

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 available¹. **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, and the global rebellions to save the Earth, have sharpened my political 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 public² –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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¹ **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>

² **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

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

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.