



*Editorial*

## The Earth's view of climate change

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**Abstract:** I review the Earth's perspective on the destruction of the planet driven by burning the fossil fuels, based on my personal perspective.

**Keywords:** climate change; indigenous view; fossil empire; moral choices

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### 1. Introduction

It is clear that the Earth is rushing towards a climate catastrophe. This paper is a sequel to [1] which discussed how the climate crisis is being driven by the conspiracy of the fossil fuel industries (which I called the Fossil Empire) to burn all the fossil fuels to make trillions in profits. This is a partnership with business-as-usual capitalism which demands a growing economy and expanding profits from the exploitation of both people and the Earth itself. As a society we are proud of our scientific and engineering capability that have given us such deep understanding of the technical human world, but our grasp of the living creation is more limited [2]. Many people expect and hope we will find technical solutions to the climate crisis. It is clear that we have had that capability for decades, but society is driven by power and profit, not by wisdom.

Almost fifty years ago I realized disaster lay ahead because no-one took responsibility for the Earth [3]. So in parallel with my research career, I set out to understand how science and society could embrace wisdom. Most of what I learnt from saints, sages and indigenous teachers across the globe is beyond and outside our science. This means it has not been publishable in the scientific literature, which has a limited perspective going back only a few centuries. However disasters are rushing towards us so quickly that the scientific community, especially the younger generations, have

to expand their grasp of the real living Earth system, even though much of it is beyond our “traditional science”.

I explained [1] for western audiences the views of the indigenous Aramaic-speaking Jewish teacher Yeshua, who is known to us as Jesus. He was killed because his indigenous understanding of the “Truth that sets you free to act on behalf of the Earth and the Creation” was heresy to both Roman and Jewish power. The early followers of Yeshua were persecuted by Rome for centuries. Then the Emperor Constantine, clearly a brilliant man, realized that this religion could be used to consolidate Roman power. It is said his wife was converted. He summoned the bishops from across the Roman Empire to the Council of Nicea in 325AD. Christianity was reframed as a creed that could be recited, and the holistic indigenous Aramaic gospels were destroyed [4] in favor of the Greek gospels. Simplistically the Greek philosophers understood power and warfare, while the indigenous framework was incompatible with human power. This established within the Roman church, the dominance and misuse of human power over indigenous authority and wisdom. This has survived for 1700 years in Western thought, including the rise of science. Every effort has been made to suppress and destroy indigenous thought, along with Jewish thought, to bury the fact that “Christians” had destroyed the indigenous teachings of Christ to meet first the needs of the Roman Empire and later their own power. A simple almost humorous example was that the Creator was moved up into “Heaven” to limit his interference with church power. The truth is that everyone has the option to connect to the living Earth and the Creation as Yeshua taught.

This key conflict between the indigenous world view and the misuse of human power is a global one. It is central to the climate crisis and the destruction of the Earth by modern society for profit. In parallel, society also lives with webs of lies on many levels rather than the “Truth that sets you free” [5]. Lies are used everywhere to protect the misuse of human power and wealth along with political and religious agendas.

I have realized the indigenous view is correct: the living Earth system is both fully interconnected, sentient (in ways beyond our limited grasp) and in control of the future of our planet. This is heresy of course to human power and to traditional science which deals with provable facts. Another example where our science struggles is the way animals know disasters such as earthquakes and tsunamis are impending and if needed run to higher elevations [6]. They are connected with the living Earth system while humans generally are not. So this paper steps out of the traditional framework of science into a much broader frame. I am going to start with my interpretation of recent climate extremes from the Earth’s perspective; and put my own direct experience of surrendering to the Earth’s vision in section 3.

## **2. Recent climate extremes from the Earth’s perspective**

In my Vermont newspaper commentaries every six weeks, I discuss the climate crisis, extreme events and the struggles of society. Rather little progress was made at the Glasgow COP26 talks on reducing carbon emissions that are driving extreme climate change. The fossil fuel industry sent 500 lobbyists to keep the discussions well under control, since burning all the fossil fuels is the key to their trillions in profits. The issues are all global, but my focus here is largely limited to North America. US greenhouse gas emissions rose 6.2% last year compared to 2020 (which was affected

more by the coronavirus); while globally oceans temperatures reached their highest level on record, driving stronger storms.

So let us review from the Earth's perspective the North American climate disasters of 2021, for which the Fossil Empire and business-as-usual capitalism bear responsibility. I have commented [7] that it seemed that the living Earth system has started to selectively target human infrastructure.

Wildfires, hurricanes, tornadoes and a winter storm were among 20 weather and climate disasters in the U.S. last year that cost \$1 billion or more, totaling \$145 billion and killing 688 people, according to NOAA. Specific events include extreme temperatures in the Northwest US and Canada, wildfires and drought in the West, Hurricane Ida, three separate major tornado outbreaks in the South and central parts of the U.S. In addition, unusually cold temperatures in Texas in February left millions of people without electricity, but successfully destroyed refineries.

Extreme records for temperature are falling globally every year. July 2021 was the world's hottest month: 0.93 °C above the 20th-century average. The event in late June in the northwest US and Canada was described as "most anomalous regional extreme heat event to occur anywhere on Earth since temperature records began" (weather historian Christopher Burt, author of [8]). The forest town of Lytton, B.C. on June 29, 2021 burnt down as temperatures rose to 49.4 °C (121 °F). This set a new high temperature record, a stunning 4.44 °C (8 °F) above the all-Canadian record, set eighty years ago in a Saskatchewan drought. Across Washington State, many other local records were also broken by a similar amount. The world's highest temperature at 54.4 °C was again reached in Death Valley on July 9, 2021. In January 2022, Onslow, a small coastal town in Western Australia, registered 50.7 °C, setting a new record for the southern hemisphere.

The climate of the past is moving into history and forecasting new climate extremes before they actually occur is extremely difficult. One reason is the Earth appears to be choosing strategies to damage fossil fuel infrastructure to limit damage to life on Earth. This is clear from an indigenous perspective, but it is heresy to capitalism, which thinks we are smart to make a lot of money exploiting and destroying the Earth.

The February 2021 freeze in Texas is a good example. This originated in the stratospheric oscillation over the North Pole, propagated down into the Arctic troposphere and then southward as a series of freezing blobs that sat over Texas, freezing and destroying infrastructure for nearly two weeks. Texas had never seen anything like it, and its infrastructure was not winterized. Much of the electrical power system shut down (as it is largely isolated from the US grid), and some local estimates of the total damages reached \$195 billion. But from the Earth's perspective, the real target was the Texas oil refineries, which suffered more damage from this February freeze than any major hurricane.

The extensive fires in North America are increasing the risks of devastating mudslides across large areas. The Dixie fire in California alone burnt nearly a million acres (400,000 ha) and studying the landslide impacts on this scale is a huge task as it depends on soil type and vegetation coverage, as well as rainfall intensity. Fires can reduce the permeability of the soil surface so that subsequent intense rain rates form streams that carry soil and rocks downhill generating mudflows. In landscapes which were forested, this process can be delayed until the tree root systems decay, which may take a few years. The extreme temperatures in British Columbia in late June and into July led to many fires that burnt and destabilized hillsides. Then a huge storm in mid-November 2021 coming from an atmospheric river off the Pacific dumped a month of rain on the region in two days. This generated

massive mud and debris slides that closed the Trans-Canada Highway and national railway line. To us this is a “supply-chain disruption” but it is useful from the Earth’s perspective as BC is mining and liquefying natural gas to speed the destruction of the Earth.

As the Gulf waters warm, many hurricanes have in recent years targeted the Texas and Louisiana coasts which are a network of oil wells and pipes to on-shore refineries. Each storm shuts the array down and damages some oil platforms. This past year hurricane Ida stood out as it did more than \$60 billion in damages. It targeted both the oil wells along the Texas and Louisiana coasts, and then targeted the New York City and New Jersey urban infrastructure and financial institutions that are funding the destruction of the Earth by the fossil fuel industries. Ida set a new record hourly rainfall rate of 3.15 in (7.56 mm) in Central Park, which broke the hourly record of 1.94 in (4.93 mm) set by the previous storm Henri, which came off the warm Atlantic only 10 days before.

We are at a turning point when it is obvious that the climate crisis, which is coming from exploiting the Earth by rapidly burning the fossil fuels, is not at all under our control. So the choice between backing the interests of the Earth or the Fossil Empire is now stark. However our industrial societies simply do not understand this choice. We are lost in the belief that humanity is smart and in charge, while the Earth is there to be exploited for profit. It is obvious to some that this misuse of human power is incredibly stupid. We too are an important part of life on Earth, but we do not understand how to connect directly with the Earth. The Earth's climate system is a fully coupled complex system (atmosphere, oceans, ice, clouds, forests, grass and all of life above and below the ground, including humanity) with an infinity of coupled modes. It appears that the Earth can select modes, knowing the long-term impacts, while our numerical forecasts struggle to predict for the short-term. The truth is that the living Earth system is in charge not human power fantasies. Of course I cannot prove this within the framework of science I learnt in college, because it is outside that framework. Instead I will illustrate from direct personal experience how I came to understand the reality of the living Earth.

### **3. How can we connect to the Earth?**

#### *3.1. My personal history*

I am going to start with my history as a scientist, so you can understand how I was trained, and why I knew we needed a deeper perspective. I went to ancient schools, first Nottingham High School founded in 1513 by Dame Agnes Mellors and then Peterhouse Cambridge, founded in 1284, where I studied Natural Sciences. My Director of Studies, Dr. John Kendrew was a Nobel Laureate (1962), and my primary tutor Dr. Aaron Klug became one in 1982. Both used crystallography to study molecular biology. Then I went to Imperial College in London (1967–1970) to get a PhD in Meteorology. My time in London was an interesting period, as I took classes in parallel at the Free University of London, staffed in part by US refugees from the Vietnam War, and the School of Philosophy, where the opening words were: “What is wisdom”. There I realized how academia is sheltered from so much. So though I have been a researcher all my life in weather and climate, I realized by the time I was 25 in 1970 that science was not enough. So I have in parallel explored the

indigenous, spiritual and philosophic traditions that are essential for understanding our place in the interconnected web of life that is the living biosphere or creation.

My PhD advisor, Prof. Frank Ludlam, was an inspiring teacher with no degrees (until he was given an honorary doctorate). He was a courageous man, who had become an expert on atmospheric clouds and convection as he humorously put it by hitch-hiking on bomber flights over Europe. On one occasion he had to bail out clutching his parachute. In 1969, he sent me to a field project in Venezuela studying tropical convection and storms. This was organized by Prof Riehl from Colorado State (CSU) and I found out later it was funded by the US military, seeking hydrometeorological guidance for their Vietnam catastrophe. This field experience made me realize how little was known. I watched the world's leading tropical expert, Herbert Riehl, try and fail to forecast the afternoon convection almost every day for six weeks. On my return, I reviewed the limited literature and wrote my conceptual PhD dissertation on cumulus convection from first principles in less than six months.

Then I was offered a post-doc position at CSU, where I stayed till 1978 on the academic faculty. I was back in Venezuela in 1972, now the field program director. Then along came a massive international project in 1974, the Global Atmospheric Research Program (GARP) Atlantic Tropical Experiment (GATE), in the tropical eastern Atlantic to study the coupling between convection, the tropical convergence zone and the vortices coming off Africa. GATE was a cold-war science collaboration, and the US, Canada, Europe and the Soviet Union committed all their oceanographic ships and research aircraft. The dates and logistics were committed, but the key convection plan was not written, and no-one volunteered! As an "expert on tropical convection" from the two Venezuelan field projects, the system said "Betts can do it". I was given the job of first writing the convection plan in 1973, and then implementing it in 1974. The aircraft were all based out Dakar, Senegal, and fortunately I speak French! So on the first day of GATE, I took off in the NASA 990, supposedly in charge, followed by another six long-range aircraft, British, US, Soviet and French. I had never flown on a research aircraft in my life, and I was only 28. For four months through four field phases, I flew 12-hr grueling days in an extraordinary range of storms, relying often on intuition, given only a single geostationary satellite data at sunrise, and typically a forward-looking radar on the British C-130. Subsequent analysis meetings over the next six years were fascinating, especially with the Soviet scientists, whose understanding of global issues was amazing. In parallel these meetings gave me the freedom to travel the world and search for deeper truths.

Vast field programs was not the life I wanted, so I refused tenure at CSU and started planning my escape to Vermont where I built a passive solar home in 1978 on a hillside with a few hundred watts of solar panels. I have worked from Vermont ever since, funded as an individual by the National Science Foundation on rolling 5-yr grants for over thirty years, by NASA and most recently by the University of Vermont. In 2005, I gave myself the job of climate advisor to Vermont. I help with climate plans, and write for the newspapers, and give talks across the state from kindergarten to professional and academic groups (see [alanbetts.com](http://alanbetts.com)).

### *3.2. Connecting with the real living Earth*

I realized long ago that because scientists were trained to do what those in power wanted and funded, but not address the broader implications, disaster lay ahead as no-one had any allegiance to

the Earth [3]. I was concerned about the proper use of science in the modern world. My basic question was: “How do we merge science and wisdom”. I started asking around and a woman who was the meditation teacher at the St John the Divine Cathedral in Manhattan said “Go and ask Yogi Ramsuratkumar in Tiruvannamalai in SE India—he would know”. Now in 1980 you simply sent a telegram telling him when you were coming. He was a man who had spent 20 years on the sacred mountain overlooking the city, 20 years on the temple steps, and now had a basement apartment opposite the temple steps. I arrived and posed my question to him but I did not get the learned verbal answer I expected. Instead this bearded yogi stood and went to his library, which I had not noticed even though it was on my left. His library was 2 m tall stacks of thin books and pamphlets, four stacks deep and ten stacks wide. How did a man sitting on the temple steps have a library of all the world’s wisdom! He pulled one from a stack (knowing exactly where to look), opened to the right page and said to me: “Read”. It was from one of his teachers (Sri Aurobindo c.1920), written after the first world war.

“Science gathers facts and thinks it knows, but wisdom as she walks hears the echo of her solitary tread on the shore of an infinite ocean (of truth)”

The first phrase is crystal clear to a trained scientist, but the second needs years of reflection. I have added the last two words for the present context of the struggle between Truth and lies.

Several Indian saints changed my life. I had been transformed even before I reached Ramsuratkumar. Foreign visitors to Tiruvannamalai can stay at the Ramana Maharshi Ashram. After travelling across India I sat down on arrival to recover and meditate in the empty darshan (meeting) room of Sri Ramana Maharshi (also one of Ramsuratkumar’s teachers). It was empty except for a green leather couch with his picture—he had passed on 30 years before. He was a man who said and wrote little. I was so grateful to have arrived. As a naïve scientist I was totally unaware that a place could be so sacred that if you simply surrendered, you could be connected to all. Within minutes I was picked up as it were and taken through my life for perhaps an hour and connected in a symbolic way far beyond words with everything. I was completely transformed and emerged ecstatic for days. In the language I did not know at the time, I had been shown the Truth of my place in the interconnected web of Creation that had set me free. I went on to spend a few weeks sitting and watching a famous living Indian saint Sri Satya Sai Baba.

I was traveling on to a GATE meeting with my Soviet colleagues in Kiev (now Kyiv). On arrival, they clustered around me seeking the wisdom I had learnt in India. I discovered they shared with each other books of wisdom from all over the world. They could get anything they wanted because it was far beyond the grasp of the censors. I was amazed that they understood so much more than scientists in the west.

Living in Vermont I worked as a research scientist on short-term field projects (with the acronyms FIFE in Kansas, and BOREAS in Canada). I tried to understand how the weather and climate system, clouds and snow worked over land through the seasons; and how well reanalysis data could represent the seasonal climate processes. I grew gardens and vegetables and watched the seasons change as the mean climate got warmer, until my grand-children could dig under a rye cover crop in mid-winter. I gave talks and climate advice to Vermont.



**Figure 1.** Temple in Tiruvannamalai.

For several years I was trained by the Peacekeeper program of the Venerable Dhyani Ywahoo, a medicine teacher from the eastern Cherokee (Tsalagi) tradition. She is the Founder of the Sunray Peace Village which is near me in Vermont, and also a teacher of Vajrayana from the Tibetan Buddhism tradition. She is a wonderful teacher who gave me practical insight into the indigenous world view and framework.

A central practice of the tradition is a dance to the four cardinal directions. I would hear how a dance would be shown to a teacher at some special place, but my science-trained mind translated this into human terms—that the teacher would envisage this dance while being there. Then one day in fall I was sitting all alone for three days by a rushing stream in the Adirondacks in the middle of a vision quest. It was late in the afternoon and I was sitting in deep meditation on a huge nearly flat boulder more than 2 m across (about eight feet) by a rushing stream. The Earth noticed me and with a sense of humor showed me how my human interpretation was wrong. I was picked up from a cross-legged position with my weight somehow fully redistributed, and my arms going up first. My body simply unfolded smoothly and gracefully upward with no stress on any joint until I was standing, and I flowed directly into a new dance to the four directions. It was similar to the one I knew but precisely different, and for perhaps an hour I just danced it till I could dance no longer. I knew instantly that I was being taught by the Earth because my science hat was watching, and I cannot stand up from a cross-legged position without using my hands, and certainly not unfold with almost weightless smoothness and grace. All I could do was dance and watch, and when I tried to turn on another part of the brain to capture and remember the dance, it started to slip away until I let go and let my body just dance.

I was fully conscious and can remember and feel the details thirty years later. As a professional scientist, I am certain that the way my body was lifted was not consistent with the law of gravity. The Earth had not only read my mind but was able to simply suspend the basic law of gravity to teach a climate scientist a lesson I would never forget. To generalize, it has become clear to me that the living Earth system can pay attention down to the level of the individual, and also influence events and connections through ‘serendipity’. The key concept that we must surrender to connect to the Earth itself, is difficult for many because we have been taught to “fight, fight and never surrender” from our militaristic traditions.

#### **4. The climate crisis revisited**

Let me review some key issues that modern industrial society must grasp if it is to survive. Indigenous people understand and respect the living Earth system and know we must work with her and her wisdom that goes back long before humanity. The first precept in the “Code of Right Relationship” is “Speak only words of truth” (Voices of our Ancestors, Dhyani Ywahoo, 1987). In these I can hear the echo of the words of Yeshua that the “Truth will set you free to act on behalf of the Earth and the Creation”.

Yet few in modern society understand the depth of these central truths. We are surrounded by webs of lies constructed to protect political views, power and money, would-be and real dictators, business-as-usual and the Fossil Empire; and all kinds of deceptions to trap people and if possible make money from them. We think humans are all-powerful and our beliefs and freedoms are all that matter. Yet we are tragically wrong. Without thinking or awareness we have taken on the destruction of the living Earth that is far more powerful than we can grasp or understand. Our industrial society will be destroyed by the Earth to protect life on Earth unless we change direction and reeducate both ourselves and our children this coming decade, and step away from the nightmare of burning all the fossil fuels for profit.

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#### **Conflict of interest**

The author declares no conflict of interest.

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