

March 2019

**FoS MEMBERSHIP QUARTERLY NEWSLETTER
No. 61**

“FoS is dedicated to providing the public with insight into Climate Science”

PRESIDENT’S MESSAGE

Here we are after a bout of record cold temperatures we are looking forward to spring. And what is spring’s most important event in Calgary? Correct! Our annual Climate Science speakers’ night!



Friends of Science Society 16th Annual Climate Science Event
April 10th, 2019 • 6:00 - 9:00pm • Red and White Club • McMahon Stadium, Calgary

POLAR BEARS and SOLAR FLARES

Dr. Susan Crockford
Researcher & Author
**Polar Bears:
Too Hot to Handle**

Dr. Willie Soon
Astrophysicist
The Sun Also Warms

Early Bird Pricing till March 1st, 2019
• Buffet dinner included
• Free Parking after 6pm
• or take the LRT

FRIENDS OF SCIENCE

www.friendsofscience.org
Order tickets by April 2, 2019

Note: This event is not affiliated with nor endorsed by the University of Calgary

In just three and a half weeks on April 10th we will be hosting Dr. Crockford and Dr. Soon who will inform us on those “poor threatened” Polar Bears and that yes the sun does have an effect on our climate. Please join us to hear these two excellent speakers who fight climate dogma and detractors every day.

Remember to get your tickets before the deadline of April 2nd! [Get your tickets now](#)

Doors open at 5:45 pm and we will start the “mix 'n mingle” with a buffet dinner (included with ticket) at 6pm until 7pm which is when we’ll have opening messages and our speakers soon after.

Our annual event is not a fund-raiser and we run it at breakeven. We have always kept prices affordable so that we can widely share our scientific and economic policy messages. Our sponsors help cover the cost as the ticket prices do not cover the costs of running this event. Your company can help. Imagine the benefit of having your corporation’s name front and center of ~400 likeminded real science supporters. All sponsorship levels will receive recognition at the event and in the program:

- ◆ Gold sponsors receive tickets for 16 guests (2 tables) for \$10,000
- ◆ Silver sponsors receive tickets for 8 guests (1 table) for \$5,000
- ◆ Bronze sponsors receive tickets for 2 guests for \$2,500

Smaller donations are gratefully accepted. Please contact us at [1-888-789-9597](tel:1-888-789-9597) Ext 2 or email contact@friendsofscience.org for more information. Thank you for your continued support.

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We will have tables set up for the opportunity to purchase memberships, books, reports, t-shirts, mugs and bumper stickers. Dr. Crockford's brand new book "The Polar Bear Catastrophe that Never Happened" will be available for purchase at the event as well as her novel ([EATEN](#)) and polar bear science book for kids ([Polar Bear Facts & Myths](#)). Books will range from \$10 to \$20; reports \$20 (suggested donation to recover printing costs), t-shirts \$30, mugs \$15 and bumper stickers \$5.

PLEASE BRING CASH as we will not be set up for credit or debit card sales.

Now for some interesting findings. Should you be browsing through [Environment and Climate Change Canada](#)'s website you will find a couple of lists. The first one is under [Air Pollution](#) and it's called the [Air Pollutant Emission Inventory report – 2018](#). It lists 12 of the emissions we all think of when we talk about pollution; particulates greater than 2.5 microns, SO_xes, NO_xes and everyone's favourite Carbon Monoxide (CO) to name a few. Then on the page for the [Canadian Environmental Protection Act Registry](#) you will find the [List of toxic substances managed under Canadian Environmental Protection Act](#). Well imagine my surprise when along with 130 nasty substances, that we definitely expect our Government to safe guard us from, they list Carbon Dioxide (CO₂). Yes, that vilified compound that you are exhaling at 100 times the average atmospheric concentration. That essential gas that feeds plants allowing them to flourish so they can provide us with oxygen is on the list. Even more oddly this list includes all but one of the 12 Pollutant Emissions mentioned above; it excludes Carbon Monoxide completely.

On the [Toxic substances list: carbon dioxide](#) page they say:

"If it is determined that a substance is entering or may enter the environment in a quantity or concentration or under conditions that:

- 1. have or may have an immediate or long-term harmful effect on the environment or its biological diversity;*
- 2. constitute or may constitute a danger to the environment on which life depends; or*
- 3. constitute or may constitute a danger in Canada to human life or health."*

Furthermore: *"The addition of carbon dioxide to schedule 1 of CEPA gives the Government the power to put in place a variety of preventative or control actions to control CO₂ under that same Act. The reporting on releases of CO₂ to the atmosphere is regulated under section 46 of CEPA and is required from large industrial and commercial facilities that meet a certain threshold for their combined emissions in CO₂ equivalent of the six principal greenhouse gases."*

How insane is it that our Government "controls" Carbon Dioxide but not Carbon Monoxide? What's next? Will they now ban Di-Hydrogen Monoxide because it is the largest greenhouse gas?

When Minister McKenna or the PM say "It won't be free to pollute anymore" they are misinformed. Canadians have been paying for pollution for almost 50 years. Michelle blogged about why [Prime Minister Trudeau is Wrong on "Polluting for Free"](#).

A quick update on what we've been up to since our last newsletter:

- Our [blog](#) contributors have added 20 new postings.
 - Robert Lyman corrects Jen Gerson and Maclean's Magazine on their dystopian claims of the end of oil and coming of EVs in [The Myth That Oil Demand Is Coming to An End](#).
 - On a lighter note we have [#Parody Canada's Climate Refugee Plan](#), thanks to a clever member for their submission.
- We added 27 new videos on [YouTube](#).
- Our recent efforts on exposing the foreign-funded activists and connecting the dots can be found in these reports:
 - [Money Matters: The ENGO Political Advantage](#)
 - [Dark Green Money](#) is a glimpse inside the big green funding machine.
 - [Big Green Money vs Conventional Energy Advocates](#) presents the foreign-funding for "No" vs "Pro" conventional energy in Canada
 - [Manufacturing a Climate Crisis](#) is a call for accountability of tax-subsidized, foreign-funded ENGOs' and their impact on the Canadian economy.
- Of course there also thousands of [tweets](#), much new content on [facebook](#) and on [LinkedIn](#).

In closing I hope to see you at our event in a few weeks and Happy Spring.

Andrew Bonvicini, P.Geoph.
President, Friends of Science

POLITICAL DEVELOPMENTS

Juliana vs. United States

The *Juliana* case gained notoriety on March 3 when CBS News [featured it](#) on 60 Minutes with the title: *The Climate Change Lawsuit the Could Stop the U.S. Government from Supporting Fossil Fuels*. CBS interviewed Kelsey Juliana, the lead plaintiff, who was 19 when the lawsuit was filed and is the oldest of 21 plaintiffs from ten different states, all of whom claim to be affected by the consequences of climate change. The youngest is now an eleven-year old in sixth grade. In the suit these 21 people are known as the Youth Plaintiffs. There is another plaintiff called “Future Generations, by and through their Guardian Dr. James Hansen”. The Youth Plaintiffs were recruited from environmental groups across the country by Oregon Lawyer Julia Olson, executive director of a non-profit legal organization called Our Children's Trust.

Kelsey Juliana is a University of Oregon student. In the CBS interview she describes the intense smoke from forest fires in the Cascade Mountains with particulate matter from the smoke that was “off the charts”. The credulous interviewer asks: “And you think that’s because of climate change?”

Answer: “That’s what scientists tell me ... We have everything to lose, if we don't act on climate change right now, my generation and all the generations to come”.

The 100-page [lawsuit](#) was filed in September 2015 in the US District Court in Oregon. All the plaintiffs, except Ms. Juliana, are represented through their respective guardians. The defendants include then President Obama (now Trump), his office, various officials and government departments – all of which are part of the Executive Branch.

Some of the allegations in the lawsuit:

- The Youth Plaintiffs are suffering both immediate and threatened injuries as a result of the alleged actions and omissions by the defendants. They will continue to suffer harm to their health, personal safety, bodily integrity, cultural and spiritual practices, economic stability, food security, property, and recreational interests from the impacts of climate change and ocean acidification caused by the defendants (¶ 96).
- The defendants are primarily responsible for authorizing, permitting, and incentivizing fossil fuel production, consumption, transportation, and combustion, causing the atmospheric CO₂ concentration to increase to at least 400 ppm and, thus, substantial harm to plaintiffs (¶ 130).
- The defendants have failed to preserve a habitable climate system for present and future generations, and instead have created dangerous levels of atmospheric CO₂ concentrations. The affirmative aggregate acts and omissions of the defendants, jointly and severally, have violated and continue to violate the plaintiffs’ fundamental constitutional rights to freedom from deprivation of life, liberty, and property; their constitutional rights to equal protection; their unenumerated inherent and inalienable natural rights; and their rights as beneficiaries of the federal public trust (¶ 130).
- For fifty years, the Executive Branch has known that “pollutants have altered on a global scale the CO₂ content of the air” through “the burning of coal, oil and natural gas.” The Executive Branch predicted that CO₂ “will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable through local or even national efforts, could occur.” The Executive Branch warned that “carbon dioxide [gases] are accumulating in such large quantities that they may eventually produce marked climatic change.” (¶ 133).
- Between 1751 and 2014, the US has been responsible for emitting 25.5% of the world’s cumulative CO₂ emissions to the atmosphere from within its borders. Those emissions do not account for the embedded emissions in imported goods and materials that are consumed in the US. The defendants enabled and permitted those cumulative emissions (¶ 151).
- There is a scientific consensus that climate change endangers humanity and nature. Present climate change is a consequence of anthropogenic GHGs, primarily CO₂, derived from the combustion of fossil fuels (¶ 202).
- To prevent the further impairment or depletion of the oceans and oceanic resources, it is imperative that the defendants take immediate measures to return atmospheric CO₂ concentrations to below 350 ppm by the end of this century (¶ 259).

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Page 99 of the lawsuit lists what the plaintiffs are asking the court to do (the legal term is “relief”), which includes:

- Declare that the defendants have violated and are violating the plaintiffs’ fundamental constitutional rights to life, liberty, and property by substantially causing or contributing to a dangerous concentration of CO₂ in the atmosphere.
- Order the defendants to prepare and implement an enforceable national remedial plan to phase out fossil fuel emissions and draw down excess atmospheric CO₂ so as to stabilize the climate system and protect the vital resources on which the plaintiffs depend.
- Retain jurisdiction over the action to monitor and enforce the defendants’ compliance with the national remedial plan and all associated orders of the court. (That is, the court, over a period of decades, would be supervising activities and results of the Executive Branch’s efforts to stabilize and lower atmospheric CO₂ concentrations – similarly to the way courts monitored compliance with school desegregation orders in the 1960s and 1970s.)

[Our Children’s Trust](#)’s website describes the history of the lawsuit since its filing. Over a series of motions, petitions, appeals and orders in various courts right up to the Supreme Court, the plaintiffs have managed to fight off the Trump administration’s attempts to stay proceedings (prevent the case from going to trial). At the time of writing the Ninth Circuit Court of Appeals has granted the plaintiff’s request to expedite the briefing schedule and fast track the appeal. The next oral arguments are scheduled for June in Portland. Members of the US Congress, legal scholars, businesses, historians, medical doctors, international lawyers, environmentalists and 32,000 youth under the age of 25 have filed *amicus* briefs asking that the case proceed to trial.

Therefore, it now appears that there soon will be a well-publicized trial. Given the photogenic appeal of the Youth Plaintiffs, some judicial support (one US District Judge in the case has [already ruled](#): “Exercising my ‘reasoned judgment,’ I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society”) and the mass of US government documents submitted by the plaintiffs’ lawyers, this case appears to have a reasonable chance of winning at the trial stage. Regardless of the trial verdict, there will be appeal(s), likely all the way to the Supreme Court.

At the final appeal, assuming the plaintiffs prevail, then the question becomes what sort of “relief” the court would order. In theory the court could easily order the Executive to stop approving all fossil fuel-related projects under federal jurisdiction. However, phasing out all fossil fuel emissions and drawing down atmospheric CO₂ to stabilize the climate system may require action by Congress, as well. Moreover, Congress has the power to defund any Executive activities it dislikes.

What if the Executive and/or Congress conclude that complying with the court’s order is politically infeasible and decide to ignore it? Then the court loses considerable authority, and its order becomes just a piece of paper. More likely the court would rule as did the US District Court for the Southern District of New York in [dismissing](#) the City of New York’s suit against five big oil companies: global warming and solutions thereto must be addressed by the two other branches of government, not the judiciary.

Last year Jordan Peterson gave an address and Q&A to the Oxford Union. In response to a question about Justin Trudeau’s political correctness, Dr. Peterson ([video](#) at 1:11:14) mentions one of the things that’s so great about the way the Americans set up their political system: they didn’t try to make it perfect and assumed that they were probably going to be governed by halfwits, but wouldn’t end up in hell as a result – hence the balance of powers.

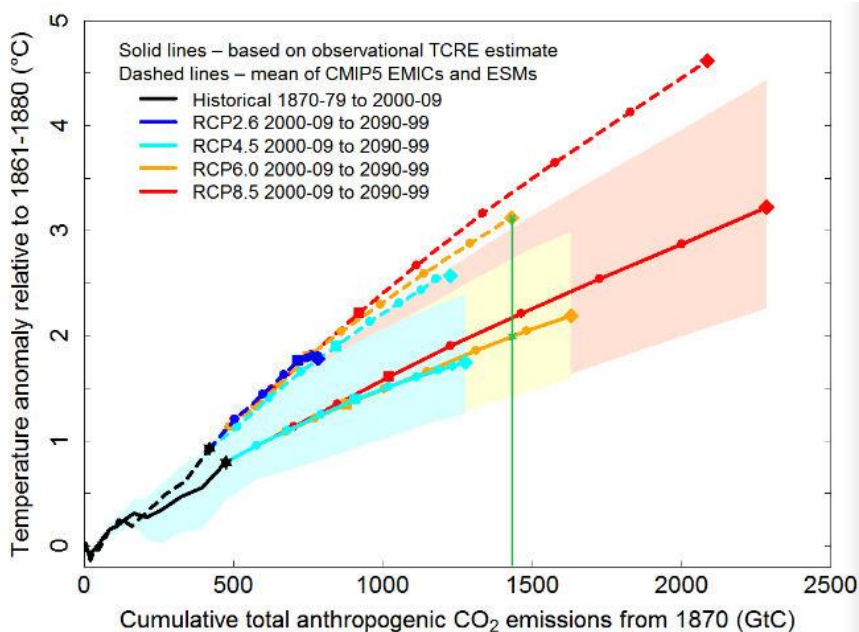
In some parliamentary jurisdictions – Canada, for example – one group of halfwits gets to control both the executive and the legislature. Worse, they have shown that they would rather submit to the diktat of an increasingly activist judiciary, than incur controversy by using the power of Parliament to put the judges in their place.

Ian Cameron
Director, Friends of Science

SCIENCE NEWS

How Sensitive is the Climate to Greenhouse Gases?

Climate Scientist Nicholas Lewis gave a presentation at the “Ontgroeningsdag” climate conference in Amsterdam, the Netherlands on March 7, 2019 about climate sensitivity. His slides are [here](#) and a video of his presentation is [here](#). He is interested in shorter term metric of climate sensitivity known as the transient climate response (TCR) which tells us how the climate will react to CO₂ emissions over decades to a century. Lewis has published 8 papers in climate science journals. His last publication shows that using the last 150 years of instrument observations and assuming all the warming over the period was caused by greenhouse gases, a doubling of CO₂ would cause a median estimate temperature rise of 1.35 °C, with a likely range of 1.1 – 1.6 °C, at the time of that doubling. By comparison, the median estimate of TCR from climate models is 1.8 °C. Even if there were no urban warming or natural warming from the Little Ice Age, the models predict an “over-warm”ing of the Earth by 1/3, which is a large discrepancy.



Lewis says a simple way to project future warming is to use the transient climate response to emissions (TCRE), which is the global warming per 1000 Gigatonnes of carbon (GtC) emissions [1 tonne CO₂ = 3.664 tonnes C, Giga means a billion]. The TCRE is nearly linear with cumulative emissions because the logarithmic effect of decreasing temperature effect of each additional tonne of CO₂ emissions is offset by both the decreasing fraction of emissions forecast to be absorbed by oceans and the biosphere, and the equilibrium warming effect of past emissions. The IPCC’s RCP8.5 emissions forecast is a near-impossible, extremely high emissions scenario. The fifth assessment report (AR5) projected that the warming with RCP8.5 of 1.5 °C above pre-industrial temperatures (1870)

will occur when cumulative CO₂ emissions are at the 2017 level, (476 GtC), but the temperature rise was only 1.0 °C, so the computer models are proven wrong.

The graph above compares the projected warming according to the IPCC AR5 report (2013) to Nic Lewis’ projection using his estimates of TCRE based on observations. Ignore the red lines as they use the RCP8.5 emissions scenario. The top yellow curve shows the projected warming given in the IPCC AR5 report using the RCP6.0 scenario which can be considered a business as usual case. It shows a warming of 3.2 °C from the 1870s to 2090 as indicated by the vertical green line. The bottom yellow line is the projection by Lewis based on his observational TCRE estimate. The warming due to CO₂ emissions at the same cumulative emissions in 2090 is only 2.0 °C from 1870.

The world has already warmed by 1.0 °C from 1870. Therefore, the projected warming from now to 2090 by the IPCC AR5 is 2.2 °C compared to only 1.0 °C using observational estimates. The discrepancy is 220%! Unfortunately, the IPCC model based projections linking warming to cumulative emissions are driving climate policies even though they have been proven to be wrong.

The Impact of Emissions and Economic Growth in Canada from FUND

Climate Framework for Uncertainty, Negotiation and Distribution ([FUND](#)) is an integrated economic assessment model of climate change. The model projects the global temperatures, populations, gross domestic products and economic and social impacts of climate change in sixteen regions. Impacts are calculated for storms, agriculture, water resources, sea level rise, health, energy and ecosystems. The current version of FUND model has a miscalibrated impact function of energy costs. A [study](#) comparing temperatures across the USA to actual energy use shows much higher space heating cost savings and lower

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space cooling cost increases than assumed in the FUND model. Therefore I have adjusted the energy component of the model to match the observations.

The FUND model shows that the total impact of a 1.5 °C temperature rise from the year 2000 in Canada would cause a 0.17% increase in wealth. Based on the projections by Nic Lewis in the above graph, this is expected when cumulative CO₂ emissions reach about 1600 GtC at 2095. However, if the energy component is adjusted to match the observations, the wealth impact would be a 0.28% increase in wealth.

Canada's GDP/capita in constant dollars is forecast to increase from 2000 to 2095 by 262.29% without impacts of climate change. Including the effects of CO₂ emissions according to FUND, with energy impacts adjusted to match the observations, and utilizing the analysis of the TCRE by Nic Lewis, the GDP/capita increases from 2000 to 2095 by 263%. In other words, Canada's annual wealth per persons is forecast to increase from 2000 to 2095 by US\$53,270 (in 2016 US dollars) without CO₂ emissions, but will increase by US\$53,504 with CO₂ emissions. Obviously, the climate impact of US\$233 per year is insignificant compared to the expected continuing growth of wealth due to technological change and capital formation.

Ken Gregory, P.Eng.
Director, Friends of Science

FUNDRAISING COMMITTEE: MEMBERSHIPS AND DONATIONS

Our Operational funds fuel gauge on the right shows that we have six months of funding available for 2019.

Michelle Stirling spoke at the recent Alberta Surface Rights Federation general meeting. She had an opportunity to directly rebut Josh Buck of Environmental Defence, referring to our recent report on [Carbon Pricing Consequences for Alberta](#). [Video](#)

In February, Michelle spoke on #Climate-Lysenkoism in schools at the FreedomTalk conference. [Video](#)

In January 2019, we covered the talk by Dr. Tom Flanagan at the CSEM, wherein he explores the challenges of the "new" National Energy Program. [Video](#)

On March 7, 2019, two of our members covered the U of Calgary Law Faculty forum on Bill C-69 which **excluded** any industry experts, and we report on our concerns in this [video](#).

For these events, we often provide our services for free or a nominal donation and we absorb the cost of video editing because we want others to see and hear what is being said. Our supporters make this happen with their donations – big or small. We have speakers available for your events!

The Friends of Science does not represent any industry or political party. We are a small group of volunteers with an operational budget that is a fraction of what governmental agencies, environmental groups and media use to disseminate fear-mongering information about human induced climate change. Since 2002 we have provided climate science and policy insights to the public and to policy-makers. Our founders saw climate science as a complex, interdisciplinary issue that was rapidly being reduced to a mantra around carbon dioxide and carbon taxes. Real problems related to environment continue to be ignored in the effort to vilify Carbon Dioxide. This rhetoric has devastated industries and the economy, creating needless unemployment. Our commitment continues to be maintaining free delivery of our information to the public, which can only be made possible through the donations of time and money by our generous supporters.

While all our Contributors and Directors volunteer time and knowledge, we do have the expense of our sub-contracted computer and website services, our exceptional Communications Manager, and our extraordinary Office Manager, both who dedicate more time than we can possibly compensate. To maintain this professional level of expertise, we need to continuously solicit donations. Every dollar we receive counts and is put towards the task of bringing the latest information to the public. This is not easy as we are continuously battling deep-pocketed and often foreign-funded activist groups that promote faulty public policy. We are the David fighting a huge green Goliath and we believe we are winning

We are in this together and we need your help. We appeal to you to please continue to make donations to Friends of Science. As we start 2019 we will face many forces wanting to stop our messages. With two



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elections in 2019, (Alberta and federal) we feel our existing scientific and economic/policy reports, videos, and analyses will help inform voters and policy makers. Topics we address are climate change, carbon taxes, renewables and the undue influence of foreign funders and ENGOs - all likely to be key topics with the greatest implications. Remember, we are your voice for climate change issues and ask that you keep repeating our messages whenever and wherever you can. Please continue to share our materials by email, twitter, and Facebook or in any way you can.

This debate matters, you are making a difference.

You can also help us expand our pool of members and donors. If every person brought us five new people, it would make a huge difference to our ability to get out the message. Do you have a local Chamber of Commerce or service club? Invite one of our speakers or ask for one of our presentations and present it yourself (or perhaps do your own version if you feel up to it).

For us to make sure our voice continues to be heard, we will need much more support - personal, financial, and through your networks of friends and colleagues.

Contributions can be made at friendsofscience.org by clicking on “*Become a Member/DONATE*” in the upper right of the home page. The PayPal donation link will allow you to pay with your credit card even if you do not have a PayPal account. Should you experience technical difficulties with online processing, please try turning off any ad blocker as we have no ads anyways. Otherwise if you prefer, you may phone us at 1-888-789-9597 Ext 2 to pay by credit card. Alternately, you can mail donations to Friends of Science at the following address:

Friends of Science Society

P.O. Box 23167 Mission P.O.

Calgary AB Canada T2S 3B1

Toll-Free Telephone: 1-888-789-9597 Ext 2

E-mail: contact@friendsofscience.org

BREAKING NEWS!

Our [Good News on Climate Change! We're Safe. We're Adaptable. Six points for Discussion](#) video is going viral with over 70,000 views in eleven days. Perhaps more interesting, it has 3700 likes and only 368 dislikes!

We believe it is all due to Michelle's message of hope that we don't need to panic. The actual effects of real climate change have often presented challenges to humankind, but we are adaptable. A carbon tax won't stop solar and ocean cycles!

If you are on twitter or Facebook or LinkedIn, please share Michelle's video as much as you can! Please join in on our conversations when you can.



Check out our social media platforms:

bilingual plain language website climatechange101.ca

virtual library on climate change friendsofscience.org

active twitter feed twitter.com/FriendsOScience

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