

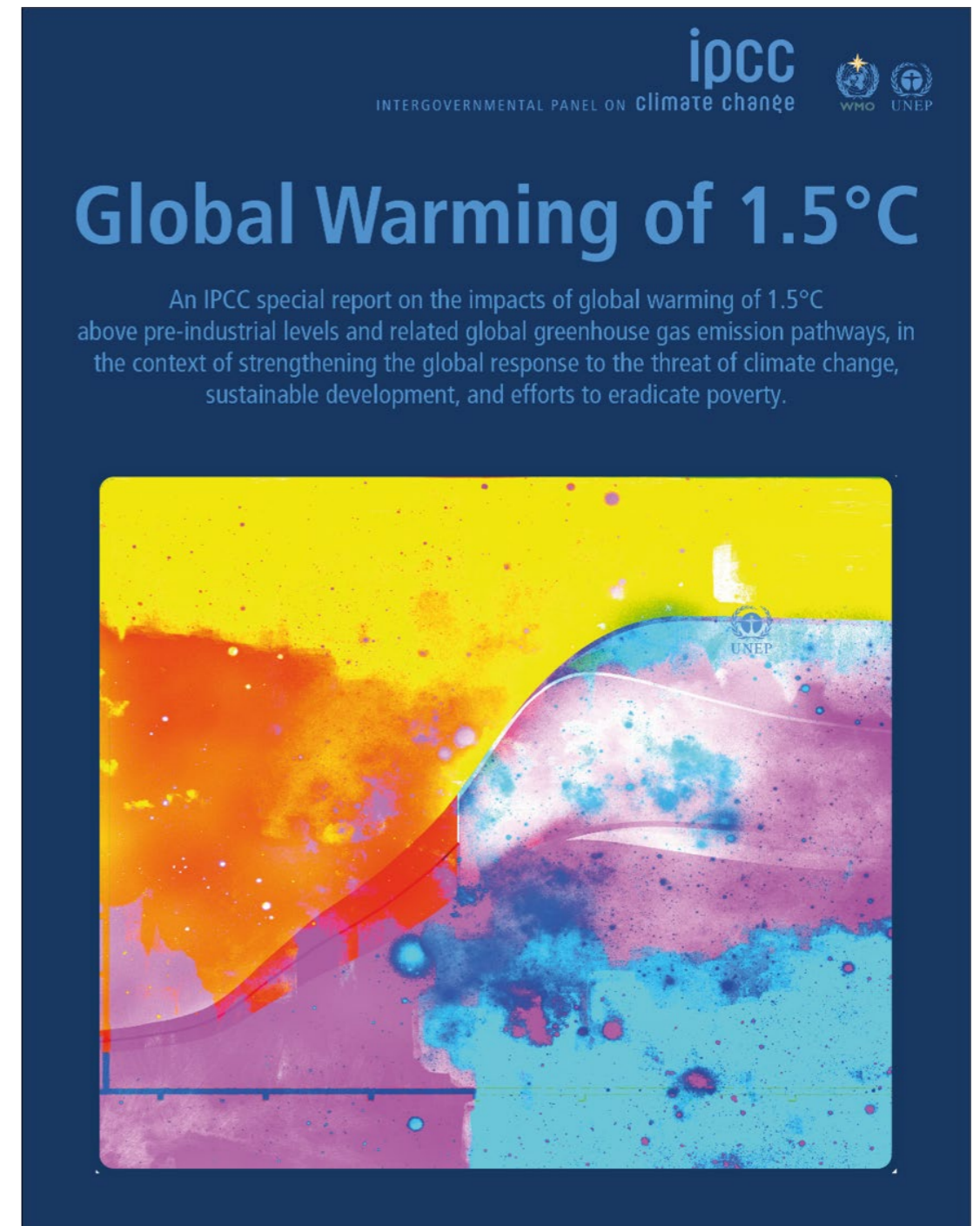
The Climate is Changing Faster Than We Are

Dean Kubani

April 7, 2021

IPCC Special Report 2018

- Need to hold temp rise to 1.5°C
- World currently on track for 3°C to 4°C temp rise
- Need to cut global emissions by 45% (below 2010 levels) by 2030 in order to meet this goal
- Not impossible but will require “unprecedented transitions in all aspects of society”



Top 10 warmest years (NOAA) (1880–2020)

Rank ↕	Year ↕	Anomaly °C ↕	Anomaly °F ↕
1	2016	1.00	1.80
2	2020	0.98	1.76
3	2019	0.95	1.71
4	2015	0.93	1.67
5	2017	0.91	1.64
6	2018	0.83	1.49
7	2014	0.74	1.33
8	2010	0.72	1.30
9	2013	0.68	1.22
10	2005	0.67	1.21

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Los Angeles Times

CALIFORNIA

All-time record heat across Southern California fuels fires, threatens power supply

By JACLYN COSGROVE, ALEX WIGGLESWORTH, LAURA NEWBERRY, SAMMY ROTH

SEP. 6, 2020 UPDATED 11:04 PM PT

An epic Southern California heat wave crested Sunday with numerous all-time high temperature records set, including a 121-degree reading in Woodland Hills that marked a historic milestone for Los Angeles County.

The broiling temperatures put extreme pressure on the power grid, with malfunctions leaving thousands without power and officials warning that rolling blackouts could affect millions of customers, although that threat eventually was averted.

It also fueled a series of fast-moving brush fires across the region, including one in Angeles National Forest near Duarte that broke out Sunday afternoon and forced Labor Day weekend visitors to flee.

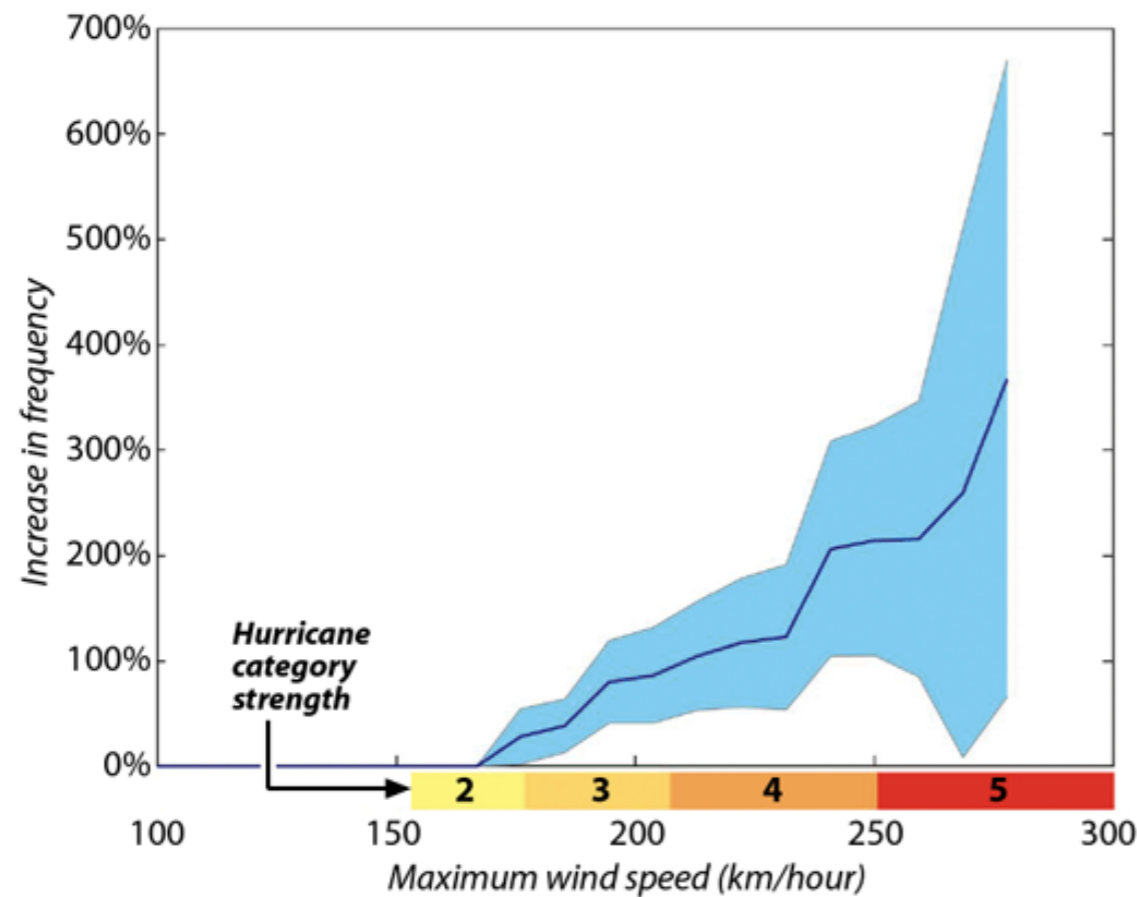
More Frequent and Powerful Storms

Monster Storms Are Growing More Common

The frequency of the most intense tropical storms worldwide has increased since 1980. Those with wind speeds over 250 kilometers per hour (about 155 mph) have more than tripled.

TROPICAL STORM STRENGTH AND FREQUENCY

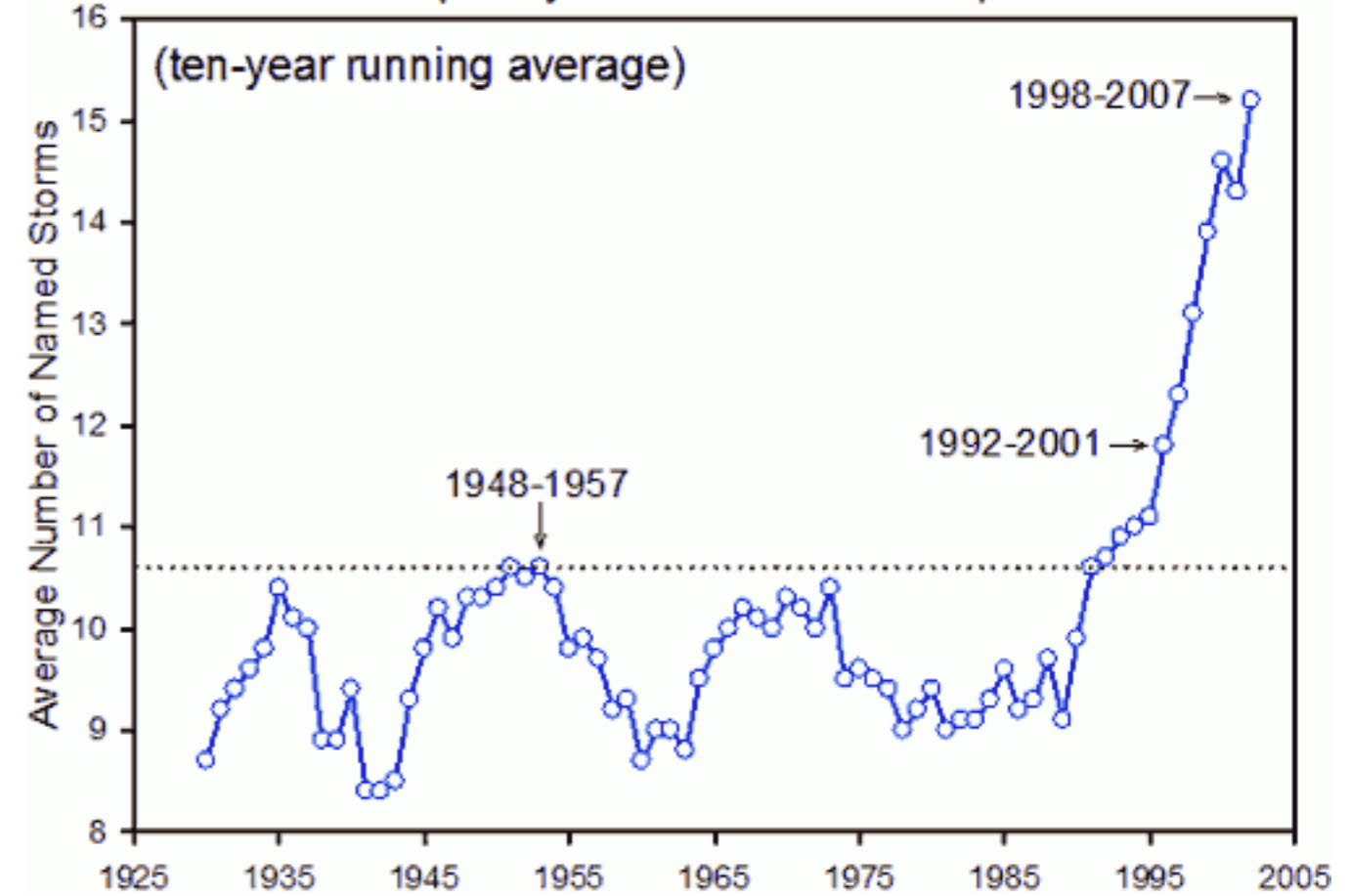
Linear trends, 1980-2016



SOURCE: Kerry Emanuel, MIT

InsideClimate News

Annual Frequency of North Atlantic Tropical Storms



Ice Melting Faster

"Although we anticipated the ice sheets would lose increasing amounts of ice in response to the warming of the oceans and atmosphere, the rate at which they are melting has accelerated faster than we could have imagined,"

"The melting is overtaking the climate models we use to guide us, and we are in danger of being unprepared for the risks posed by sea level rise."

Dr. Tom Slater, Centre for Polar Observation and Modelling at the University of Leeds, Sept 1, 2020

Think 2020's disasters are wild? Experts see worse in future

SETH BORENSTEIN

AP Science Writer

A record amount of California is burning, spurred by a nearly 20-year mega-drought. To the north, parts of Oregon that don't usually catch fire are in flames.

Meanwhile, the Atlantic's 16th and 17th named tropical storms are swirling

"The 2030s are going to be noticeably worse than the 2020s," she said.

University of Michigan environment dean Jonathan Overpeck, a climate scientist, said in 30 years because of the climate change already baked into the atmosphere "we're pretty much guaranteed that we'll have doubt what we have now."

THE NEW REPUBLIC

Ben Ehrenreich / March 18, 2021

We're Hurling Toward Global Suicide

Why we must do everything differently to ensure the planet's survival

WHAT can
we do?

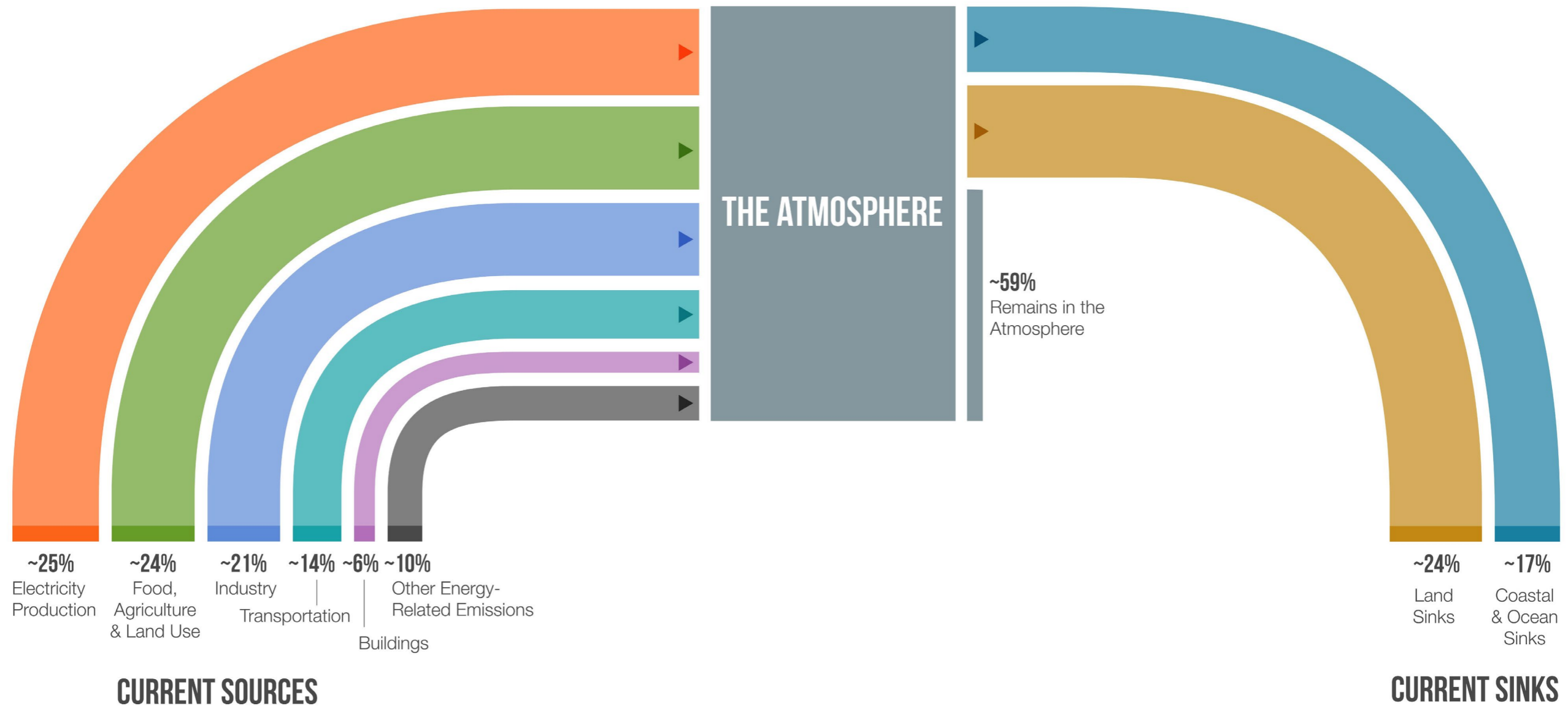
Regenerative Solutions to Global Environmental Challenges

- “Project Drawdown” : First comprehensive and detailed plan to **reverse** global warming
- List of solutions to get to Drawdown by 2050 using **existing technology** compiled by a team of more than 200 scholars, scientists, policymakers, business leaders, and activists

DRAWDOWN
THE MOST COMPREHENSIVE
PLAN EVER PROPOSED TO
REVERSE GLOBAL WARMING
EDITED BY PAUL HAWKEN



EMISSIONS SOURCES & NATURAL SINKS



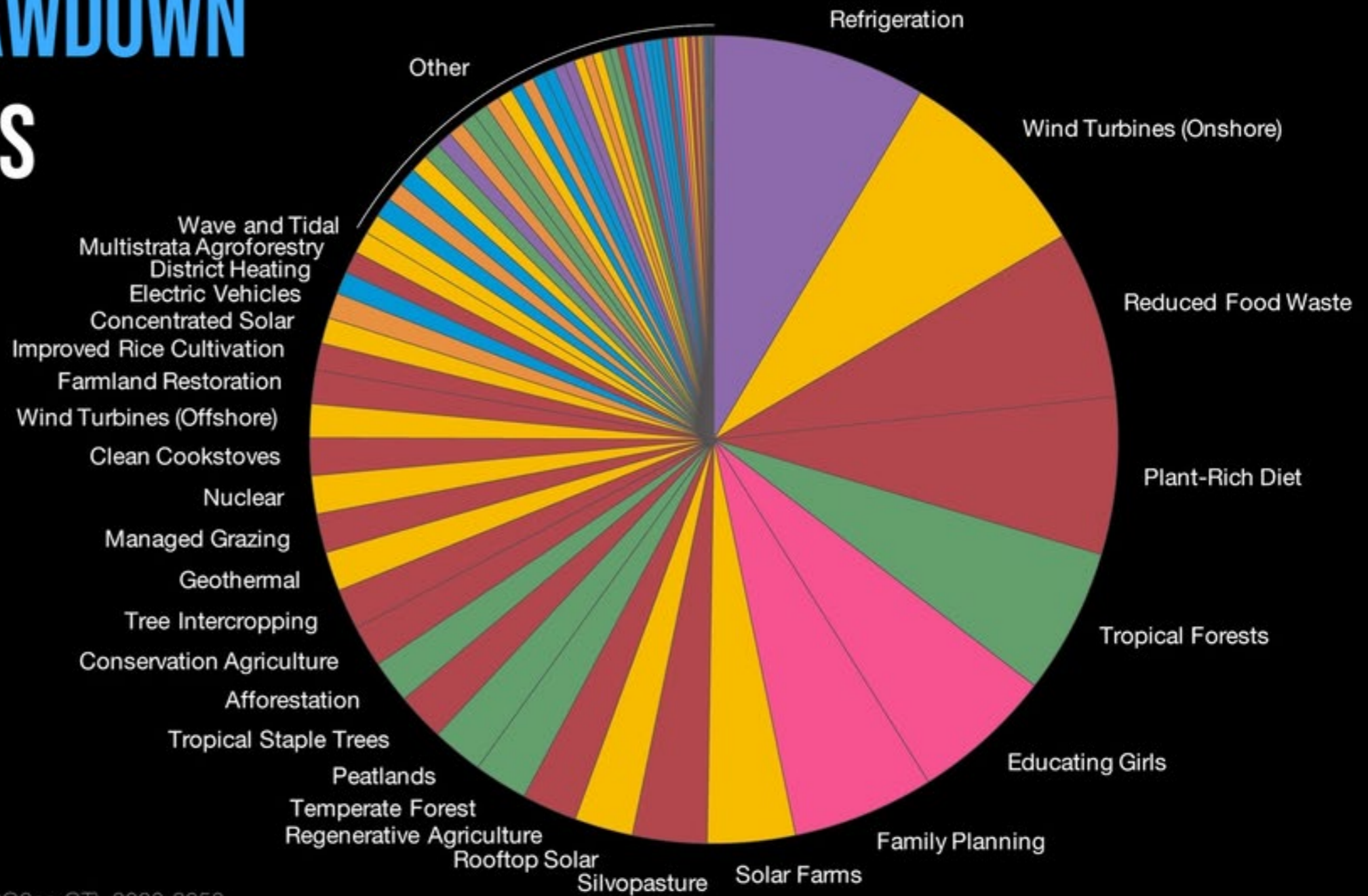
PROJECT DRAWDOWN

80 SOLUTIONS

CO2-EQ: 1,035 GT

COST: \$29.6T

SAVINGS: \$74.4T



Ranked by potential emissions reduction (CO₂eq GT), 2020-2050, as modeled in Project Drawdown's Plausible Scenario (2017).

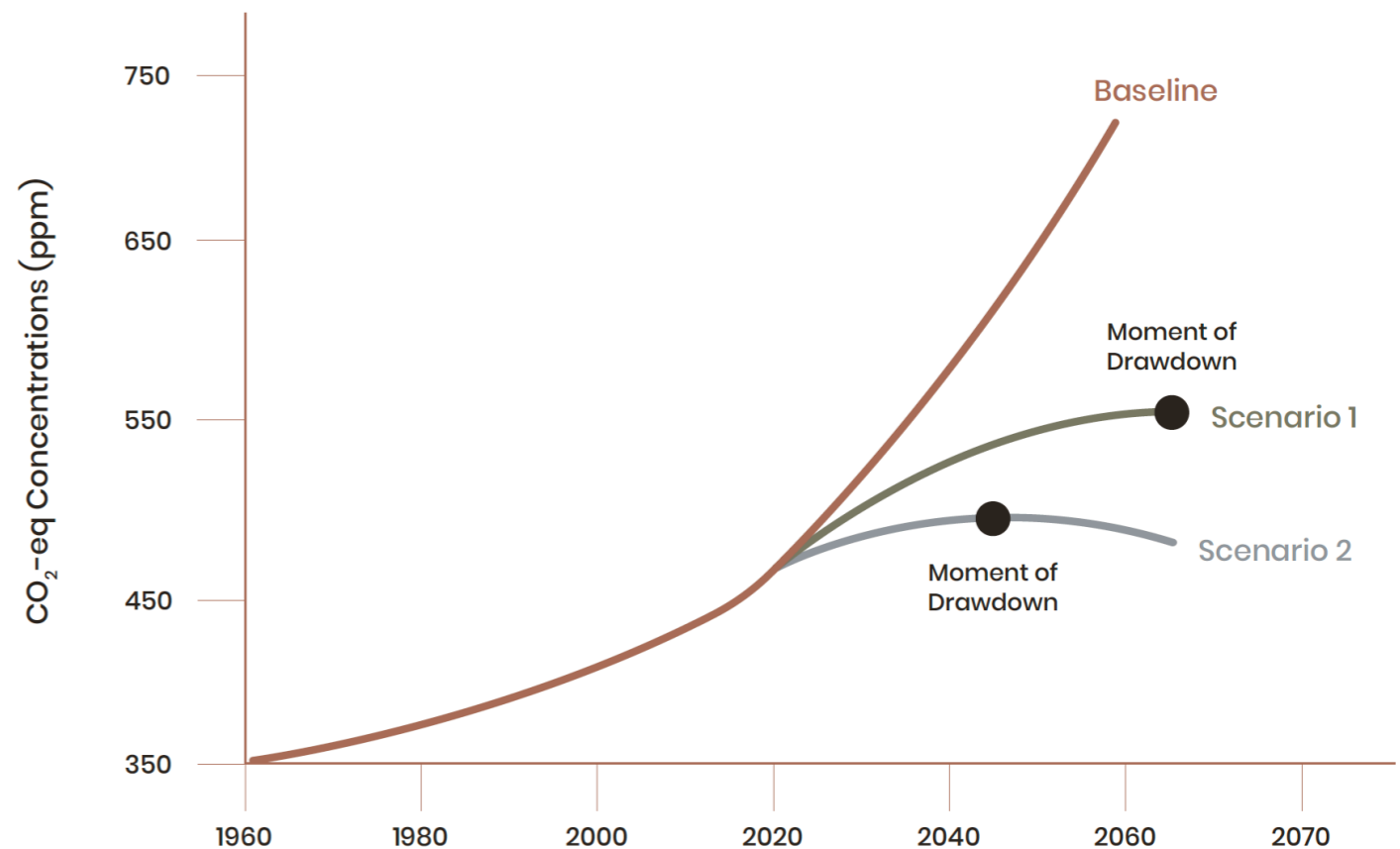
Drawdown Review



<https://www.drawdown.org/>

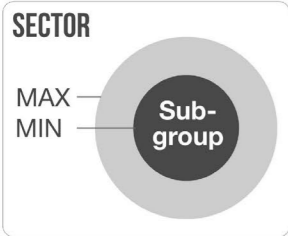
Drawdown Review

- Refines and updates proposed solutions in three categories:
 1. Reduce Sources
 2. Support Sinks
 3. Improve Society
- Presents ambitious Scenario 2 showing that we can get there by 2040

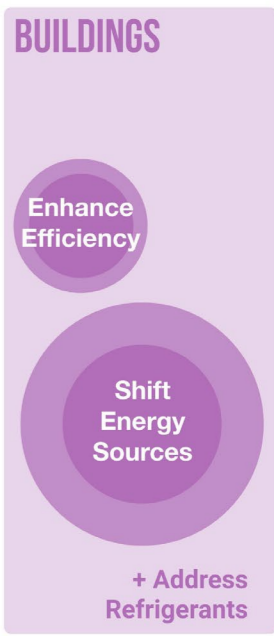
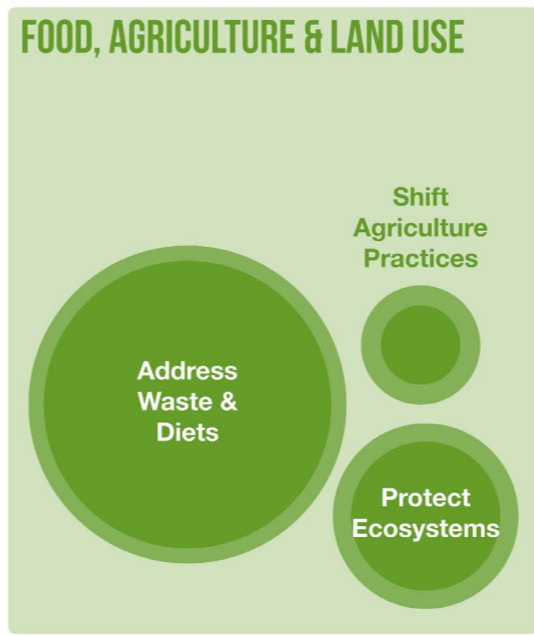
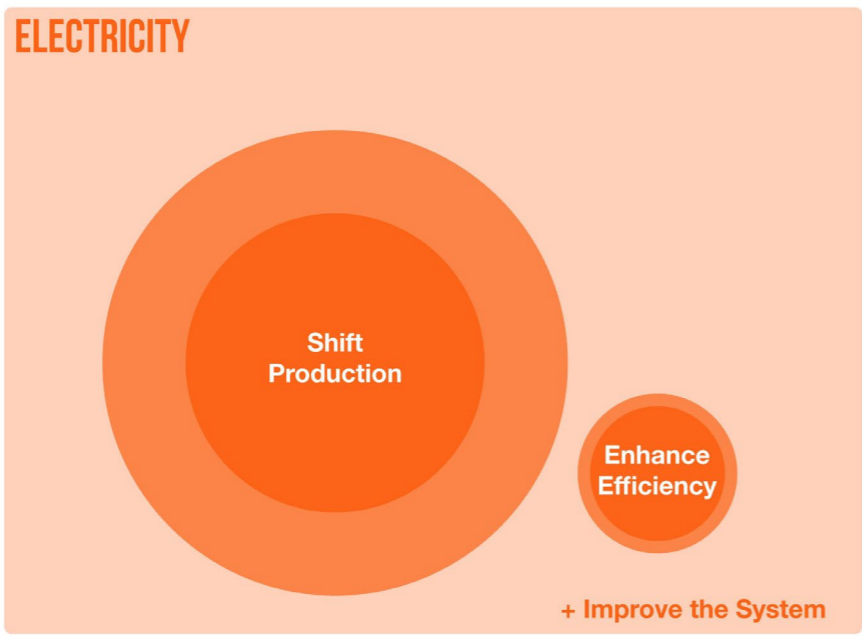


DRAWDOWN FRAMEWORK FOR CLIMATE SOLUTIONS

How to Read It
 Size represents potential emissions reductions (CO₂-eq (Gt)) 2020-2050



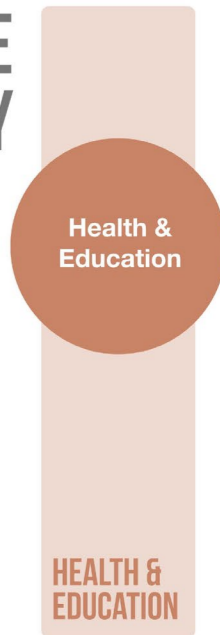
1. REDUCE SOURCES



2. SUPPORT SINKS



3. IMPROVE SOCIETY



Drawdown Review: Key Insights

- We can reach Drawdown by mid-century or sooner if we scale the climate solutions already in hand
- The majority of climate solutions reduce or replace the use of fossil fuels. We must accelerate these solutions, while actively stopping the use of coal, oil, and gas
- Some of the most powerful climate solutions receive comparably little attention, reminding us to widen our lens
- Accelerators are critical to move solutions forward at the scale, speed, and scope required
- Footholds of agency exist at every level, for all individuals and institutions to participate in advancing climate solutions
- Achieving Drawdown will require immense commitment, collaboration, and ingenuity, but the mission is clear: make possibility reality

Drawdown Review: Accelerating Solutions

1. Shape Culture: reshape societal beliefs using storytelling, visioning, art and dialogue
2. Build Power: build individual and community power and diverse leadership to counteract existing failing power structures
3. Set Goals: ambitious, visionary and measurable
4. Alter Rules and Policy: to limit problems and advance solutions

Drawdown Review: Accelerating Solutions

5. Shift Capital: away from sources of problems and towards solutions
6. Change Behavior: individuals, thought-leaders, businesses, governments
7. Improve Technology: “Now is better than new” however innovative technology can help accelerate the solution process

CSO Challenge

INCREDIBLE OPPORTUNITY



WE GET TO REIMAGINE OUR WORLD

BOLD VISION, LEADERSHIP