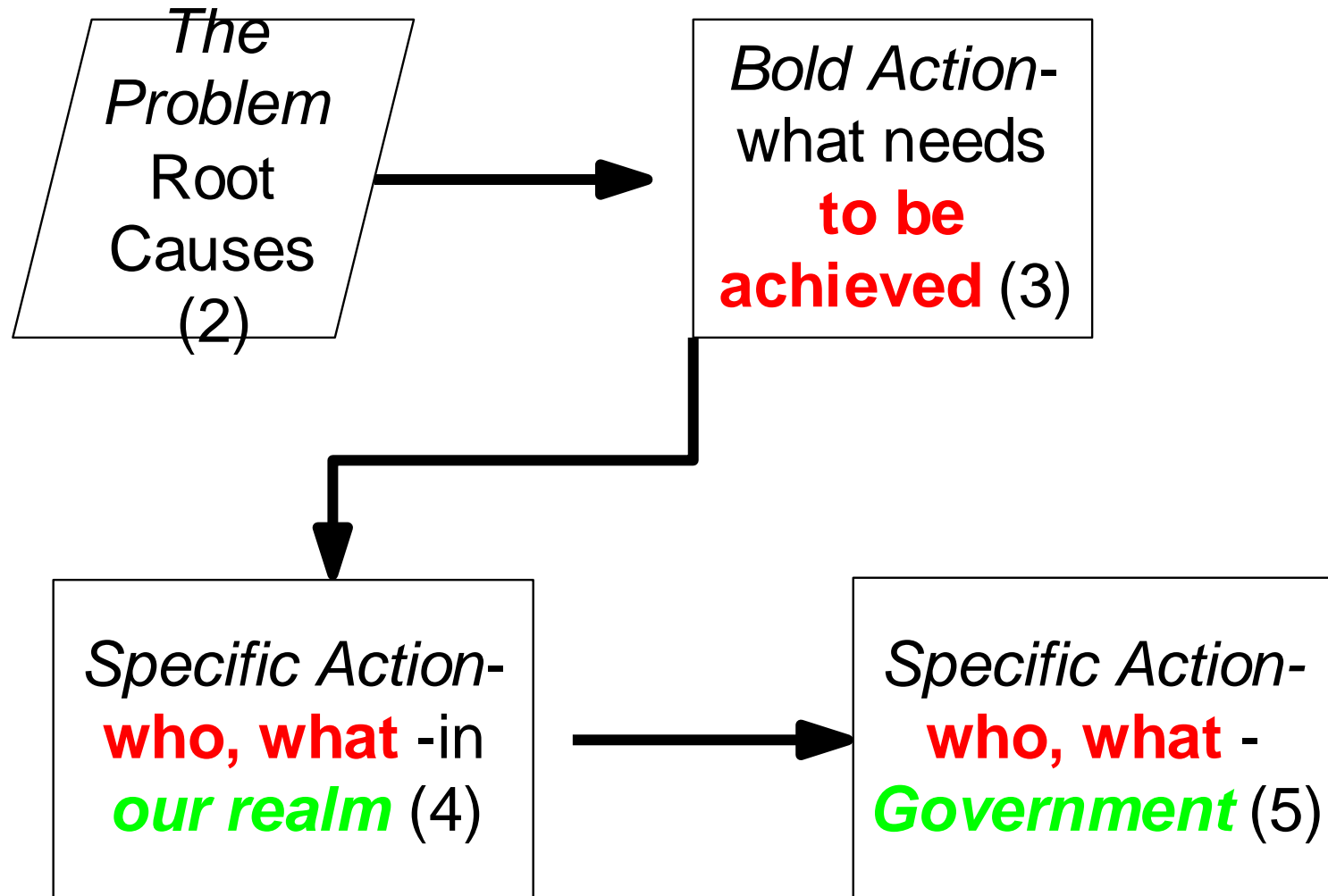
This Fragile Earth, Our Island Home

Session 3 of 6

Interfaith Association of Greater Long Beach NY



Roadmap



Agenda

- Basic Framework
- Caveats
- The Means
- Uncertainty
- Summary
- Q&A
- What's Next



Basic Framework

Natural World's Biggest Ally

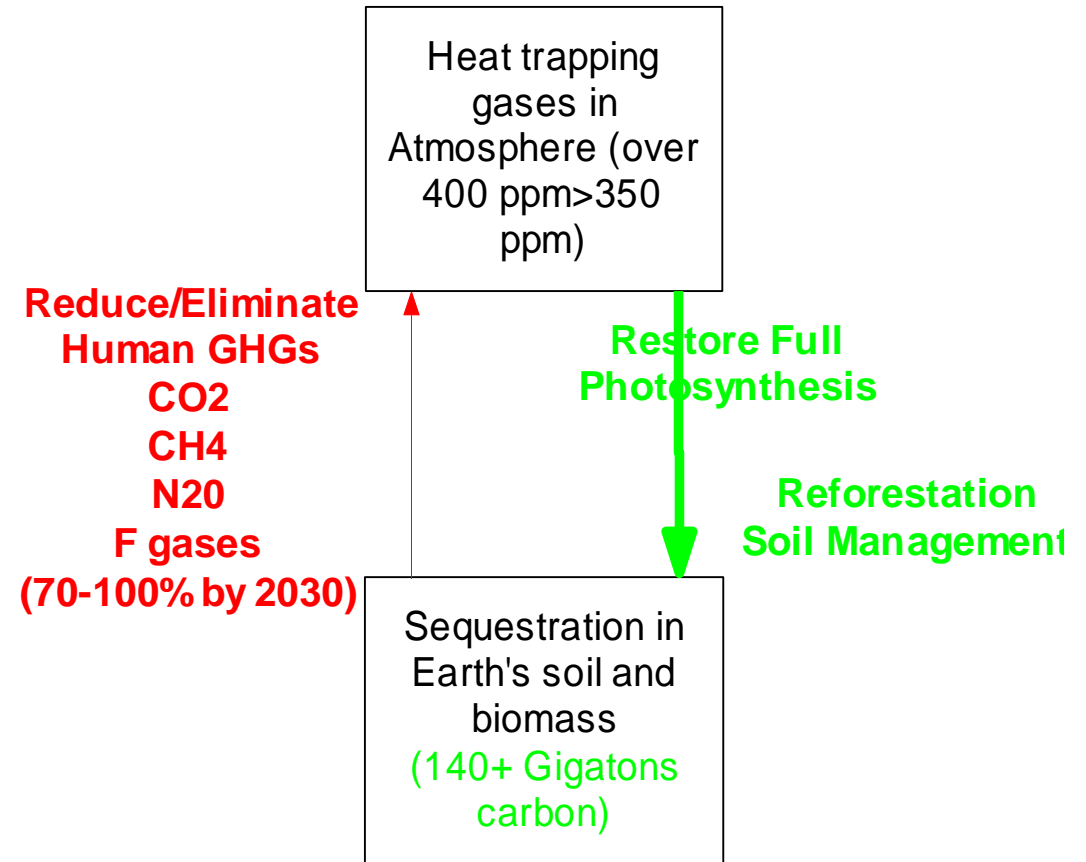
Reduce emissions 70-100% by 2030 (almost 8% annual reduction)

- Conservation
- Transition to zero emission energy

Remove 140+ Gigatons carbon from the atmosphere

- Reforestation/afforestation
- Soil management

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Caveats

- Climate “adaptation” and “mitigation”
- “Save the planet”
- Misleading adjectives
 - “clean” and “renewable”
- Net zero by 2050



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Climate *Adaptation* and *Mitigation*

IPCC:

- Adaptation: the process of adjusting to actual or expected climate change
- Mitigation: human intervention to reduce heat-trapping emissions or remove carbon already in the atmosphere
- We cannot focus exclusively on adaptation (or resiliency), The climate will continue changing and the long-term impact of global warming will be too severe to manage
- Climate justice issues

Communities that embrace “*adaptive mitigation*” (those that help their residents adapt to a changing climate while also reducing emissions and sequestering more carbon) are better positioned to remain livable in the years ahead. - Jeffery Ravens, *Forbes*

Save the planet

Whoever uses this phrase is clueless about climate change. If done by a corporation, they are “greenwashing” you. If an individual, they are uninformed. Earth has existed for billions of years and will continue to exist for billions more. Humanity is facing an existential crisis. To think the planet needs to be saved by humanity is just anthropomorphic hubris.

David Houle and Bob Leonard, [Moving to a Finite Earth Economy: Manifesto](#),



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Misleading adjectives – clean and renewable

- Natural gas: anything but clean
- Some renewable (wood, biofuels) contribute to the problem
- Solar, wind, nuclear, small hydro and geothermal energy meet the criteria for Bold Action (“*Zero Emission*”)



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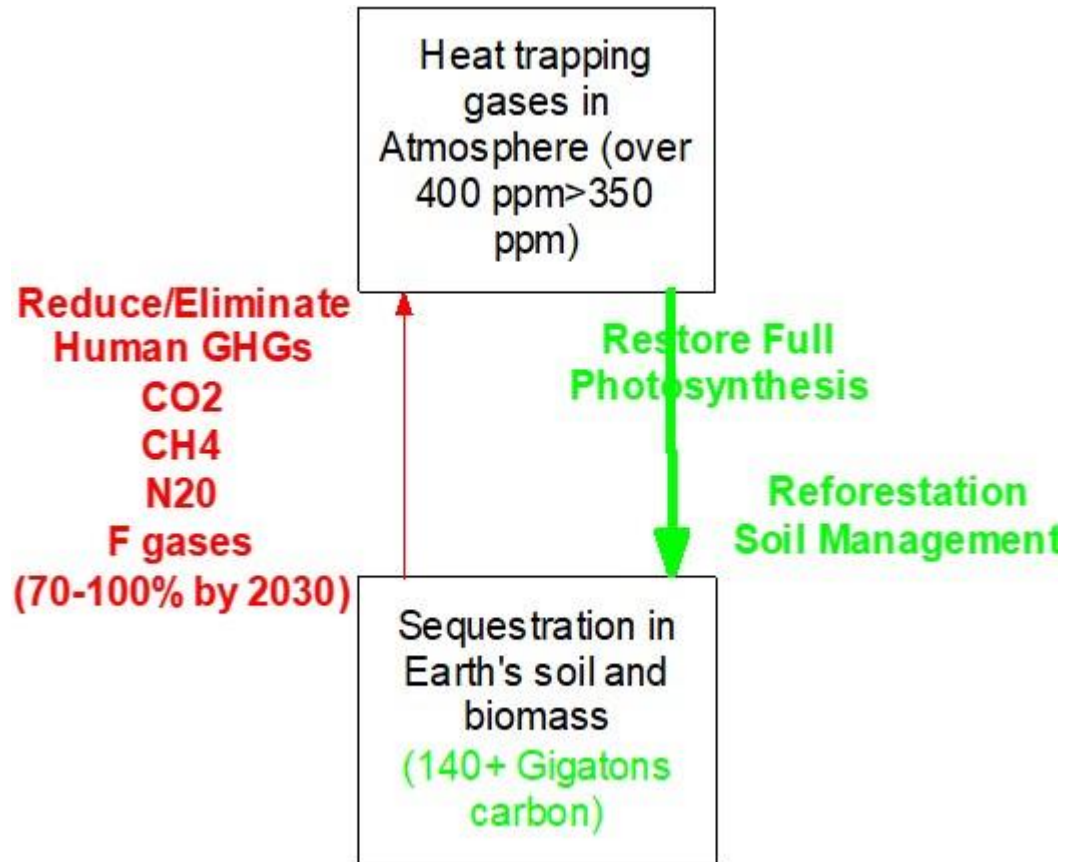
Mistaken goal: net zero by 2050 –

- “Net zero” – magical thinking with hypothetical carbon capture, allows us to pencil out emission goals
- “By 2050” - This deadline feels comfortably far away, encouraging further climate procrastination. Comfortable for worlds political leaders (term limits)



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What needs to happen – the means

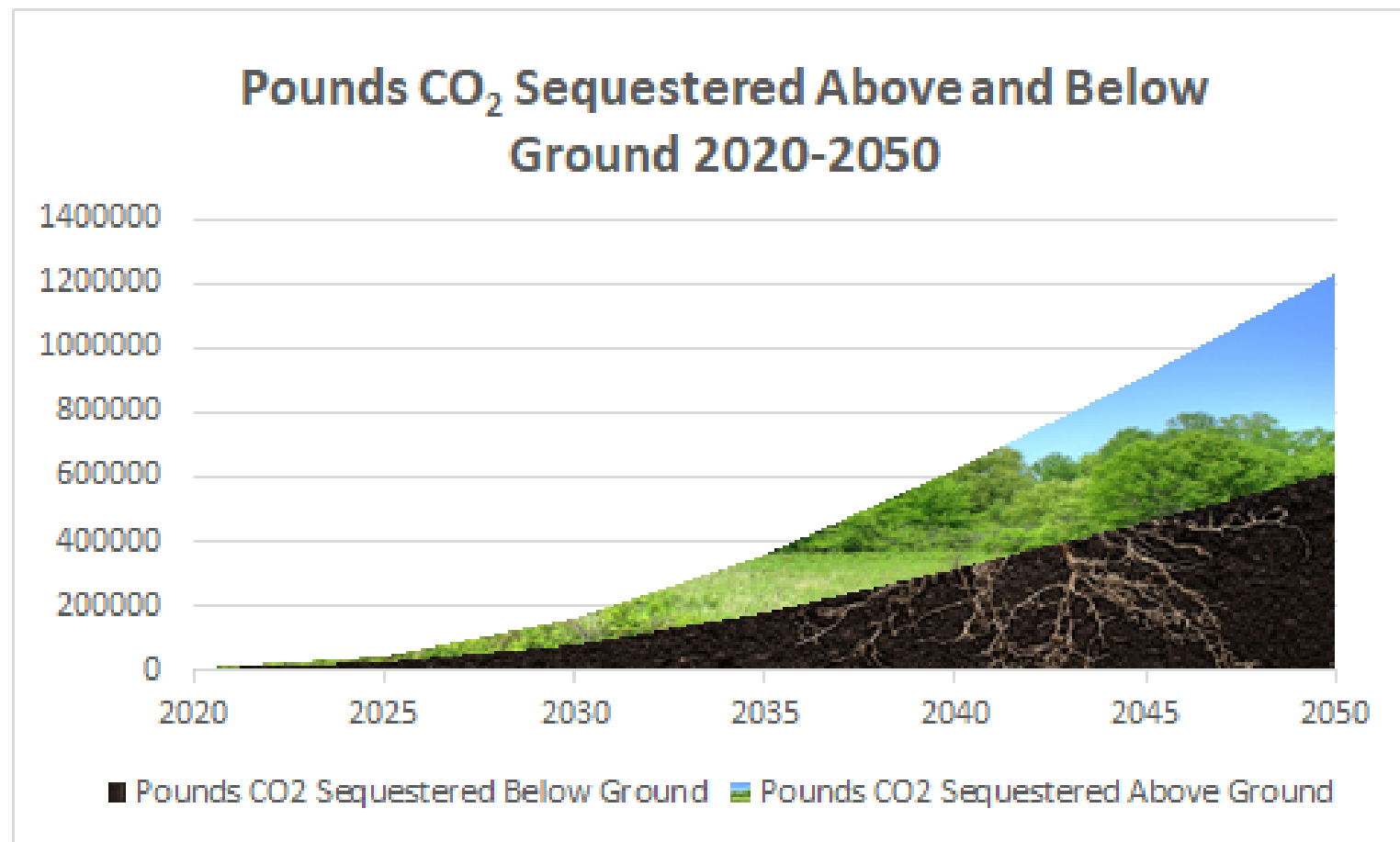


- Plant lots of trees
- Reduce Energy Consumption
- Electrify (almost) everything, generate power from non-emitting power sources
- Improve food system
- Finite earth economy
- Abolish corporate personhood

Plant Lots of Trees

- Reforestation: *Global Tree Restoration Potential*
- Afforestation (#15): the creation of new forests where there were none before.

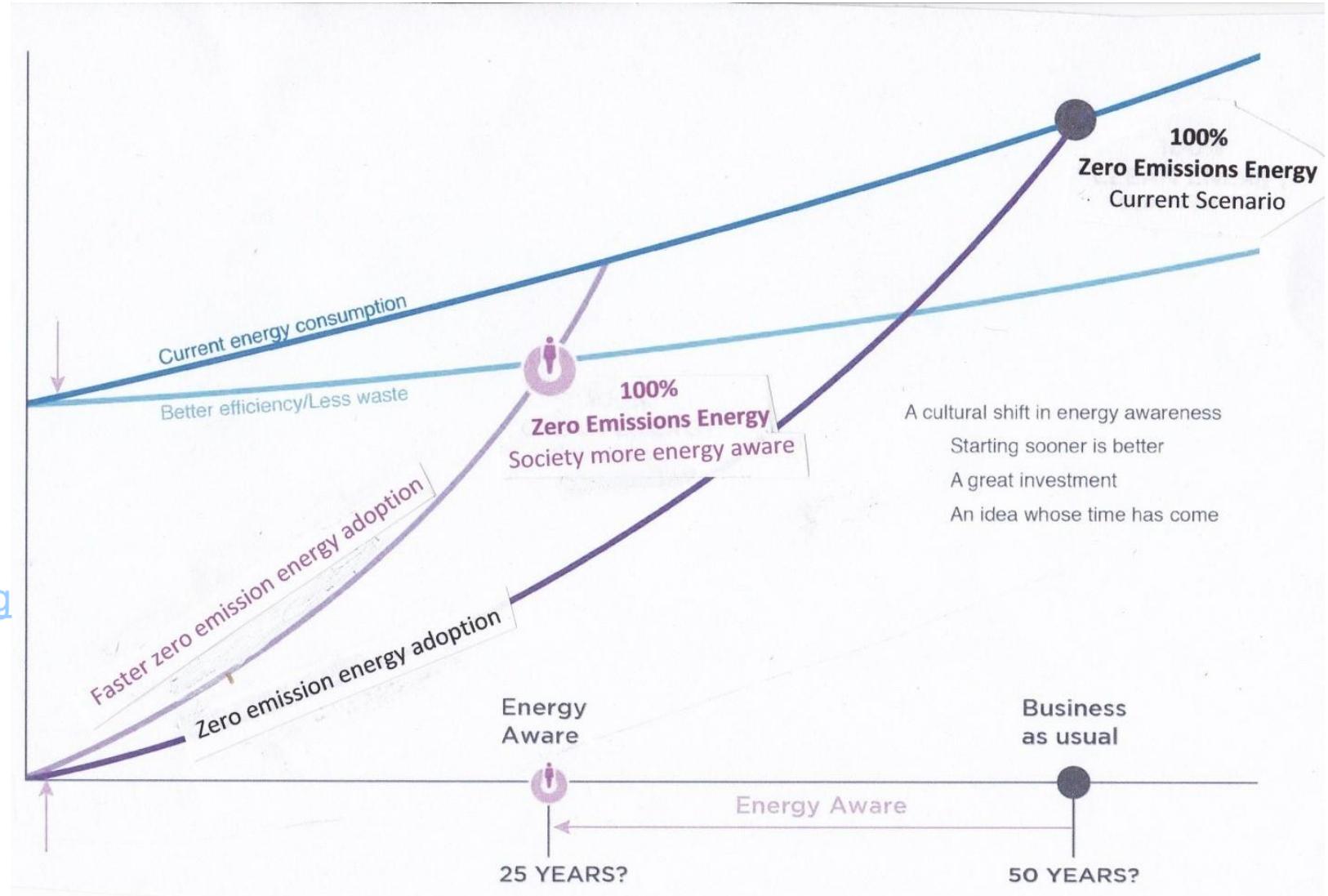
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Reduce Energy Consumption

- Efficiency (LEDs)
- Conservation (switch off lights)

[Generation 180.org](http://Generation180.org)
presentations to
Citizens' Climate
Lobby in January
and June 2017.



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Electrify (almost) everything; generate power from non-emitting power sources

Bending the consumption curve WAY down (as much as 50%)

Zero Emission Generators

- Wind turbines (#2, 22)
- Solar farms (#8)
- Geothermal (#18)
- Nuclear (#20)
- Rooftop Solar (#10), NREL: almost 40% of US needs
- Small hydropower (#48)



PS: Electrify *almost* everything

- Heat water with the sun (#41)
- Taps the sun's radiation, rather than fuel or electricity.
- Water heating is a major energy use- a quarter of residential energy use worldwide; roughly 12% in commercial buildings,
- Solar water heating can reduce fuel consumption by 50 to 70 percent (bend that curve!)
- 2-4 year payback are possible
- As much as 25% return on investment



Improve Food System

Responsible for ¼ of human emissions, loss of opportunities to sequester

Behavior changes

- Reducing food waste – 8% global emissions, help meet demand for food (#3)
- Plant based diet – emissions, health, productivity (#4)

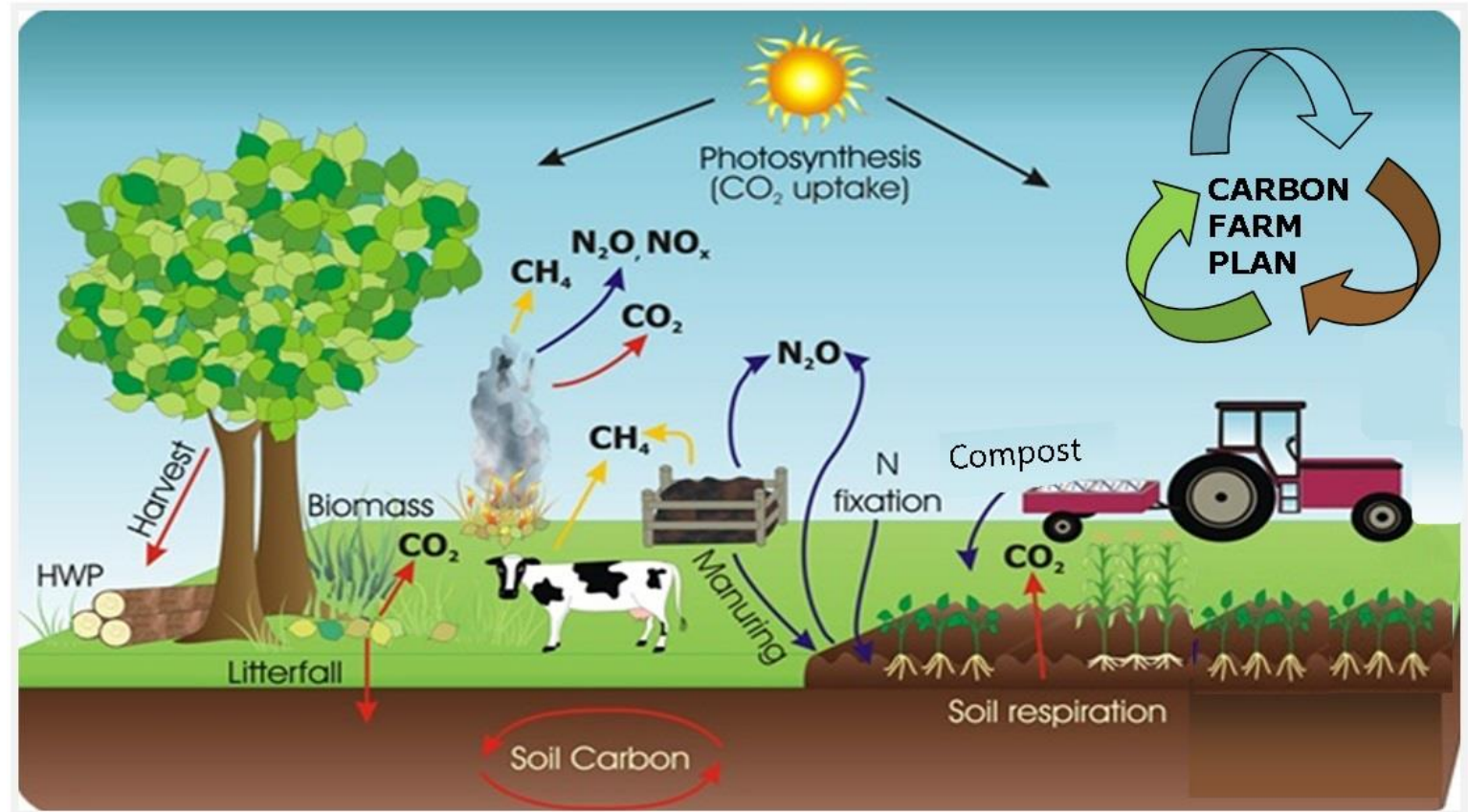
Farming practices



Forks over Knives

Improving Food Systems -Farming Practices

- Silvopasture (#9)
- Regenerative Agriculture (#11)
- Composting (#60)
- Fertilizers-nutrient management (#65)
- Etc.



Credit: Marin Carbon Project

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Finite Earth Economy

Status Quo

- Almost ½ Americans in dire financial straits
- Consuming more than our share
- Feeding the climate crisis
- GDP does not enhance life satisfaction, alleviate poverty, or protect the environment



New Economy Characteristics

- Don't reward bad behavior – no more subsidies. Divest.
- Punish bad behavior- a price on carbon.
- Reward good behavior –pay for sequestering carbon. Provide good paying jobs
- New metrics- life expectancy, a living wage, amount of carbon in the atmosphere, and education.



Economics of climate mitigation

- ❑ Doing nothing or doing too little to mitigate climate threatens the whole economy with collapse
- ❑ Zero-emission energy is already cost competitive if not outright cheaper (with prices falling dramatically) than fossil fuels
- ❑ Solar and wind energy are returning a healthy return on investment while stimulating the economy and creating jobs
- ❑ Health benefits from reduced pollution (no smokestacks, no tailpipes) translates to dollars and lives saved.

Abolish Corporate Personhood

- Constitutional rights belong to corporations (since late 1800s)
- Money as free speech
- Rx: *We the People* amendment
 - constitutional rights reserved for natural persons only
 - spending money on elections not be considered protected free speech.



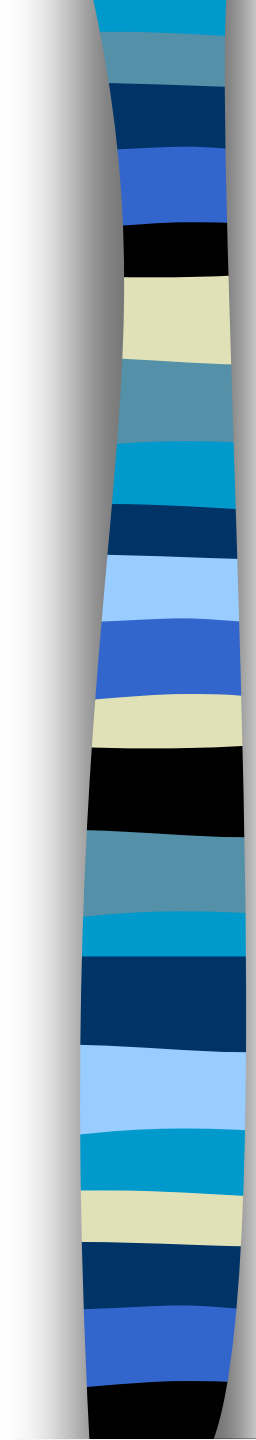
Uncertainty

	Uncertainty A	Uncertainty B
Alternative 1	Outcome 1A	Outcome 1B
Alternative 2	Outcome 2A	Outcome 2B

Why should we commit to bold and aggressive action, invest and give up convenience when the rest of the world could fail to take similar action to curb emissions and remove carbon from the air?

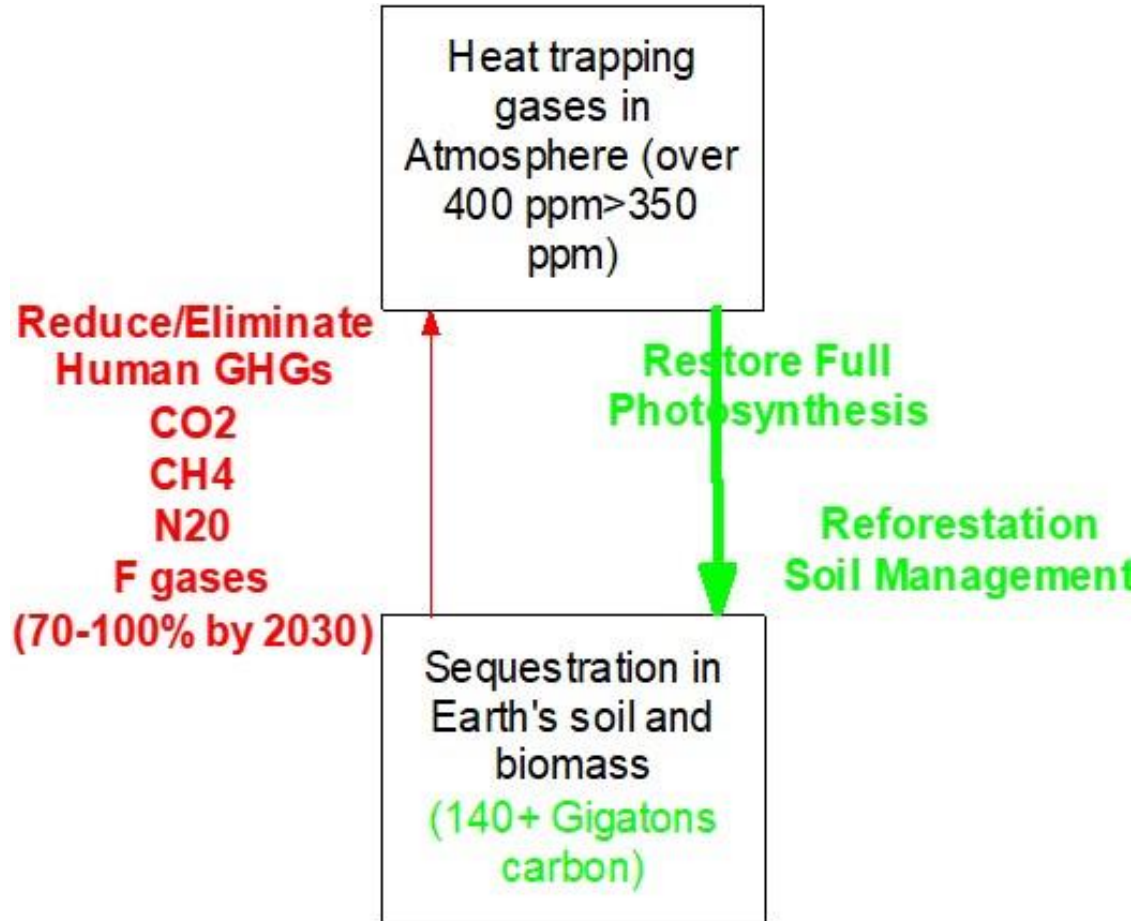
Decision science/Risk assessment

- Lay it out (choices, uncertainties, outcomes)
- Evaluate: decide how to achieve best case, avoid worst case



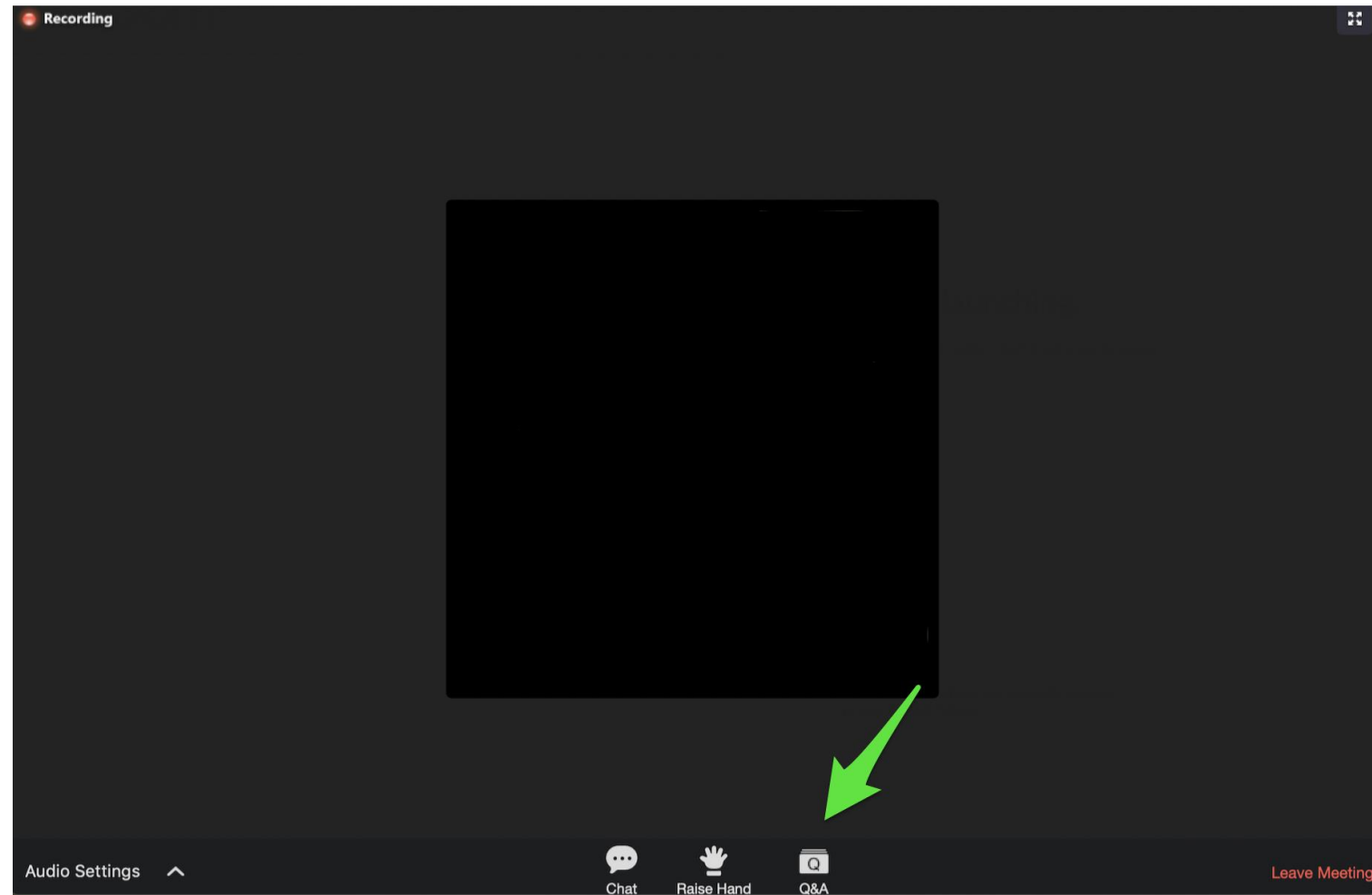
	Others take action	Others DO NOT Act
WE DO NOT act	Blow thru 1.5°C threshold for global average temperature increase above pre-industrial levels, probably later than if nobody was taking action	Worst case Blow thru threshold of 1.5°C global temperature increase above preindustrial levels by 2040
We take Bold Action	Best case – chance to keep global average temperature below 1.5°C threshold above preindustrial levels Economic and health benefits of zero emission energy	World will blow thru 1.5°C threshold, probably at a later date than if nobody took action Economic and health benefits of zero emission energy

Summary



- Become nature's biggest ally
 - 70-100% Emissions by 2030
 - Removal of 140+ GT atmospheric carbon
- Caveats
 - Adapt and mitigate
 - Forget "Save the planet"
 - Delete "clean" & "renewable"
- The Means
 - Plant trees
 - Reduce consumption
 - Electrify everything (almost)
 - Improve food system
 - Finite Earth Economy
 - Abolish corporate personhood
- Uncertainty

Questions



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What's next?

#3 *Specific actions- in our own realms*

Follow up email tomorrow with homework (a quiz)

- Registration for session #4
- References
- Slide show
- Recording of this webinar

Can't wait? Go to
<https://tinyurl.com/withGreta>