



Trashing God's Creation

In the face of global climate change a biologist challenges Christians to become wise stewards. | **JOEL OLFELT**



As my brother, sister, and I were growing up, my family lived some good theology. We picked wild raspberries and thimbleberries, and Mom made preserves from them. Mom and Dad chose a home for us close to work and school, minimizing commutes. Mom taught me to leave the ruby red toadstool on the forest floor rather than kick it over.

At the time I did not think of these as theological practices, but they were in fact an acting out of theology described by Walter Brueggemann, who writes that God has placed a “force of generosity” on the earth “so that [it] can sustain all its members,” and that creation requires wisdom of humans. As a family, we tasted the generous fruits of the earth, and Mom and Dad taught us the wisdom of using only that which we needed. Because Dad was an attorney for the Minnesota Department of Natural Resources, we also experienced the realities of working out stewardship practices in the larger community beyond the boundaries of our household.

A stewardship crisis that shaped our lives heavily in the mid-1970s involved the dumping of mining wastes into Lake Superior. Since 1955, accepted practice had been to dump 67,000 tons of the wastes into Lake Superior daily. Public and company scientists believed that the wastes were biologically inert

and that they would flow in dense lake bottom currents to become trapped by cold water deep in Lake Superior’s Great Trough. Early government reports praised the ecological soundness and sensitivity of the practice, and the mining company came to supply more than 10 percent of the taconite pellets needed by United States steel mills. It was a critical part of northern Minnesota’s economic fabric.

In time, however, new information revealed a startling story. The wastes contained asbestos-like fibers, and lake currents delivered those fibers in high concentrations to the city of Duluth’s drinking water. Legal historians tell us that the mining company and its powerful friends suppressed this information for years. However, persistent citizens demonstrated that the practice increased the probability that many people were continuously exposed to a potent carcinogen. At stake, according to these citizens, was the quality of the greatest and most pristine of the Great Lakes.

Eventually the dumping practice became unacceptable to the state and to many citizen groups, but company officials, and many taconite plant workers and their friends and neighbors,

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defended the practice. They felt that their livelihoods and community were at stake, and they responded vigorously.

The resolution achieved in this Minnesota crisis was hammered out over many years by many people. Some, like my father, acted out of their Christian stewardship ethic. Dad worked grueling long hours for years in efforts to foster the state’s best

understanding of what would lead to long-term human, economic, and environmental health. He was frustrated and discouraged when those in power wielded their influence to prolong the status quo, apparently considering long-term public health to be less important than their immediate profit.

In the end on-land disposal facilities for the wastes were constructed, and taconite is still processed in the same location on the shore of Lake Superior. Students of environmental law now consider the case to be a major turning point from poor to much better corporate earth stewardship practices in the United States.

A Global Crisis

We are now in a global climate change crisis because of our practice of dump-

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ing carbon dioxide and other greenhouse gases into the atmosphere. The pattern of this crisis, like that of the mining waste crisis, is woven from our need for shelter, food, and jobs, balanced against the tension of our need for clean air, water, and healthy ecosystems.

The climate change crisis is caused largely by the burning of fossil fuels, a practice that is deeply ingrained in our personal and collective habits. Metal-smiths probably used coal as long as 1,000 years ago in China, and King Edward I of England made coal fires illegal in 1306 because of the noxious fumes. King Edward's efforts were ineffective, however, and over the course of the next centuries England and many other nations came to tolerate poor air quality and horrible conditions for some people because of the power and wealth others could gain through fossil fuel use.

By 1896, fossil fuel use was widespread, and Swedish scientist Svante Arrhenius predicted that the global climate would warm on average as atmospheric carbon dioxide levels increased. The idea that humans could alter climate has seemed incredible to many, but the rate of fossil fuel use is exploding. Papers published by the National Academy of the Sciences (NAS) show that about two-thirds of the current climate change is attributable to fuels burned in the last thirty years. They also show that worldwide greenhouse gas emissions are increasing at a rate that, if unchecked, will approximately double yearly input to the atmosphere within our lifetime. Studies published in the premier science journal *Nature* show that plant and animal species would have to migrate more than thirty feet per day to keep up with the average temperature changes that are occurring. In short, the evidence supporting and refining Arrhenius's ideas is now overwhelming.

In November 2007, the cautious Intergovernmental Panel on Climate

Change (IPCC), a scientific intergovernmental body set up by the World Meteorological Organization and the United Nations Environment Programme, issued a rigorously reviewed report stating that global climate warming is "unequivocal" and that human activities are "very likely" (more than 90 percent certain) the cause. This link between our activities and climate change is troubling because so much that we value—the heat in our homes, the food we purchase for our families that has been shipped around the world, and our ability to travel as needed or desired—depends on fossil fuel use. *Newsweek* reported in August 2007 that some petroleum interests find this link so troubling that they have paid large sums of money to well-placed people to deny such a connection exists.

We have made great strides in removing the noxious fumes from coal smoke to which King Edward I objected. The air quality in many of our cities has improved markedly over the last forty years, and we have found that the economy, rather than faltering under air quality constraints, has grown. Over these years, however, our appetite for fossil fuel has grown exponentially. We are now dumping more than *six billion* metric tons of carbon dioxide into the atmosphere each year. Only about half of this can be taken up by the earth's ecosystems; the other half accelerates the changes we are effecting in the composition of our atmosphere.

Those changes are critical because they alter the way the sun's energy interacts with the atmosphere. Much solar energy, in the form of light, passes largely unchanged through atmospheric gases such as carbon dioxide. When the light hits a surface, some of the energy converts into heat, especially if the surface is dark. The heat energy that bounces back into the atmosphere interacts with greenhouse gases and is trapped by them. The ability of light to pass through the atmosphere more readily than warmth is especially im-

portant in the earth's polar regions where summer sea ice extent has fallen by about 20 percent since 1978. These regions are warming especially quickly because snow and ice reflect sunlight like a mirror, but open water and uncovered vegetation capture the sunlight and convert it to heat.

According to models published by the NAS, if we do not change our practices, we can expect average global temperatures to rise by at least 3.6 to 5.4°F by the end of this century. Experts tell us that the last time the earth was this much warmer, three million years ago, ocean levels were 80 to 115 feet higher than at present.

While such increases of temperature may initially sound insignificant to the average person, a paper published in the journal *Nature* predicts that about 60 percent of all species on earth will perish if average temperatures rise by 5.4°F. Paleontologist Michael Benton argues plausibly in his book *When Life Nearly Died* that temperatures in this range led to the greatest extinction event in the earth's history 251 million years ago when about 90 percent of all species perished. Geologic evidence shows that the earth has warmed in the past, and that there were important consequences. When temperatures rise now, in contrast, we are the ones responsible for the warming and its consequences.

A Christian Response

There are clearly compelling secular reasons to work very hard to lessen the severity of future climate change, but Christians might ask what roles individuals, churches, and denominations might be compelled by faith to play in this global crisis.

One response is to do little, remarking that we like warmer winters and that our corner of the world is likely to be more comfortable in our lifetime. Such a choice builds the comfort of some of us upon increasingly dangerous conditions for others. It ignores the

evidence that elevating average global temperatures are at the very least linked to increasing length of droughts, deadly heat waves, and increasingly severe hurricanes. Though in the short term this may be the easiest option for many North Americans, such a choice fits neither a biblical description of good stewardship of creation nor of care for fellow humans who are equally created in the image of God. If we take this choice, we reject the messages of the prophets and we might rightly be called hypocrites.

When we search Scripture, we find that it affirms the use of the earth's resources to care for ourselves and for one another, but that it does so within the larger context that the earth and all that is in it belongs to and is sustained by God (Psalm 24, John 1:3, Hebrews 1:1-3). Genesis 9:8-17 shows that God's covenant after the flood is not only with Noah and his descendants, but also with "all flesh that is on the earth." Psalm 148 shows us that the sun, moon, stars, mountains, storms, humans, trees, and animals are all to raise hymns of praise to God. God apparently values non-human creation for its own sake, not only for its utility to humans. Christian individuals and groups might use these and other Scripture to inform our efforts at good stewardship and to promote those practices that are most likely to help all parts of God's earth to raise their hymns of praise.

Projections published by the IPCC and the NAS show that if we begin reducing greenhouse gas emissions within the next several years and achieve emissions levels near to those that can be absorbed by the earth's ecosystems by mid-century, then average global warming might be minimized. According to these same sources, sea level increases of a few feet and important levels of species extinctions by 2100 are now inevitable, but we have the time and technology to significantly decrease the damage.

The challenge is enormous and complex. To meet it we need to increase our individual and corporate stewardship efforts. I believe that our best hope might begin in seeing that right relationships are very important to God, whether the relationships are between God and humans, among humans, or among the parts of God's creation. We know from experience that our richest and most rewarding relationships develop when we value and respect others and that our poorest relationships come through disrespect and exploitation.

I invite each of us to invest in our relationship with God's good earth by changing our fossil fuel use habits. Doing so will demonstrate our respect and care for God's earthly creation, knowing it more fully as we work out new ways of living with it. We can invest in our relationship with our sisters and brothers in parts of the world that are already strongly impacted by climate change, and we can invest in our relationship with our children's children, leaving them a richer earth just as we have inherited a cleaner Lake Superior from my father's generation.

We are each placed in our own particular part of God's good earth at this particular time. Our place as caretakers comes with tasks during this climate change. God has given each of us circles of influence, sets of resources, and examples of earth stewards that we can follow. We must invest in best stewardship practices so that God is

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honored. Those best stewardship practices will differ for each of us, but whatever we do we must find the best available information, and we must begin now. My family has found publications such as *Global Warming* by Time Inc. to provide information that is reasoned and helpful.

Practically we might begin changing our relationship with the earth in small steps, such as turning down the thermostat, buying locally produced food, using transportation models other than one person per car, or growing more of our own produce. In addition to improving personal stewardship, we must develop better practices in our cities,

regions, and nations. Those who are able should promote best practices in their companies and churches. We might support politicians who actively foster good earth stewardship. In our national politics we might support leaders who forge sound international agreements based on best stewardship practices, investing in long-term relationships rather than in short-term gratification.

As we prayerfully forge new stewardship practices, I believe that we will be delighted by new insights into our relationship with God's good earth, and we might find ourselves healthier and with better relationships with our sisters and brothers around the world. With God's help our present time might be seen as a turning point in history for better stewardship on earth. May it be so. □