

2018 Climate Conference

Discovery: Reduction in photosynthesis correlation to atmospheric CO₂ increase.

Climate Change Truth Inc.

- ▶ Research activities and funding request.
 - ▶ Ocean Evaporation for better Weather Modeling
 - ▶ Reforestation of Amazon Rain-forest
 - ▶ Vertical and horizontal CO₂ distribution.

Outline

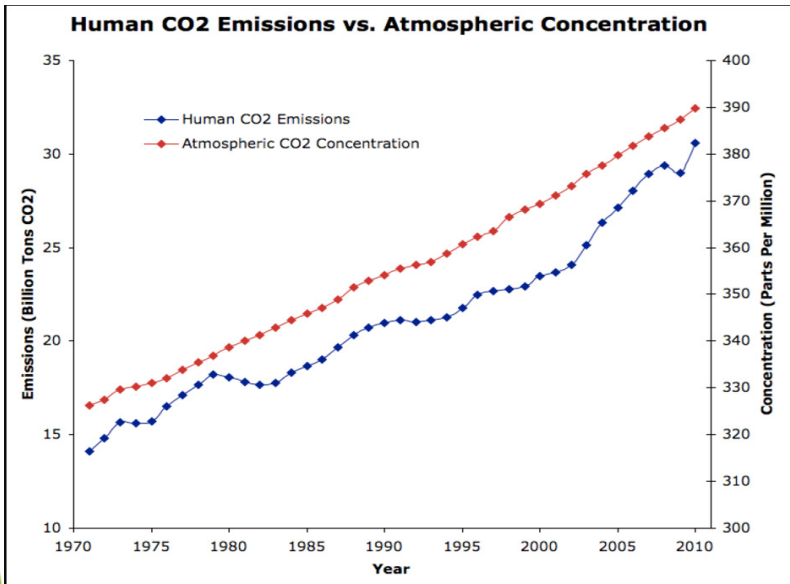
- ▶ Atmospheric CO₂
 - ▶ Where we are
 - ▶ Where we are going
 - ▶ Correct solution to lower Atmospheric CO₂
- ▶ Fair question.
- ▶ CO₂ does not freeze in upper atmosphere
- ▶ Ocean is not a sink for atmospheric CO₂
- ▶ Summary
- ▶ Acknowledgments

Next Conferences

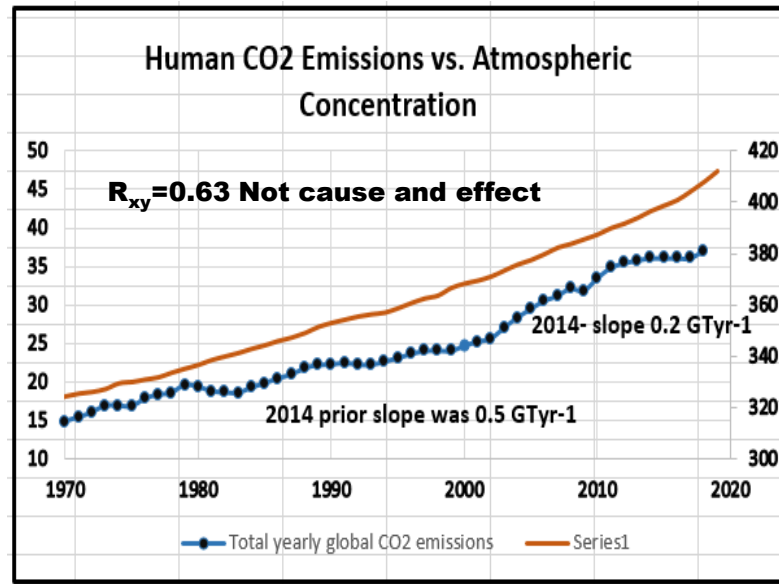
- ▶ I will present this truth in science at the following conferences:
 - ▶ AGU Fall Conference Washington DC
 - ▶ Paris Climate Conference 2019, Keynote Speaker
 - ▶ European Climate Conference 2019 Greece

Where we are

After spending \$2 trillion we have:



2008 $r_{xy}=0.87$

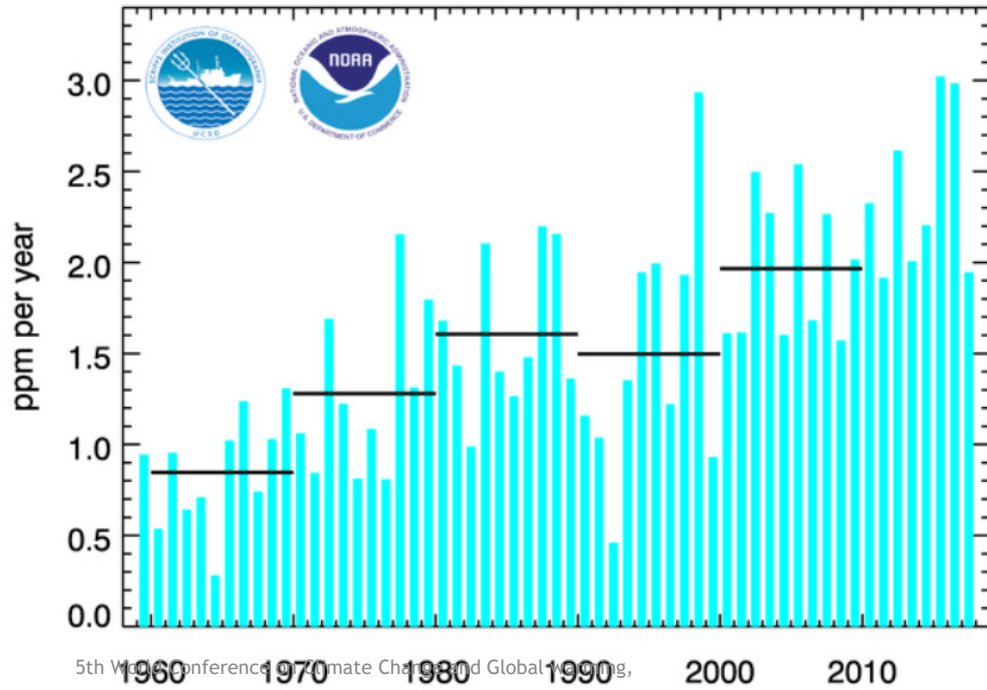


2019 $r_{xy}=0.63$

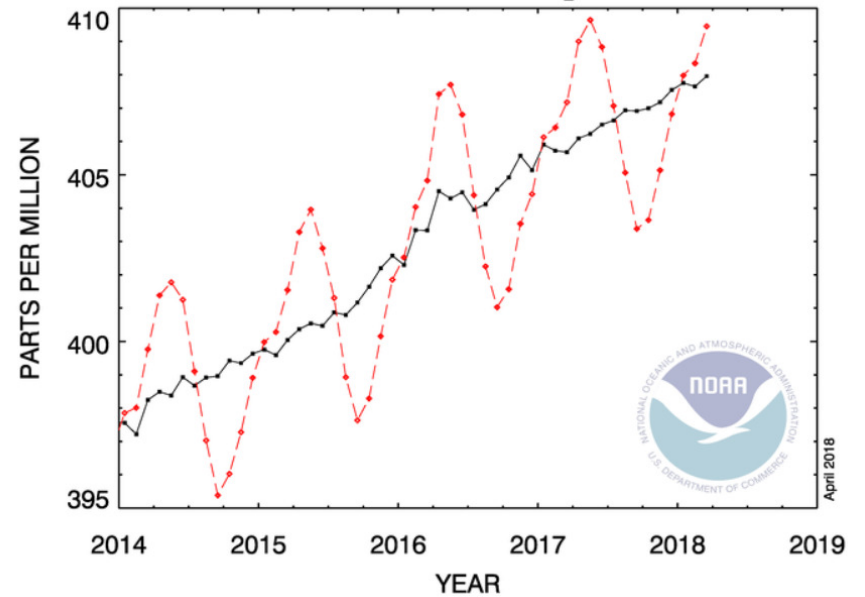
Mauna Loa CO₂ Growth Rate

Annual mean global CO₂ growth rate is increasing.

annual mean growth rate of CO₂ at Mauna Loa



RECENT MONTHLY MEAN CO₂ AT MAUNA LOA



Where we are going

▶ Facts

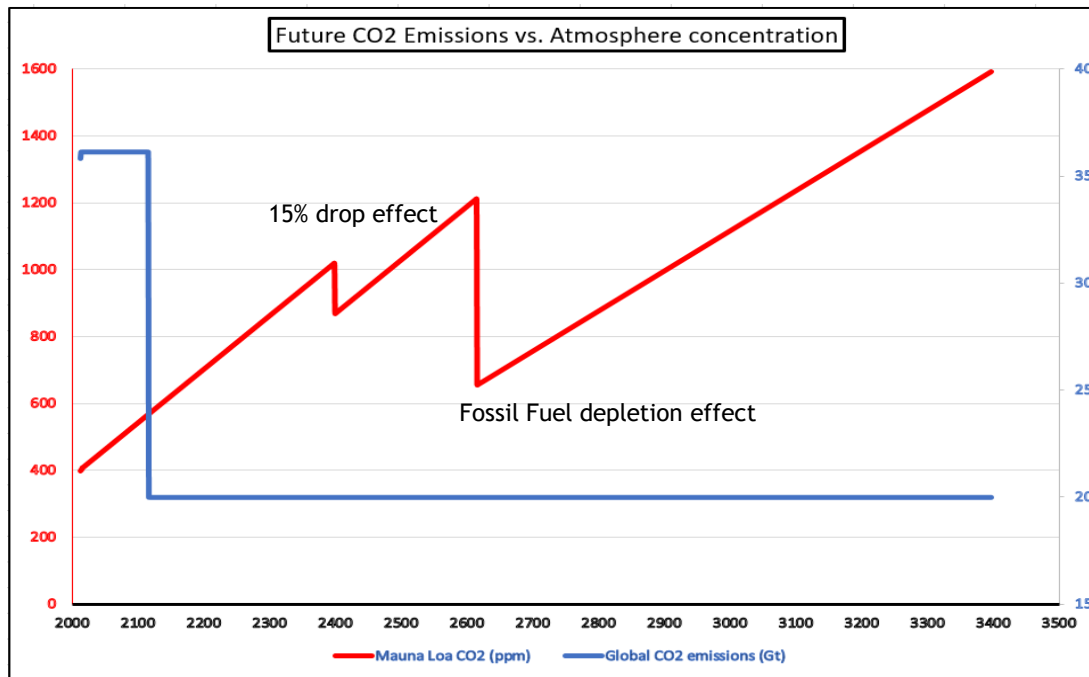
- ▶ Minimum residence time 500 years. Was 5 years
- ▶ Most work is on carbon emission reduction
 - ▶ Reforestation efforts in China and North America ongoing.
- ▶ Atmospheric CO₂ is “Extra” that is not consumed in photosynthesis

▶ Assumptions

- ▶ Keep current carbon emissions level at 36 billion metric tons annually.
 - ▶ Decreases of carbon emissions will be offset by increases in population
- ▶ Atmospheric CO₂ stays the same slope.
- ▶ At 100 years no more oil so carbon emissions drop by 30%

Future

- ▶ CO₂ emissions correlation shrinks with passing of time.
- ▶ Goes to zero at 520 ppm, Year 2100

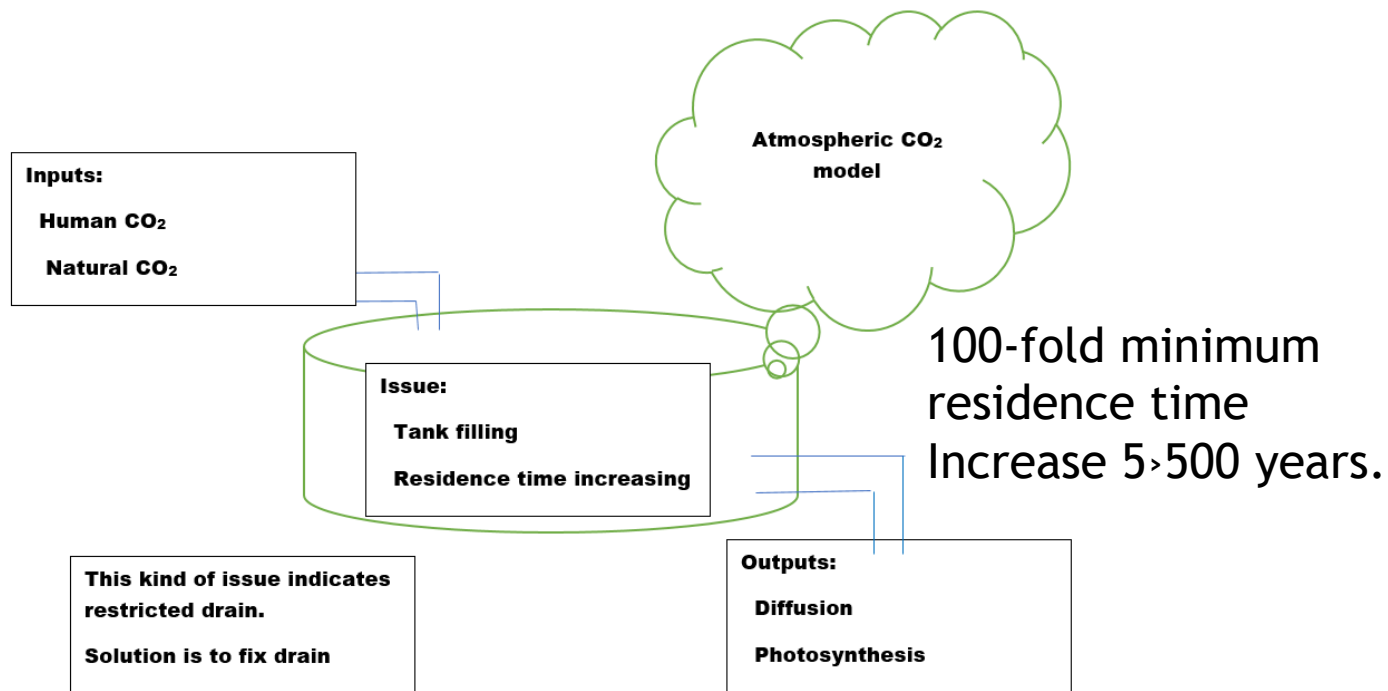


Pearson's regression

$$r_{xy} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$

- ▶ r_{xy} can vary from -1 to 1.
- ▶ Value closer to $|1|$ is best.
- ▶ May be used to find a perfect correlation between 2 sets of data by holding one set constant and changing the other until a maximum value greater than $|.95|$ is obtained.

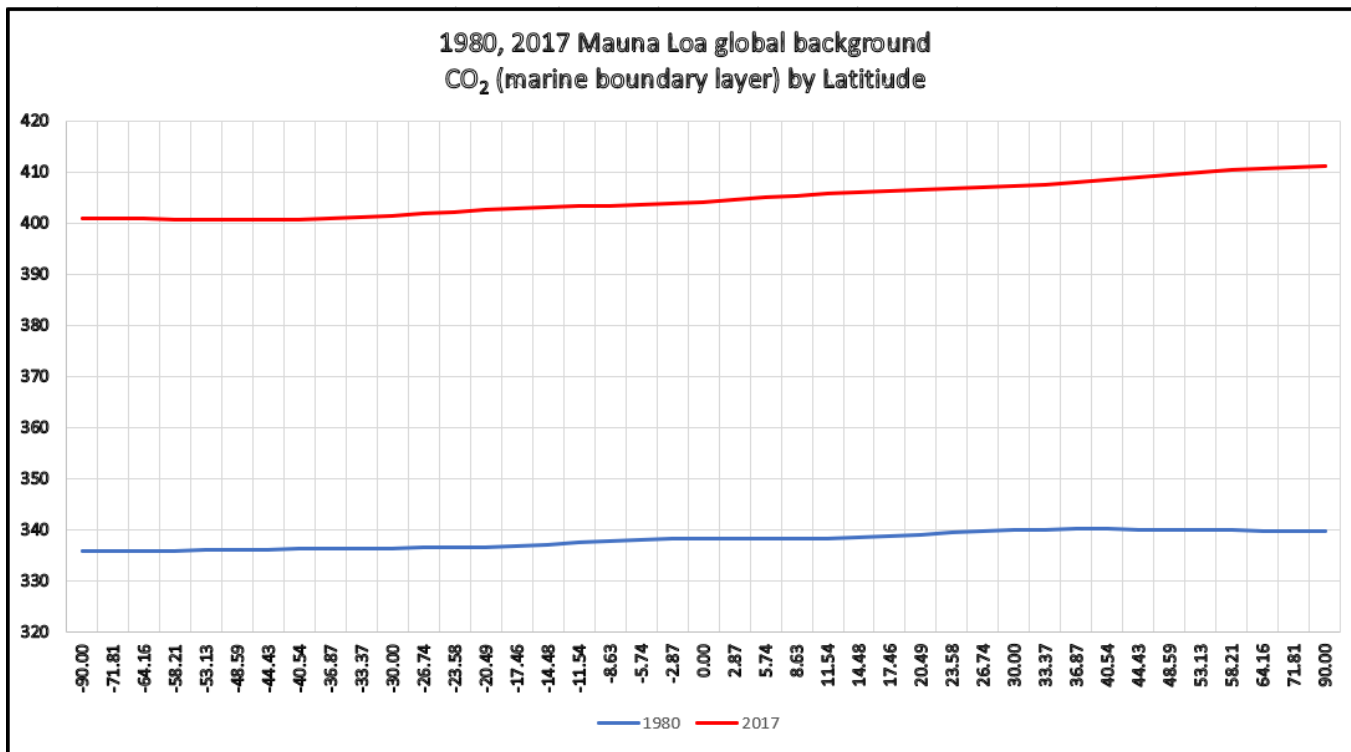
Atmospheric CO₂ Tank Model



What Photosynthesis could be 48 ppm?

Atmospheric CO₂ by latitude

- ▶ CO₂ mixed by atmospheric winds.



Courtesy
Mauna Loa

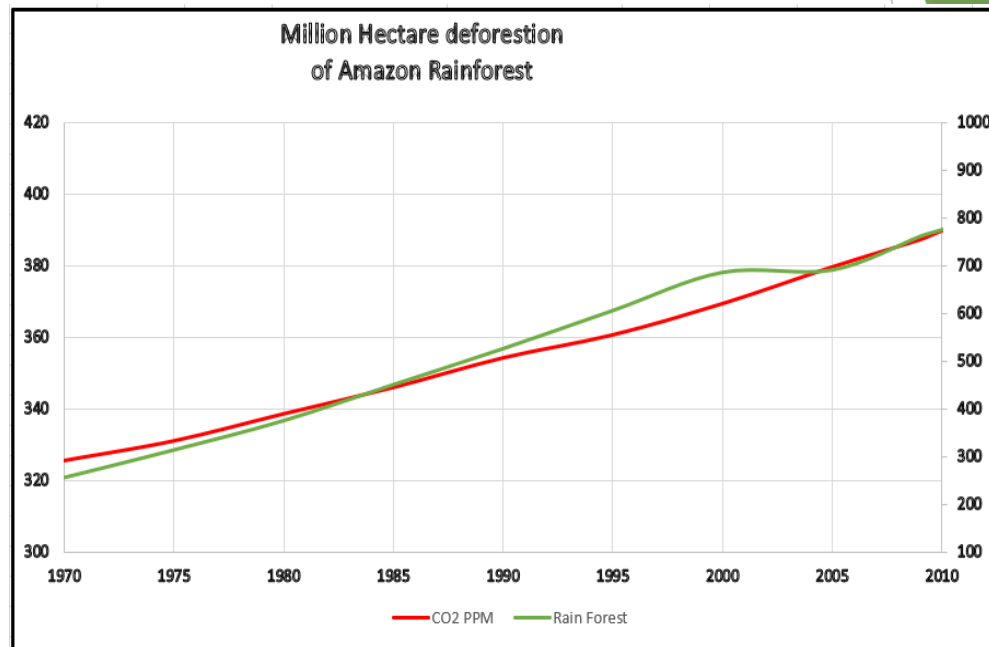
Photosynthesis issues

- ▶ City sprawl is 1 billion tons lost CO₂ consumption annually
- ▶ IPCC forestry estimates 2-3 billion tons lost CO₂ consumption annually from bio-mass burning.
- ▶ Deforestation of 30 million acres annually in Amazon Rain-forest is 90 million tons lost CO₂ consumption. Total of 60 billion tons lost since 1950.
- ▶ More than 300 billion tons lost CO₂ consumption annually from Amazon Rain-forest switching. 19x our output.
- ▶ 11 billion tons of human emissions, 3 billion are deforestation issues. The switch over of the amazon to an oxygen sink and carbon dioxide producer is 10+ billion tons of unaccounted for CO₂ annually.

Amazon Rain-Forest

year	x CO ₂ PPM	-71.81	xbar 369.7831	ybar 622.3462	xi-xbar	yi-ybar	(xi-xbar)(yi-ybar)	(x-xbar)(x-xbar)	(y-ybar)(y-ybar)
1970	325				-44.7831	-367.146	16441.93445	2005.523979	134796.2983
1975	331.2				-38.5831	-309.146	11927.80983	1488.653825	95571.34444
1980	339				-30.7831	-247.646	7623.310604	947.5978249	61328.61751
1985	346.12				-23.6631	-172.146	4073.50768	559.9412095	29634.29828
1990	354.39				-15.3931	-96.6462	1487.68168	236.9468172	9340.479053
1995	360.82				-8.96308	-16.6462	149.2007574	80.33674793	277.0944379
2000	369.55				-0.23308	63.35385	-14.76631953	0.054324852	4013.709822
2005	379.8				10.01692	68.35385	684.6952189	100.3387479	4672.248284
2010	389.9				20.11692	152.9538	3076.960757	404.6905941	23394.87905
2014	398.6				28.81692	209.3538	6032.93368	830.4150556	43829.0329
2015	400.8				31.01692	223.4538	6930.850757	962.0495172	49931.62136
2016	404.2				34.41692	238.4538	8206.84768	1184.524594	56860.23675
2017	407.8				38.01692	253.4538	9635.535373	1445.28644	64238.85213
							76256.50215	10246.35968	577888.7123
					bottom	76949.7			
					top	76256.5	rxxy=		0.990991607

$$r_{xy} = 0.99$$



Carbon Emissions correlation 363, Rain-forest photosynthesis lost 48 ppm.

Amazon Rain-forest

2 Billion acres deforested since 1950.

1950 start deforestation

1957 Atmospheric Carbon Dioxide started current increase

1970's trees and plants toppling over.

Burning of bio-mass each acre causes minimum 1 billion CO₂ release annually (6 months)

The massive release caused plants to grow to fast causing toppling and massive decay.

1990's Changeover to oxygen sink and carbon dioxide producer.

Massive decay causing the rain-forest to change to an oxygen sink and carbon dioxide producer.

One billion annual tons of carbon dioxide from biomass burning.

60 billion tons annual CO₂ consumption lost from deforestation.

300-600 billion tons annual CO₂ consumption loss from the switch over.

10-15 billion tons emissions from decay per annum

We have lost 20%+ of Earths Oxygen production.

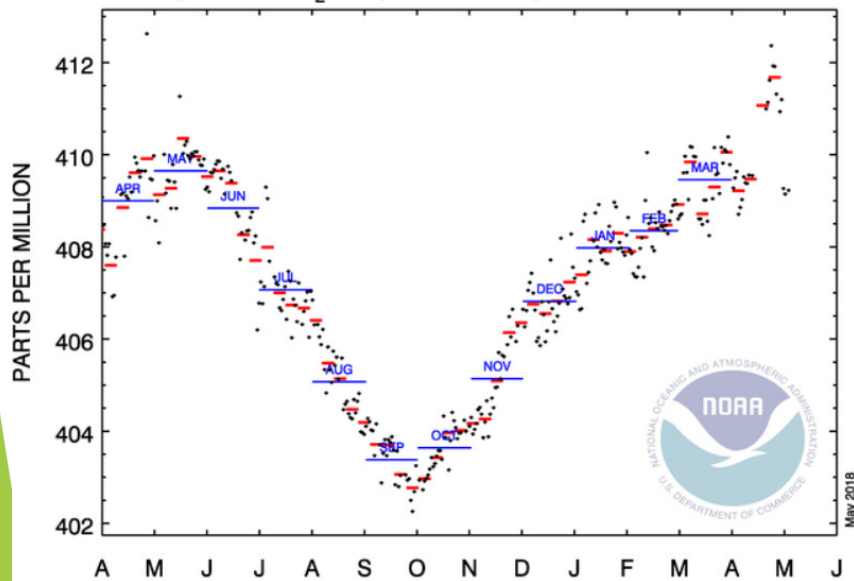


5th World Conference on Climate Change and Global warming,

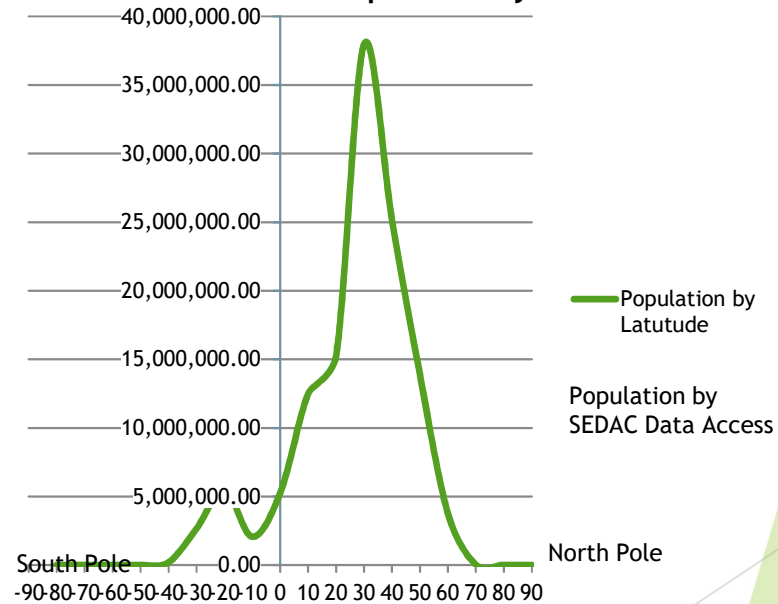
Mauna Loa harmonic trend

Increases during south hemisphere summer and decreases during their winter.

One year of CO₂ daily and weekly means at Mauna Loa



World Population by latitude

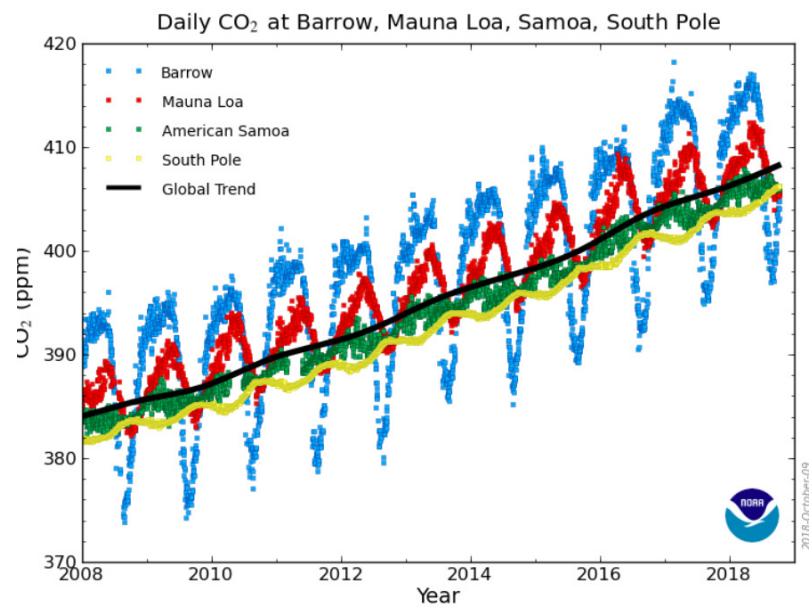


Decreases when Northern Hemisphere summer with more economic activity.

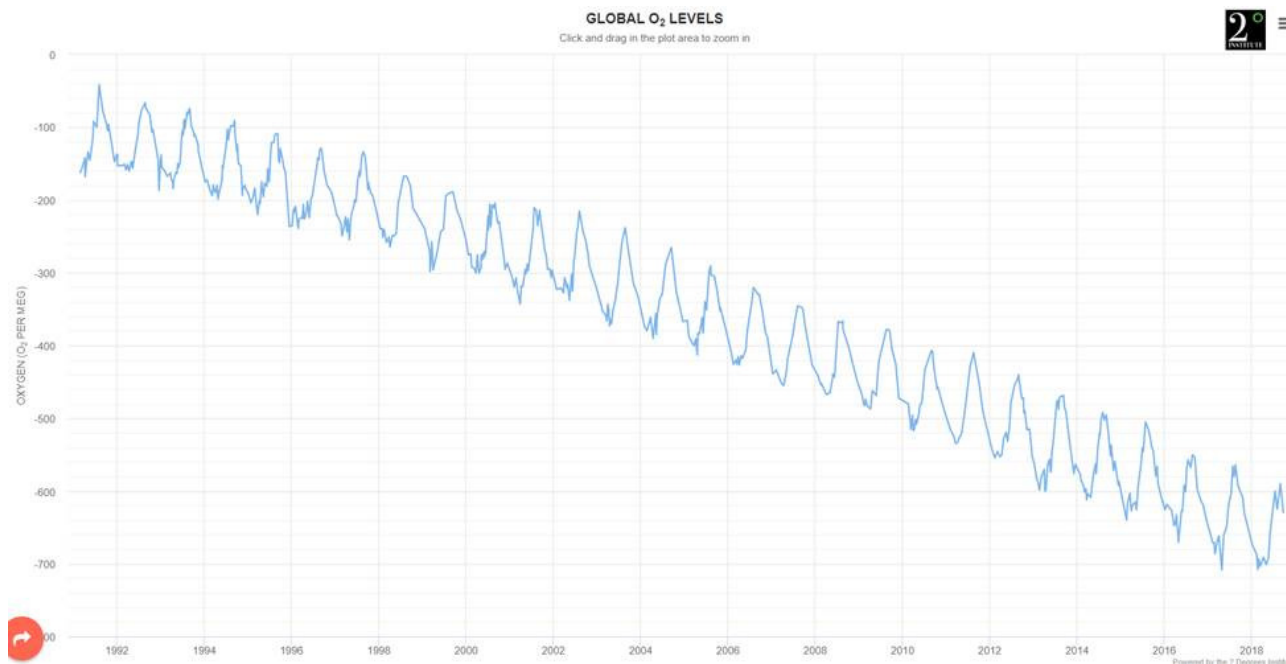
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Mauna Loa harmonic trend

Strong (yellow line) at south pole



Global O₂ levels decreasing.



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Annual Carbon dioxide

- ▶ Of the 36 billion annual tons of CO₂ emissions, the natural emissions are 21 billion tons and human caused are 15 billion tons.
- ▶ Amazon rain forest are 10-15 billion tons of additional carbon dioxide annually
- ▶ The current NET Zero CO₂ value is 9.2 Gtyr⁻¹

Correct solution for Atmospheric CO₂

- ▶ Moratorium on Rain-forest deforestation starting now! All nations need to put pressure on Brazil and all south America to stop this. Not one more acre.
- ▶ Plant native trees and shrubs all over the world. 1 billion new in 2019-2020. Increase Photosynthesis.
- ▶ Stop deforestation in India and everywhere which is not sustainable.

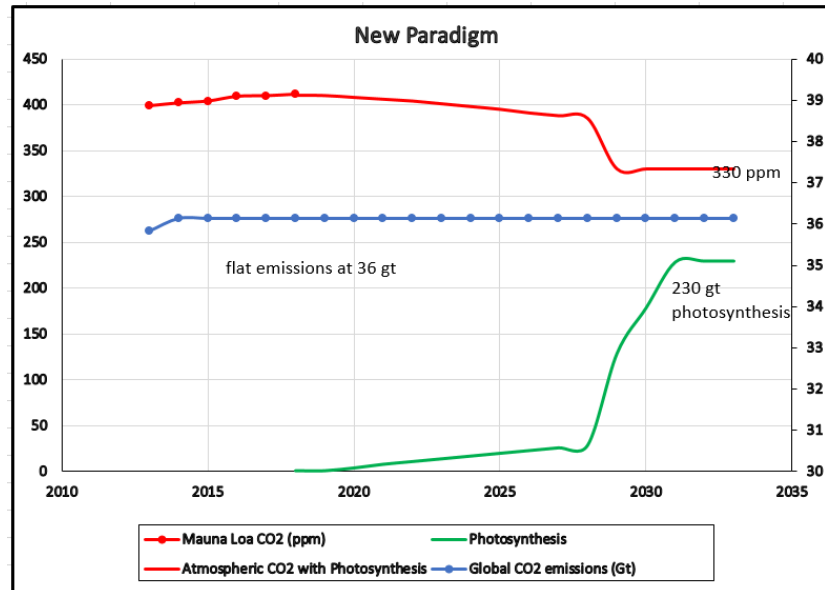
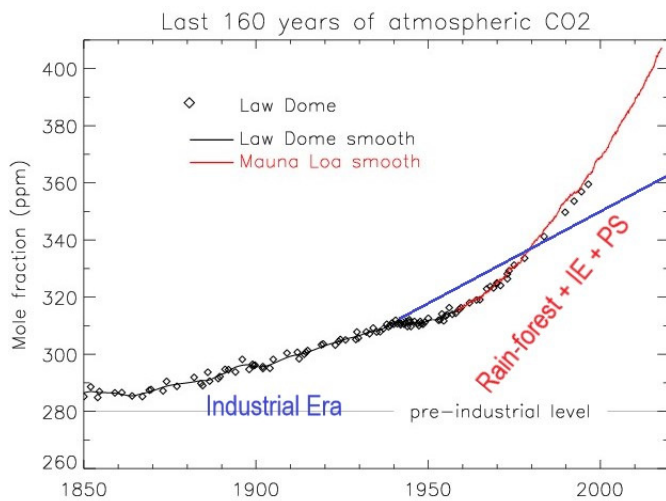
Planting Ideas

1. Provide space where public can come and plant trees and shrubs. All government-owned lands. Very small cost. Need website with document for each planting area.
2. Plant shrubs in all freeway medians and sides. This is revenue plus. Plant native shrubs at a minimal spacing so all light is used in photosynthesis. This will take in 1 ton of CO₂ emissions per acre per year right at the source. The space would not need to be mowed every week in the summer.
3. Get schools involved and planting massive number of trees and shrubs. In their property and the government property as in 1 above.
4. Parks can add trees and shrubs.
5. Tax incentive for business to plant trees and shrubs. Flat roofs which can structurally handle dirt can plant shrubs at minimum spacing and water using drip irrigation.
6. Wild fire attention. Get a retainer for the Jet plane and use it from the start on any wild fire.

This all government policy document is on the home page of cctruth.org

New Paradigm

- ▶ We have worked on Carbon Emissions.
- ▶ Lets work on Photosynthesis. Atmospheric CO₂ decrease by 2031.
- ▶ Drain atmospheric CO₂ like a bathtub.



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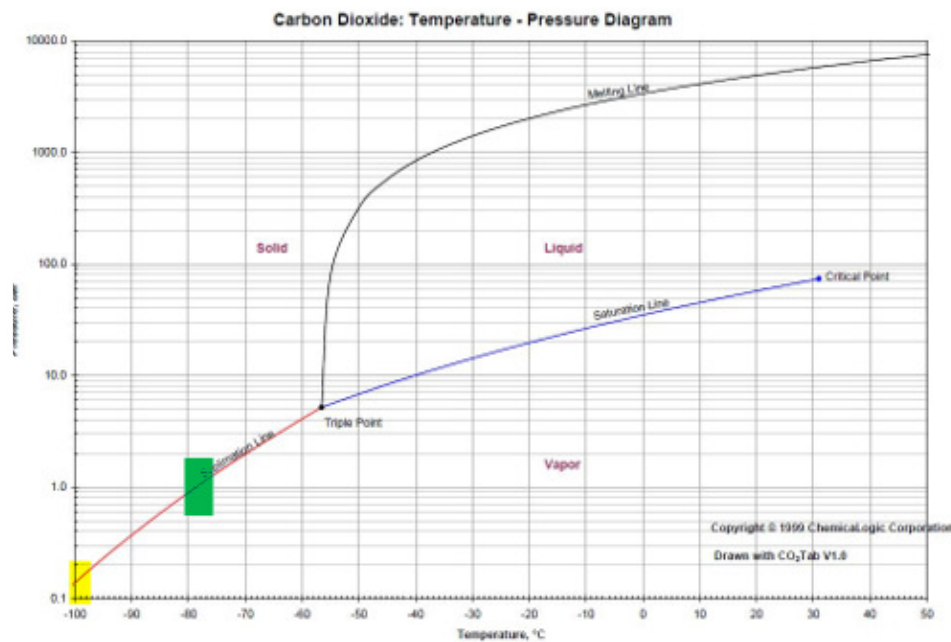
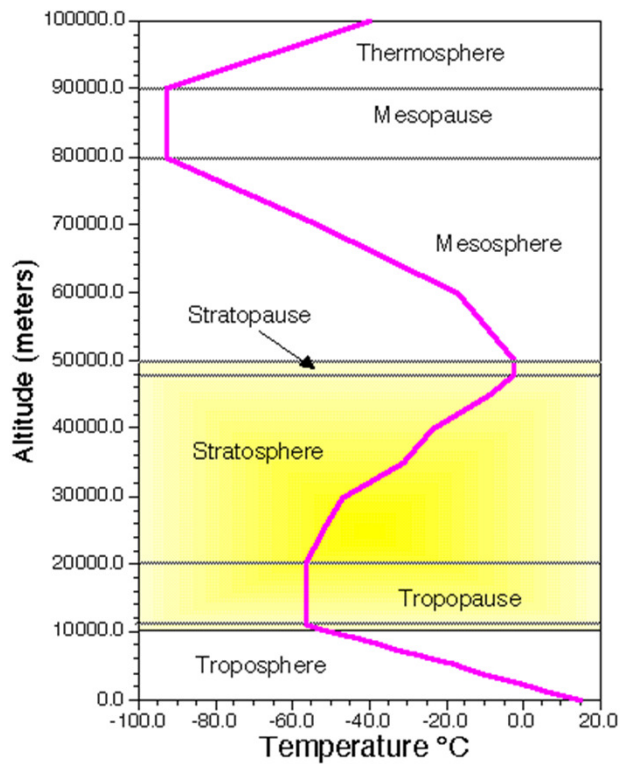
Global Warming Potential

- ▶ Global warming potential is a calculation!
 - ▶ Dr. T. J. Blasing of Oak Ridge National Laboratory exposed greenhouse gasses to long wave radiation.
 - ▶ Gas
- | | Increased radiative forcing (Watts/m ²) |
|------------------------------------|---|
| CO ₂ ppm. | 1.94 |
| CH ₄ Methane ppb. | 0.50 |
| N ₂ O Nitrous Oxide ppb | 0.20 |
| O ₃ (Ozone) | 0.40 |
- ▶ The remainder are negligible.

Fair Question

- ▶ This question should have been discussed in the beginning of climate change research.
- ▶ How much carbon emissions reduction equates to how much Atmospheric CO₂ reduction?
 - ▶ **Land based photosynthesis consumes 12.5% of current emissions.**
 - ▶ **Land based is 50% of world-wide photosynthesis**
 - ▶ **We need to reduce emissions to less than 9.2 billion tons to get to equilibrium.**

CO₂ does not freeze in Mesosphere



Pressure in Mesosphere is 1mb (1 millibar)

Ocean not a sink for atmospheric CO₂.

- ▶ Carbon dioxide diffusion in air at STP is 2 cm per month toward the exosphere. Rate limiting step.
 - ▶ Diffusion across ocean/air boundary is 14.8 cm per day.
 - ▶ Ocean wave curl and ocean spray capture a small amount of CO₂.
 - ▶ Photosynthesis from surface plants capture CO₂ but do not add to ocean CO₂.

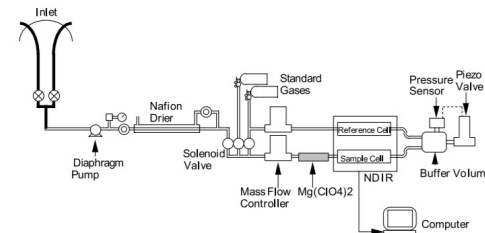
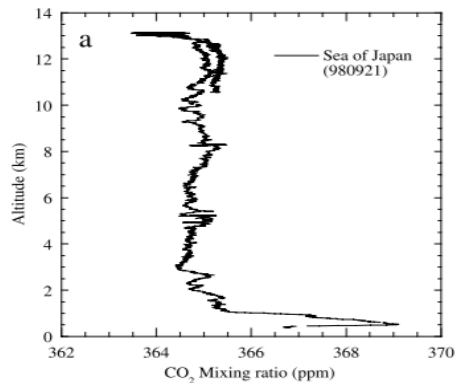
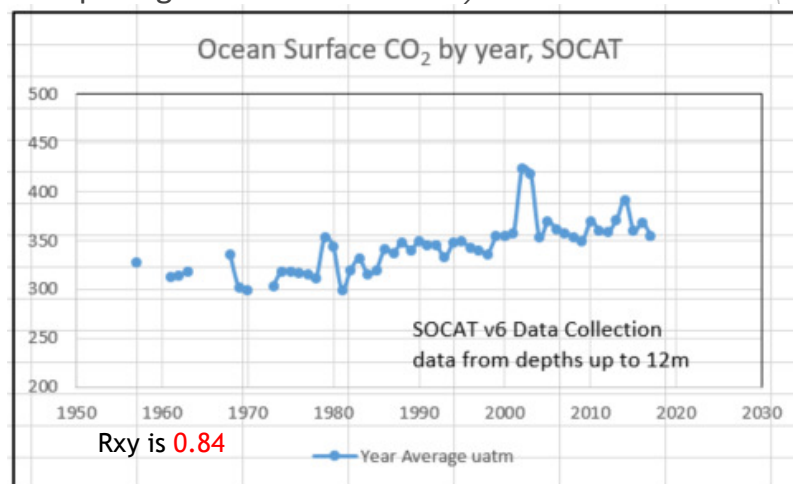
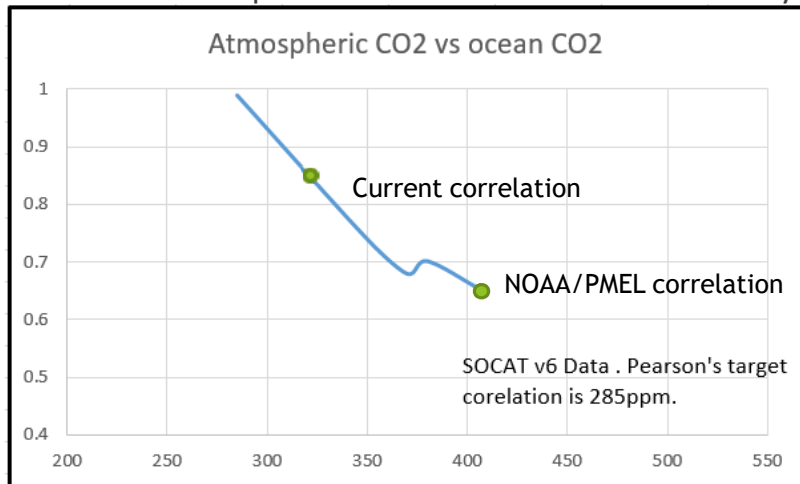


Figure 2. Schematic diagram of the CO₂ measurement system.

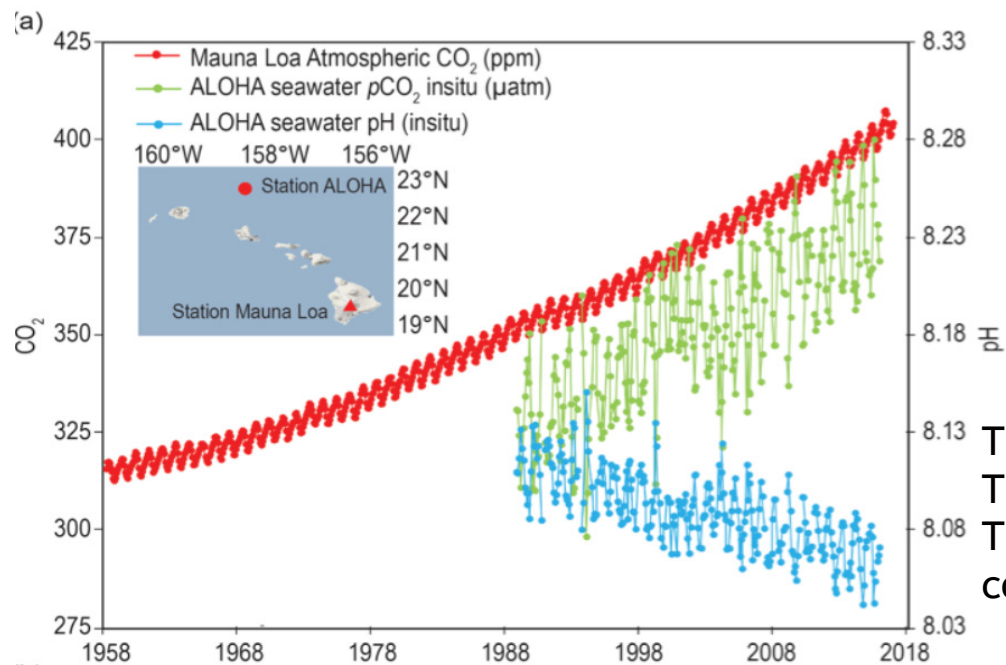
1998 Machida-san et al

Ocean CO₂ data

- ▶ Garbage put into the oceans is one of the causes of ocean CO₂ increase.
- ▶ In 2002 the Belgian ship, the Belgica went up the Petite Nèthe river near Antwerpen. The values for CO₂ were in the 7000 range.
- ▶ That river is polluted with manure. Direct cause by decomposing debris for ocean CO₂ increase.



No correlation to current atmospheric CO₂.

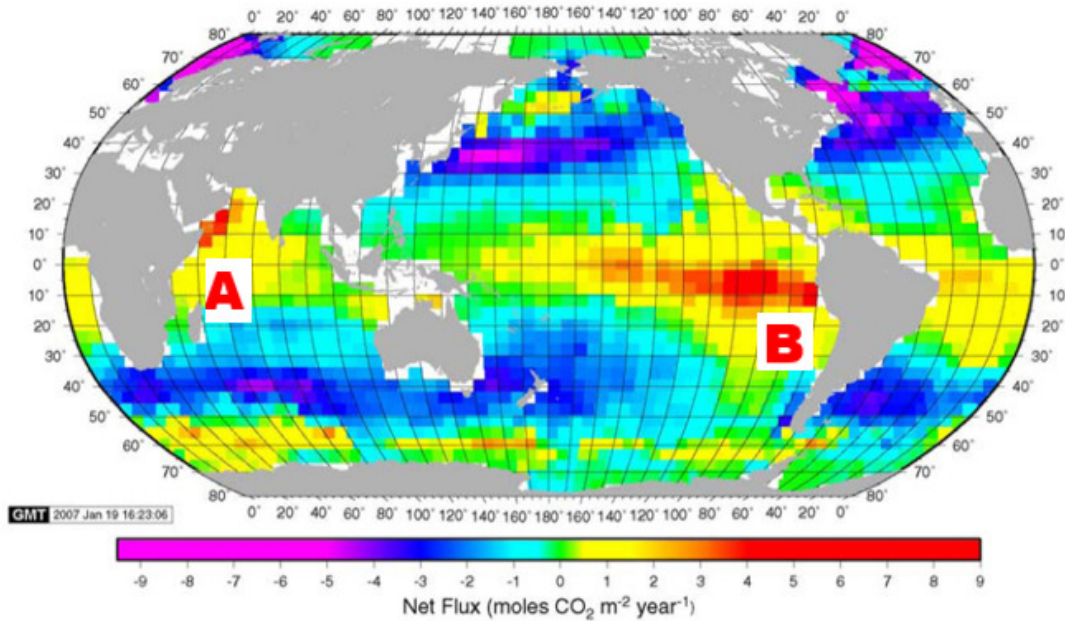


This is a subset of SOCAT data.
 The regression by target applies
 The small acid change is from
 continued volcanic activity.

Time series of atmospheric CO₂ at Mauna Loa (ppm), surface ocean pCO₂ (µatm) and pH at Ocean Station ALOHA in the subtropical North Pacific Ocean. Mauna Loa data: (ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_mm_mlo.txt); HOTS/ALOHA data: University of Hawaii (http://hahana.soest.hawaii.edu/hot/products/HOT_surface_CO2.txt).

No correlation to current atmospheric CO₂.

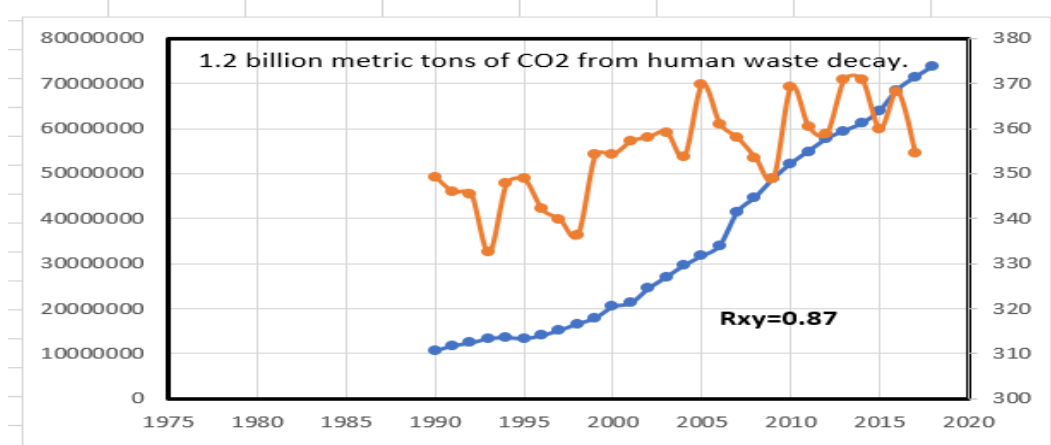
Ocean Flux or decay?



A is polluted rivers in SE Asia
B is most likely Cruise ship human waste decay.

Ocean Dumping Data

- Since 1968 the USA, Canada and Europe have stopped dumping garbage in the ocean.
 - Asian cities still do.
 - Every river in Vietnam is polluted and puts that pollution into the ocean.
- Cruise Lines dump human waste directly into the ocean.
 - 1.2 billion tons of CO₂ added from decay of human waste annually.



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Summary

- ▶ Atmospheric CO₂
 - ▶ Not caused by carbon emissions. Caused by massive loss of photosynthesis. Mainly Amazon Rain-forest
 - ▶ Does not diffuse into the ocean. Ocean dumping is the cause of Ocean CO₂ rise.
 - ▶ Does not freeze in upper atmosphere.

Acknowledgments

- ▶ International Journal of Chemical Engineering
- ▶ International Journal of Environmental Science and Development
- ▶ 2018 Climate Change Conference Committee