

# Climate, Energy and Community: Vermont 2020

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This is a compilation of my 2020 columns from the Sunday Rutland Herald and Barre/Montpelier Time Argus. This is the thirteenth year of a series that started in January 2008; and a 2012 overview paper is available<sup>1</sup>. **In the first decade**, these columns dealt with weather, climate, climate change, energy and policy issues. They blended science and opinion with a systems perspective, and encouraged the reader to explore alternative and hopeful paths for their families and society. They were framed so that a scientist will perceive them as technically accurate (although simplified); while the public can relate their tangible experience of weather and climate to the much less tangible issues of climate change, energy policy and strategies for living sustainably with the earth system. **However, in recent years**, politically motivated attacks on climate science, the global rebellions to save the Earth, and deepening political corruption have expanded and sharpened my commentary. The climate and extinction emergencies will bring immense suffering to our children and all life on Earth. Indeed 2020 is a year of reckoning.

I believe that earth scientists have a responsibility to communicate clearly and directly to the public<sup>2</sup>—as we all share responsibility for the future of the Earth. We must deepen our collective understanding, if we are to we can make a collective decision to protect the biosphere and build a resilient future.

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<sup>1</sup> **Betts, A.K. and E. Gibson (2012)**, Environmental journalism revisited. *Environmental Leadership: a Reference Handbook*. Deborah R. Gallagher, Editor, SAGE publications Inc., Sept. 2012, ISBN: 9781412981507. Available at <http://alanbetts.com/research/paper/environmental-journalism-revisited/#abstract>

<sup>2</sup> **Betts, A. K. (2011)**, Communicating Climate Science. *EOS Transactions*, 92, No. 24, 14 June 2011. Available at <http://alanbetts.com/research/paper/communicating-climate-science/#abstract>

## a) Resolve to save the Earth

(January 18, 2020)

[https://www.rutlandherald.com/opinion/perspective/weekly-planet-resolve-to-save-the-earth/article\\_7e83aa98-32eb-5b7b-9bc8-d53bc35d5549.html](https://www.rutlandherald.com/opinion/perspective/weekly-planet-resolve-to-save-the-earth/article_7e83aa98-32eb-5b7b-9bc8-d53bc35d5549.html)

**OK, it is time to resolve** to step away from our consumer stupor and save the Earth. These Planet columns have been running for twelve years, and the year of reckoning has arrived. Think of this as the last decade to wake up and stop destroying our planet and our children's future. Start by listening to the inner hubbub of rationalizations for business as usual, our inalienable human rights, and our treasured freedom to exploit everything for profit.

**Take a deep breath**, put on a coat and step outside into the splendor of the natural world that embraces and cherishes us. Listen and look around, and up and down, as if you were an indigenous person whose ancestors had been living on this land for a thousand years. Oral tradition has taught you about every plant and creature. As you listen you can see into everything in the entire living world of the creation. You are simply part of the web of the living biosphere. You know where your food comes from, you know the call sounds of danger, and you are both alert and at peace.

**Stay as long as you can**, and resolve to return to this living world every day. Promise to teach your children the knowledge they need to face the future. Before you step back into the warmth and comfort of your home, hold close to your heart the fact that our society intends to destroy this interconnected living world, rather than create a sustainable future. Is this your choice also, or will you join with friends and colleagues and confront the powerful interests, corporations and politicians?

**Creating a viable future will not be easy**, as the shift we need is a threat to so many deeply held beliefs. Many came from a century of cheap energy from burning the fossil fuels, which has driven rapid climate change and the extinction of species. In fact all the waste streams from nearly eight billion people must be brought under careful management.

**But there are deeper issues** of our concepts of human power and authority that are more than a thousand years old. You may have glimpsed this when you stepped outside into the mindset of the indigenous people of your land, where the concept of human power did not exist. In our world the rise of science and the industrial revolution has given humanity immense knowledge and power on the mechanistic level, but a rather limited grasp of the web of life. I know this well as I trained as a scientist. But without direction from Earth-centered moral values, the unguided use of our science and technology has led to the disaster of climate change. To our horror, we find the Earth is clearly out of human control. All we can do, unless we choose to be utterly stupid, is slam on the brakes.

**Every year I give many talks** to schools, citizen and business groups and churches. For many years I half understood why science and religion had been kept apart for centuries. I could see this was comfortable for institutional power. Scientists were also taught not to challenge political authority, but I challenged this forty years ago. However the clash between the scientific and indigenous worldviews raised deeper issues. I was troubled for years why the Christian churches collaborated with the colonial powers to crush indigenous people on a global scale. Yes, indigenous traditions were a threat to church authority and doctrine. Yet the founder of Christianity was clearly deeply connected to the natural world. So being a scientist, I started looking for the truth. What I found was revolutionary to me, but obvious in retrospect.

**The Aramaic name** of Jesus was Yeshua. He spoke Aramaic an indigenous language where every story has several levels of meaning (*The Hidden Gospel* by Douglas-Klotz). Yeshua's world was the indigenous world, and one of his core teachings was "Come with me into my world, the world of the Creator, where you will see the truth of the living web of the Creation; and that truth will set you free to act on behalf of the Creator". This truth is one more key to the deep global issues we face, hiding in plain sight. How did Christianity lose its way?

**When the Roman emperor**, Constantine, converted to Christianity, he realized this religion could benefit the imperial Roman Empire. He summoned the bishops to the Council of Nicea in 325 AD, and offered a deal. Define Christianity in clear doctrinal form, and choose the Greek gospels with their dualism and understanding of human power; and suppress the holistic and mystical Aramaic gospels. So Christianity became an institutional religion with a dualistic framework that influenced both the rise of science and the separation of science and religion; but it lost its indigenous roots. Sadly, many Aramaic speaking Jewish and Assyrian Christians, who understood what Yeshua had actually taught, became the heretics who perished over the next century or two.

**To save the Earth**, we now face the beautiful but challenging task of reconciling our science with the indigenous understanding of Jesus. So step outside into the real natural world for a second time: it is closer than you think.

## **b) Phase-out fossil-fuel financing** **(March 7, 2020)**

[https://www.rutlandherald.com/opinion/perspective/weekly-planet-phase-out-fossil-fuel-financing/article\\_98604f45-4b71-5cb8-9d42-ebf304e2af28.html](https://www.rutlandherald.com/opinion/perspective/weekly-planet-phase-out-fossil-fuel-financing/article_98604f45-4b71-5cb8-9d42-ebf304e2af28.html)

**This year** we are searching for solutions to the climate and extinction crises, because time has run out. Groups like Extinction Rebellion (Rebellion.earth) are campaigning every week across the globe to save our children and the biosphere; while business and financial interests are mostly trying to hide to protect 'business as usual'. What are the leverage points in our society?

**Bill McKibben pointed out** the key role of finance in a New York Times article last fall titled '*Money Is the Oxygen on Which the Fire of Global Warming Burns*'. He listed the key pressure points: Banking, Asset Management and Insurance, so let us examine these.

**JP Morgan Chase** has been the leading US bank investing in new fossil fuel development. Dimon, their CEO, chairs the business roundtable, and talks soothingly about "improving capitalism to create a healthier society with affordable health care and better climate policies" (Time, 2/3/2020). Last week they declared they would stop providing loans for new oil and gas drilling projects in the Arctic. Goldman Sachs made a similar announcement in December. Other banks should be pressured to follow suit. The Republican governor of Alaska is angry at both banks, and his current budget calls for \$254 million in new tax credit payments to oil and gas drillers. Clearly Alaska's governor intends to sacrifice our children for money.

**BlackRock** is the world's largest asset manager, and also the world's largest investor in coal companies, coal-fired utilities, oil and gas companies, and companies driving deforestation. Recently they have indicated they will start some limited thermal coal divestment, since it is not profitable. Their web-site makes this claim "Our purpose is to help more and more people experience financial well-being. In pursuit of this, a focus on long-term sustainability is embedded across our business. From integrating

environmental, social and governance practices into our investment processes, to creating positive social impact by serving the communities in which we operate, we are dedicated to helping clients, employees, shareholders and communities achieve long-term, financial well-being.” This is Orwellian doublespeak at its finest; since while they are diligently making money off fossil fuels, they are ensuring the destruction of the planet. This will bankrupt their clients, and make long-term sustainability a farce.

**The insurance industry** is the third group that routinely invests enormous sums in the fossil-fuel industry, since no one can build or operate a facility without insurance. Ironically, the insurance industry understands the risks, and they have the data to know how bad the climate crisis is. The last decade was the most costly on record; with economic costs from natural disasters of over \$3 trillion. This is tiny compared with the hundreds of trillions in costs that lie ahead.

**All these large financial sectors** understand the climate and extinction crises, and they know that by profiting from the fossil fuel industry, that are complicit in a crime against our children and against the Earth. It is time to stop them, using whatever tactics and shaming strategies we can invent, including non-violent civil disobedience, as proposed by Extinction Rebellion. We need disinvestment everywhere from the fossil fuel industry, with large carbon taxes both to drive the transition off fossil fuels, and to fund the huge investment needed in efficiency measures and the transition to renewables.

**The financial system** oppresses the poor and exploits the Earth, which is clearly unjust. We need deep change and that means struggle. This remarkable speech by Frederick Douglass is as true today as back in 1857.

**“Power concedes nothing without a demand. It never did and it never will. Find out just what any people will quietly submit to and you have found out the exact measure of injustice and wrong which will be imposed upon them, and these will continue till they are resisted.”**

This is why our communities need to get together to demand a just financial structure for capitalism that is not based on fossil fuels and does not exploit the poor. For thirty years we have avoided facing this, as the climate and extinction crises have accelerated. Our politicians have accepted being bribed, and the people have quietly submitted to debt, consumerism and isolation.

**But we must change** - or lose a livable Earth. Capitalism was built on burning fossil fuels, but the increasing greenhouse gases are driving a global energy imbalance that is stored in the oceans for centuries. Catastrophic climate change is coming in the next few decades that will overwhelm our entire economic system, unless we change its direction now. Make no mistake: the Earth is far more complex and powerful than our technology, and climate change is one way it can strike back.

**Globally, January 2020** was the warmest on record. For Vermont this has meant an exceptional winter, when for the first time our garden soil has not frozen. Through January and into February my grandchildren and I were able to dig under the rye cover crop. Today is March 1, and the soil in the rest of the vegetable garden, mulched with two inches of leaf mold, is still unfrozen. Spinach and lettuce are growing under glass for harvest in early spring. As global supply chains crumble, the localization of our food supply is an essential part of the broader struggle.

## c) The Global Economy Crumbles

(April 25, 2020)

[https://www.rutlandherald.com/opinion/perspective/weekly-planet-the-global-economy-crumbles/article\\_4c855e2d-f3d9-5a7b-9c05-04acec273ecd.html](https://www.rutlandherald.com/opinion/perspective/weekly-planet-the-global-economy-crumbles/article_4c855e2d-f3d9-5a7b-9c05-04acec273ecd.html)

**The collapse of the global capitalist economy** in the face of the Covid-19 pandemic has valuable lessons for us. Capitalism searches for places, people and resources that can be exploited to maximize profit and minimize costs. Capitalism has no moral guiding principles, it simply demands growth and profits, with no consideration for resilience and long-term stability. Historically justice for working people was not considered, let alone justice for life on Earth.

**Looking back**, it is clear that the growth of the capitalist system was powered by fossil fuel. The post-WWII boom in the US was possible because we controlled the global oil supply, and froze the price of oil at \$3 a barrel, until first OPEC rebelled in 1973, and then Iran in 1979. This led to financial shocks in the 1980s. At the same time the rapid burning of fossil fuels that had been safely stored underground increased the atmospheric greenhouse gases, which reduce the cooling of the Earth to space. So the Earth is warming and more than 90% of this energy imbalance is being stored in the oceans, driving stronger storms and climate change that is accelerating. This threatens not just humanity – especially our children and grandchildren - but it is also driving the extinction of millions of species. Capitalism as it has functioned is both immoral and incompatible with a livable Earth.

**But since ‘free-market’ capitalism** has externalized all its adverse impacts, it does not pay for the current oppression of people, nor for the future catastrophic long-term costs of climate change. This is clearly remarkably stupid, but it continues because it is so profitable, and a trillion dollars in profit can bribe a lot of politicians, and buy a lot of media time to deceive the public.

**The Covid-19 pandemic** exposes a second stupidity of a capitalism that exploits without considering resilience. In the past two decades, in the search to maximize profit, a lot of manufacturing was outsourced first to China and then other Asian countries. Now the collapse of global manufacturing links shows the foolishness of globally distributing just-in-time manufacturing to wherever components can be made cheapest.

**The US drug industry** is an example, where the goal is to maximize profit at the expense of the sick and elderly. The US outsourced generic drugs to India, and India then outsourced some components to China. As manufacturing and supply chains collapsed, medications and now reagents for the Covid tests have become difficult to obtain. Contrast Germany’s well-managed universal health care and the capitalist shambles in the US. Research scientists in Germany identified the new virus threat in late December, and with the full support of the government, developed a test by mid-January, went into production at the beginning of February, and soon could test more than 500,000 people a week. So Germany has Covid-19 under control. But in the US, the government was ineffective and largely in denial; so a dozen private companies developed competing Covid tests, using different reagents that had been outsourced to China, so availability is limited.

**This global pandemic** is one example where reality has intruded on sacred ‘free-market’ theology. Climate change is another on a longer timescale. A third threat is that if a major solar flare strikes the Earth, which has not yet happened during the satellite era, global communications may be lost, leading to a collapse of a different kind.

**Several things are needed** for long-term resilience and stability for humanity and the Earth. First a move to the re-localization of our industry, food and medical supplies, so that local control is possible on a regional scale, not by global empires which exploit people for profit without moral guidance. This will also reduce the burning of fossil fuels for global trade.

**Second**, we must reinvent our economic system to include all the true costs, both present and future, and especially the huge long-term costs of using fossil fuels. Now is a perfect time to add a fossil carbon tax, when the price of oil is low, to fund the transition to an efficient society powered by renewable energy. The public would not notice, but what is obvious to us is unthinkable to the rich and powerful oil industry, which is demanding instead subsidies to protect profits-as-usual.

**Third**, we must strip our economic and health-care systems of the many injustices embedded in capitalism, both to people and the Earth itself. It is outrageous that so many people are poor because they must work for low wages for this unjust and unsustainable system, until they are sacrificed in a crisis. We should expect rebellion and provide guidance.

**Fourth**, we must step away from the endless pleas for growth, and grasp the simple reality that exponential grow of the consumer economy means sacrificing the Earth just so some can profit. This too is stupid when our engineers could easily and cheaply build long-lived products for a sustainable society, instead of the throw-away culture that was started in the 1950s.

**We can also delight** in the benefits from the large economic downturn. The decline in the pollution from air travel and less driving helps the Earth. The big drop in global air pollution from the reduced burning of fossil fuels benefits the planet, and ironically may save as many lives as are dying from Covid-19.

**We the people** now have a window of opportunity to help drive this transformation. It will take community organization and immense effort. Expect only opposition from our clueless central government, which is trying to buy its way out of this crisis by borrowing money. Remember to find time this Spring as the world slows down to sit outside and rejoin the living natural world.

## **d) Capitalism, Courage and Justice**

**(June 13, 2020)**

[https://www.rutlandherald.com/opinion/perspective/daily-planet-capitalism-courage-and-justice/article\\_a8254cea-c44a-5d5b-955b-e38a627c301a.html](https://www.rutlandherald.com/opinion/perspective/daily-planet-capitalism-courage-and-justice/article_a8254cea-c44a-5d5b-955b-e38a627c301a.html)

**The response of the United States** to the confrontation with the COVID virus has been revealing. The strengths and weaknesses of America's core values of freedom, justice and courage have been exposed, along with the blatant immorality of capitalism and white racism. Little has changed since the famous "Tale of Two Cities" speech by Mario Cuomo in 1984 about how the economy leaves so many poor and fearful.

**The continued collapse** of our central government has been stunning. This crisis needed leadership and fast decisive action in Washington; but leadership is impossible if you cannot face the basic truths of a pandemic. Lost in angry narcissism and longing to escape to his golf courses, the president tried to hide his irresponsibility and incompetence by lying and blaming others, from Democrats to the Chinese to the World Health Organization; and by firing those who confronted him.

**Simultaneously, the pandemic** exposed the cruel nature of unregulated capitalism, which exploits everyone and life on Earth for profit. Nurses, doctors and underpaid essential workers showed up with courage to work, but the central government, which had trashed the virus emergency plans left by the previous administration, was useless. Hospitals had little personal protective gear for the emergency, and capitalism had outsourced manufacturing to wherever in the world it could be made more cheaply, and supply chains had collapsed. To avoid responsibility, the government said: “Let the free market provide”. In coded capitalist language, this means someone should be able to make a profit out of all these people dying. Yes I have not been properly trained in polite euphemisms. But under the cover of COVID, the government greedily cancelled as many clean air, clean water and clean car regulations it possibly could to encourage corporate polluters to send more money for its reelection. In reality hundreds of thousands will die; but money trumps everything, and the right-wing will not be held responsible for those that perish – an echo of the tobacco companies’ playbook.

**Meanwhile, the US consumer economy**, which was clearly not essential, collapsed in less than a month. The Earth breathed a sigh of relief as air pollution and greenhouse gas emissions plummeted with the reduced burning of fossil fuel. But tens of millions of people have become unemployed. They have received some payments, and economic incentive money has been sent to many citizens; while trillions have flowed to rich corporations to prop up the stock market.

**To keep profits high**, we have long refused to pay a living wage to all Americans, so few have savings. Minorities, poorly paid and living in polluted areas of cities, have suffered the most. As minorities, they have been treated as expendable by rich white capitalist society, which clings to its racist roots. As murders by police exposed the truth, the rebellion demanding justice has rightly spread across America. Yet the president, backed by his racist supporters, wants to call in the troops to gun down protesters, and crush free speech protected by the constitution. Pathetically, a president who lies every day, is furious that Twitter is now fact-checking his lying tweets that endanger and threaten Americans.

**The other dark side** is that America is the only rich country that refuses to provide health care for all. We have a health care system, which is the most expensive in the world. However, for much of it the key unspoken goal is not to optimize the health of the nation, but to maximize profit for hospitals, drug companies and insurance companies. The political right keeps trying to destroy the limited effort to expand health coverage with Obamacare, because providing healthcare to the underpaid is not profitable. Unfortunately, their guiding rule that the poor have to work to serve us, even if they are sick, is a problem in a pandemic.

**So when COVID struck**, hospitals started losing money when they lost their profitable elective surgery, and they laid off nurses, staff and doctors. What they could not do with their surplus capacity was provide critical healthcare for the hard-working poor, the unemployed and for minorities. We are supposed to believe the capitalist hogwash that universal healthcare is un-American.

**Many have died** in our nursing homes in this crisis, which were also unprepared. The American Health Care Association opposed ‘burdensome regulations’ for emergency preparedness for pandemics, for the simple reason that these reduce profits. Again we see this conflict between profit and people’s lives in unregulated capitalism. Capitalism cannot prepare for future emergencies, whether a pandemic or climate change, since it places no value on the future. So building resilience is viewed as simply reducing current profits. And with deregulation, current profit for shareholders is their prime responsibility, not justice for people or for the Earth itself.

**It will take courage** to shake and reframe this immoral world, but now is the time. We all deserve better.

## **e) Our Present Task**

**(August 1, 2020)**

[https://www.rutlandherald.com/opinion/perspective/betts-our-present-task/article\\_eb28f206-283d-5c77-88bb-e64a6cd63768.html](https://www.rutlandherald.com/opinion/perspective/betts-our-present-task/article_eb28f206-283d-5c77-88bb-e64a6cd63768.html)

**There is a grim set** of interconnecting issues shaking the stability of the United States as the central government crumbles in the face of COVID, white racism, capitalist exploitation of the poor and the Earth, political bribery, and the denial of science. Many themes are haunting.

**Out in the real world**, the hurricane season has started, and the Siberian forest and peat are burning. The permafrost and Arctic sea-ice are melting and irreversible changes are setting in. Across a vast area of Russia, temperatures in the first 6 months of 2020 averaged more than 10 degrees above the climate of twenty years ago. On the summer solstice, one town within the Arctic reached 100 degrees F.

**Globally 2020** is likely to be the warmest year on record, as global climate change is slowly accelerating. As more heat is stored in the oceans, warmer sea water is undercutting and melting the huge Antarctic glaciers, which will flood our coasts in the coming decades.

**The United States** after withdrawing from the 2015 Paris climate change agreement is not simply avoiding these issues, but heading into a new dark age. Under the cover of COVID, the president is taking multi-million dollar bribes from polluting industries to roll back the EPA clean air, clean water and cleaner car regulations, because he needs money for re-election. The 1970 establishment by President Nixon of the Environmental Protection Agency and the Clean Air Act was a real achievement; as were the Clean Air Act extensions passed by President George H.W Bush in 1990 – just 30 years ago.

**G. H. W. Bush** was the last Republican president that listened to scientists. Following Reagan, he was responsible for extending the Montreal protocol, the global regulation that saved the Earth from an ozone catastrophe. G. H. W. Bush fully understood that society must pay to protect future generations from pollution. In contrast, the shocking actions of the current president and his advisors in rolling back pollution regulations for ready cash, which condemns hundreds of thousands of children and old folk to sickness and death, are simply despicable.

**The glaring issue** is that our society is no longer placing much value on the future, because capitalism has become increasingly focused on maximizing current profits for corporations and the wealthy. Most capitalist economies, such as those in Europe, include the future costs of pollution as real costs for doing business. Here rich corporations, the fossil fuel industry and right-wing politicians have conspired to pretend the future of our children and the Earth itself have no value. Alternatively we could just say they are refusing to take responsibility for the future. Once the US claimed it stood for freedom, responsibility and justice (at least for white racists). Now the US capitalist economy simply prizes the freedom to exploit the poor and the Earth for profit.

**For example, we hear** that paying fees now for future damage is not 'cost effective'. This is warped logic, because although we care deeply for our children in the present, this means we are willing to

sacrifice their future to increase current profits a little. When will we start asking the honest question: "Is this cost effective for our children?"

**As the COVID pandemic** spreads again across the US, the political response has been dismal. We hear the strange rationalization that freedom to not wear masks is more important than the spread of the virus. This is not freedom coupled with responsibility. Where in the US constitution is the freedom to spread diseases that kill people? Of course, government denial of the reality and science of COVID has played a large part.

**Another haunting group** is the so-called 'Christian' evangelical right, who backed slavery and then white racism for nearly a century after the US civil war. Now they are encouraging the white racist views of the president. Where is their Christian compassion for the suffering of the poor during this pandemic? They claim to be concerned about women and children, but as climate change accelerates, they are silent on the destruction of so much of the Creation. Remember the example of the black Baptist minister Samuel Sharpe, who called 60,000 Jamaican slaves out on strike for half-pay on Christmas Day 1831. He was executed for treason, but his clear moral stance led directly to freedom for all the slaves across the British Empire.

**Yes, we have much to do.** So take a deep breath, and step out into the beauty of summer. Breathe again and connect with the whole of the Creation, and resolve to preserve it. Support those who want to hold classes outside when schools open in September, so children can learn immersed in the natural world. Above all, resolve to stand together for freedom, responsibility and justice for all.