

Carbon Accounting & Cool Effect

Presentation for Health Research Alliance

19 October 2021

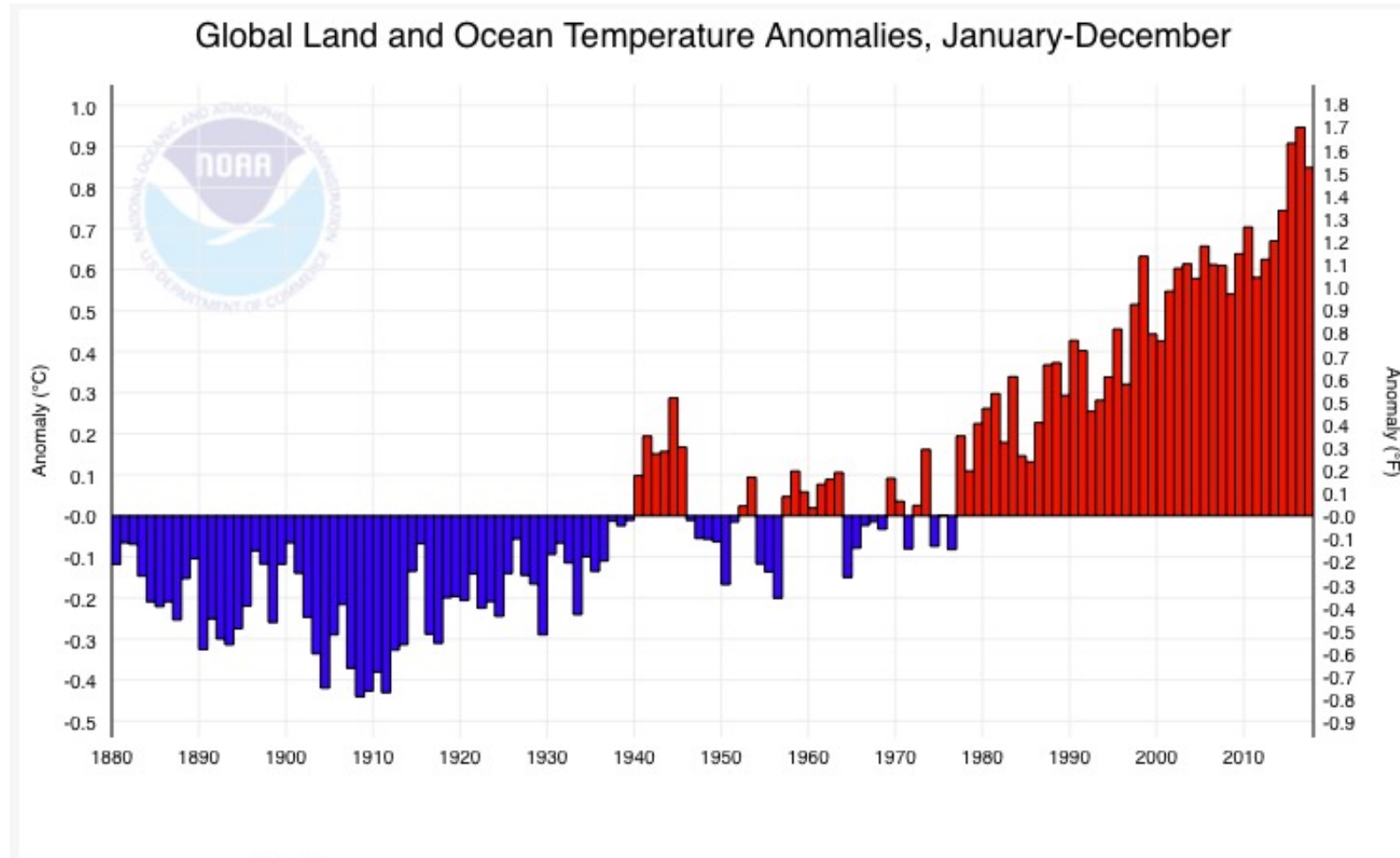


A large glacier is melting into a body of water, with icebergs and a misty atmosphere. The text is overlaid on the image.

WE HAVE A CARBON PROBLEM!
Too much CO₂ in the atmosphere & year on year
increases in carbon emissions.

**THE CARBON FOOTPRINT OF THE AVERAGE AMERICAN
DESTROYS 600 SQUARE FEET
OF ARTIC SEA ICE A YEAR**

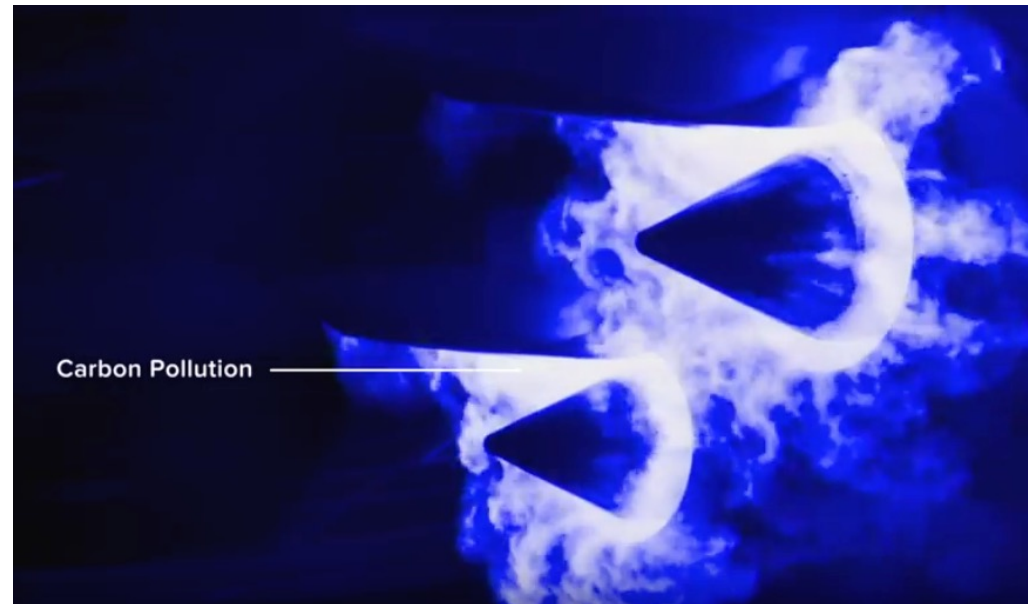
Is the earth warming?



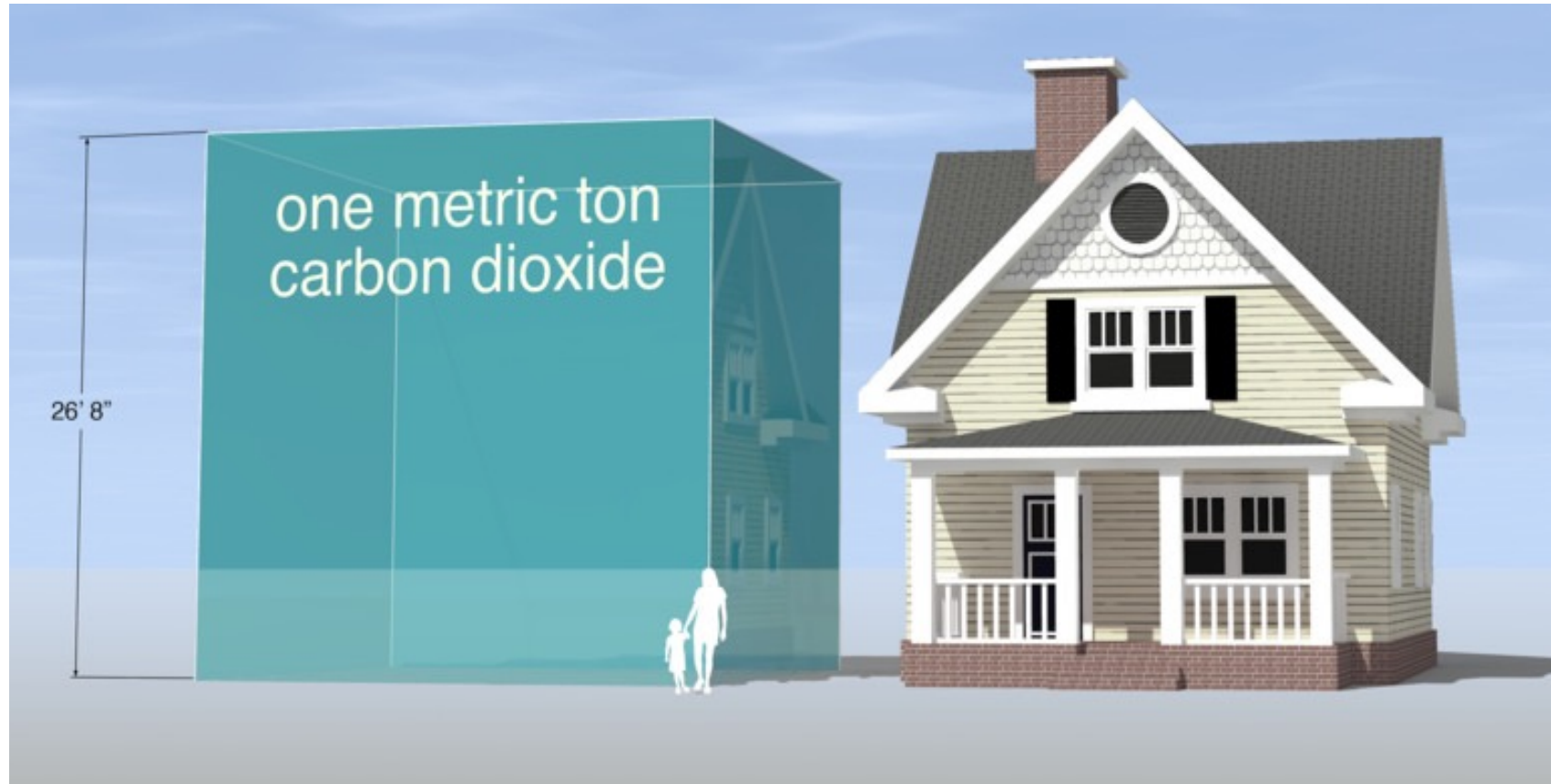
<http://www.ncdc.noaa.gov/cag/> https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/12/12/1880-2017

What is a Carbon Footprint?

The amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person, group or entity measured in metric tonnes of carbon dioxide.



Carbon Footprints are measured in metric tonnes of Carbon Dioxide equivalents (mtCO₂e)



What goes into calculating a carbon footprint?



Travel:

By air and by car



Home:

Energy including electricity, natural gas, other fuels, water, construction



Food:

Meat, dairy produce, cereal other foods



Goods:

Clothing, furniture other goods

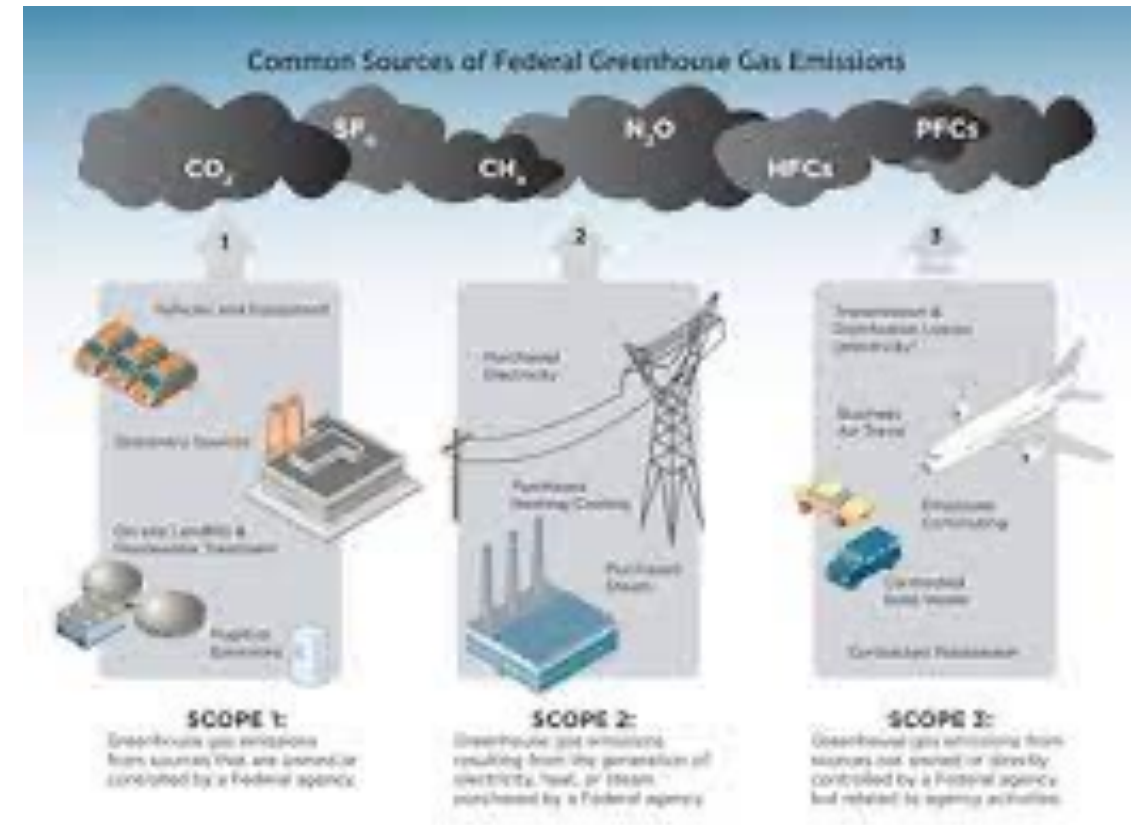


Services:

Others emitting carbon on your behalf

How many emissions?

- This requires an evaluation of the sources of emissions in your office and throughout your supply chain.
 - Often referred to as Scope 1, direct emissions from the organization
 - Scope 2 emissions from your electricity use
 - Scope 3, emissions that occur outside the control of the organization but caused by the organization (employee commuting, airline travel, use of the company's products etc.)



How many emissions?

- You can't reduce what you haven't measured.
 - Make an energy audit
 - Measure Hot water/Heating gas consumption
 - Track your flight miles and associated emissions
- Enter related information in a carbon calculator or work with a footprint provider such as The Climate Registry: <https://www.theclimateregistry.org/programs-services/voluntary-reporting/membership-benefits/>
- Cool Effect has Calculators to help any individual, organization or business figure out their emissions:
 - Flight offset tool: <https://www.cooleffect.org/travel-offset>
 - Business calculator tool: <https://www.cooleffect.org/business-offset>
 - Driving calculator: <https://www.cooleffect.org/travel-offset>
 - Accommodations: <https://www.cooleffect.org/travel-offset>
 - We estimate that the average American has a carbon footprint of 16.6 tonnes per person

How many emissions for flying?

- These are approximate travel emissions for an economy seat based on the distance traveled and the emissions associated with each passenger mile (EPA):
 - From San Francisco NY: 0.86 mtCO₂e
 - From DC to Chicago: 0.24 mtCO₂e
 - From NY to Orlando: 0.26 mtCO₂e
 - From NY to London: 1.15 mtCO₂e
 - Dallas to Honolulu: 1.27 mtCO₂e
 - LA to Boston: 0.87 mtCO₂e



How many emissions for a small conference?

- To run a 20-person conference DC to Chicago for 2 days, we used the Cool Effect Calculator @ <https://www.cooleffect.org/event-offset>
 - The calculator makes assumptions for things that are too small to count like shipping, plastic wear, taking private auto instead of public transport, meals consumed and accommodations.
 - 4 mtCO₂e: 20 Round trip flights DC Chicago (0.17 mtCO₂ e per round trip per person)
 - 7 mtCO₂e: Two nights accommodation, 6 meals for 20, and other miscellaneous aspects of conferences
 - Total of 11 tonnes for a small conference without much associated travel.
 - How to reduce this number

How to reduce emissions at conferences?

Tips to Reduce Your Footprint

Whether you fly less, cut out red meat from meals, or switch to energy-efficient lightbulbs, your small changes taken together can impact the climate crisis.



Travel

- Organize shuttles to and from the airport
- Host speakers and attendees in a green hotel
- Reduce miles traveled by hiring local vendors



Waste

- Rent reusable coffee mugs, glasses, plates, and silverware
- Purchase compostable or high post-consumer waste content paper napkins and towels, and eat what's on your plate
- Replace bottled water with filtered water stations



Meals

- Eliminate red meat from meals
- Offer snacks separate from sandwiches, instead of boxed together
- Work with a sustainably focused caterer

How to reduce general emissions?

- The first best step to reducing a majority of organization emissions is to attack electricity use.
 - If you can switch to renewable energy, you can eliminate an enormous part of your footprint.
 - Contact your energy provider, it doesn't cost much more.
- Consider other areas where you can reduce, as Bill McKibbin says:
Climate has no silver bullet, only silver buckshot!

How to reduce general emissions?

- Think before you ship
- Zoom before you fly
- Change light bulbs and install motion sensors in offices
- Offer incentives for public transport
- Share resources and videos about climate change and the health effects of climate change.
- If you cater events or serve office lunches, make them meatless
- Insulate hot and cold water pipes
- Save for long term investments like upgrading the efficiency of your plant or switching to electric power



zoom

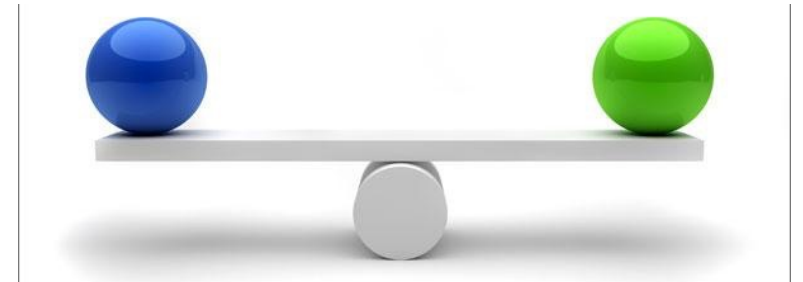


Consider reducing your footprint with Carbon Credits.

- Carbon credits should only be used after all other mechanisms to decarbonize have been explored.
- Carbon credits compensate/counter/ offset the impacts of greenhouse gas emissions.
- Measured in metric tonnes of carbon dioxide equivalents or mTCO₂e.
- Include a basket of global warming gases that include CO₂, Methane and Nitrous Oxide (N₂O) among others such as HFCs and PFCs
- For each metric tonne emitted, carbon credits fund activities to prevent reduce or capture a tonne from being emitted somewhere else.
- Geography does not matter to carbon credits!

1 metric Tonne
CO₂ Emission
anywhere in the
world.

1 metric Tonne
GHG Reduction
anywhere in the
world



Carbon credits can help cool the planet.

- Can be used to reduce emissions that can't be reduced through any other means, e.g. airplane flight or gas heating.
- Immediate answer to an urgent problem.
- Measurable and contribute to an accurate count of emissions
- Inexpensive mechanism to reduce emissions
- Validated, monitored and verified on a regular basis and issue credits from a secure registry under scientifically accepted methodologies.

How can Carbon Projects help reduce emissions?

Carbon Projects generate carbon credits through activities such as planting trees, saving trees, reducing wood use, capturing methane

- They reduce, avoid or sequester greenhouse gas emissions
- They are often grass-roots organizations that provide extra benefits to local populations, in addition to reducing greenhouse gas emissions.
- They are dependent on the income from carbon credits in order to continue to reduce emissions.



What is Cool Effect?



- Provides carbon offsets/credits from high quality, global emission reduction projects.
- Non-profit
- Community of 400,000 individuals and hundreds of small and large businesses.
- Educates on human caused (anthropogenic) carbon emissions and what can be done to reduce them
- 3 million metric tonnes of greenhouse gas emission reductions sold since launch at the Paris Convention in December 2015

Reasons for Cool Effect

- Carbon offsets are a measurable way to reduce emissions that can't be reduced any other way.
- Carbon offsets at Cool Effect are additional to emissions that would have been reduced in a Business as Usual Scenario.
- Transactions are transparent at Cool Effect. Both buyer and the seller know the price paid per tonne and the entire commission received by Cool Effect.
- About 90% of every dollar for credits purchased through Cool Effect goes directly to the project



Sichuan Biogas Digester Project

What it does:

Provides up to 1 million poor farmers in rural China with biogas digesters that capture methane emissions from animal and human waste and use it for clean energy.

- Animals and humans live in more sanitary conditions.
- Clean gas fuel reduces reliance on wood, charcoal for household energy and rids homes of toxic smoke.
- Slurry from the biogas digester is used as free fertilizer



Carbon projects Contribute to UN Sustainable Development Goals

- Carbon offset projects contribute to other United Nations Sustainable Development Goals (UN SDGs) beyond SDG Climate Action.
- More value for your metric tonne of carbon when purchasing from a project outside of the U.S.
- SDG's, especially those in developing countries most affected by climate change can include:
 - Poverty reduction
 - Zero hunger
 - Good health and well-being
 - Quality education
 - Gender Equality
 - Clean Water and Sanitation
 - Affordable and Clean Energy
 - Decent Work and Economic Growth
 - Industry Innovation and Infrastructure
 - Life on land (including biodiversity)



Why does the Project Price Vary?

We accept the price offered by the project and negotiate for quantity discounts. Prices for projects differ due to:

- Scarcity of Project Type
- Quantity of credits available
- Location of the project
- Age of Credits
- Costs to implement the project
- Competitive pricing established by other market forces such as the compliance market

Summary: A quick review of options to reduce emissions!

- Measure your organization's footprint and look for ways to decarbonize
- Buy renewable electricity
- Pool transportation
- Have remote meetings, fewer flights
- Reduce shipping
- Eat less meat
- Wear your clothes another year
- Consider supporting carbon projects that help people live healthier lives, save forests, save grasslands, prevent deforestation

500,000 Strong, nearly 4 million tonnes gone!

