

The Challenge of Climate – The Future is Now

I suspect that I'm mostly preaching to the choir in talking about climate change. The nature of the problem is likely all too familiar to us. We feel frustration and anxiety as too many Americans seem unwilling to recognize its seriousness. So what I will do here is to offer an overview of the situation: what climate change is, the arguments about it, and some of the consequences. But most importantly I want us to consider what we—this congregation—can do that would have some real effect; and consider why we should act. How does this issue apply to a congregation of UUs located in the relative safety of central Michigan?

In thinking about this issue I invite you to focus on two of our Seven Principles. First, clearly, is the 7th: "Respect for the interdependent web of all existence, of which we are a part." That is, we are only a subordinate part of the whole, and responsible to it. The second relevant Principle is the 6th: "The good of world community, with peace, liberty and justice for all." This—in the context of climate change—means recognizing the real threats to the goals of peace, liberty and justice; and actively working with the world community to address those threats. Think of the Paris Climate Accords. And, as well, if the rich nations of the earth are primarily responsible for the threats, what responsibilities do they have for solutions?

First, let us consider the nature of climate change. Climate is influenced by both natural and human changes—e.g., natural volcanoes versus human greenhouse gases. Climate deniers argue that the recent changes are caused essentially by natural factors and therefore don't require actions that would disturb the status quo. At the same time, the overwhelming and virtually universal scientific consensus, is that causation is largely human. The primary cause is the increased production of greenhouse gases, especially carbon dioxide. This production came from the growing use of fossil fuels associated with the industrial revolution and should therefore be the primary focus in addressing the problems resulting.

On the one hand, it's hard to understand how so many people can ignore that scientific consensus. As Neil deGrasse Tyson has spelled out so clearly: "The good thing about science is that it's true, whether or not you believe in it." Moreover, it is clear that the people who know the most about climate change are the ones who are most concerned and most alarmist. On the other hand, denial has a powerful appeal. It's hard for most of us to think generations ahead, especially if we can persuade ourselves that it isn't necessary. But, most importantly, some very powerful economic interests want to preserve the status quo as long as possible. The world's energy producers have worked together to argue that their fossil fuels are not the cause. They have followed the example of tobacco companies to support false science—sometimes using the same scientists—and thereby legitimizing climate denial. And, unfortunately, this has become ever more a partisan political issue. Climate change has become like opposition to abortion rights, to be a defining issue for Republican office holders. For many years not a single congressional Republican would publically acknowledge the threat of climate change. And, at the same time, the scientific community was typically thorough, cautious and probably not nearly alarmist enough.

Thus, too much of the general public has been left uncertain about what is happening. And none of us can be completely certain of how much is happening, how fast and how urgently we should respond. It can't be that serious—can it?

Well, I've been reading a book by Jeff Goodell called *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World*. In it, the author points out that the amount of CO₂ in the air is greater than it has been since the mid-Pleistocene, three and a half million years ago when there was a lot

less ice at the poles and sea levels were sixty feet higher. Sixty feet! We can hardly imagine the consequences; it is the stuff of dystopian science fiction. How high will our temperatures rise, will we act - can we act in time? For myself, I can't emotionally accept the worse case, doomsday scenarios. But intellectually I can't fail to recognize that we are at a very dangerous point. Complete certainty is impossible, but nonetheless the patterns and directions seem clear as we look at current and likely future consequences.

The buildup of greenhouse gases, especially carbon dioxide, is producing changes at an unprecedented and at a generally accelerating rate. Twenty of the last 22 years have been the hottest on record, with the past four years the four warmest. The results include patterns of more intense and more erratic weather: the intense hurricanes and floods in some areas; the historic droughts and wildfires in others; the rising extreme heat levels, the disruptions of food production, the spread of disease vectors, the warming and acidification of the oceans. And perhaps most threatening, the inexorable rise of sea levels. This is caused by ocean warming and the melting of glacial and pack ice in the Arctic—including Greenland—and in the Antarctic.

Early estimates of global sea level rise were in the three feet range by 2100; more current ones are in the six to eight foot range. And, depending on how much we heat up the planet, it will continue rising for centuries after that.

The best way to slow temperature rise and consequent flooding is to quit burning fossil fuels. But even a complete ban won't stop temperature rise. CO₂ is not like other kinds of air pollution—like the chemicals producing smog which go away as soon as you stop using them. Much of the CO₂ emitted today will stay in the atmosphere for thousands of years. That means that even if we do reduce CO₂ in the future, we can't prevent the warming from the CO₂ that we've already dumped into the air.

That doesn't mean that cutting CO₂ is pointless. For as much as we can minimize the inevitable temperature rise, we can limit the inevitable sea level rise. So that by 2100, the sea level rise could be held to 3 feet (best case) instead of 13 feet (worst case, we hope). Though it will continue to rise after that, still the differences are very real. For American coastal cities the difference between 3' and 6' is the difference between a wet but livable city and a submerged city; and billions of dollars worth of coastal real estate, and billions more for the costs of controlling the flooding. We should also recognize that these costs will be paid for not just by those coastal cities or their state governments, but by the federal government.

An example: By the end of 2016 the State of New Jersey had spent \$4.6 billion on Hurricane Sandy recovery efforts. 95% of this came from the federal government—that is, from the rest of us. But, for nations like Bangladesh and Indonesia, the difference between 3' and 6' is the difference between a terribly disruptive but probably manageable coastal crisis and a decades-long refugee crisis. And for many Pacific island states it is the difference between survival and extinction.

Thus the consequence certainly vary by location. Here in central Michigan the consequences seem less apparent. Yet, the Midwest has experienced increasingly erratic weather—more floods, more droughts—which have disrupted agriculture and resulted in a series of billion dollar plus disasters. We also are experiencing more health problems—spreading disease vectors like Lyme disease. And that late polar vortex was almost certainly related to climate change.

Other areas are experiencing more dramatic effects. The human costs of living in south Florida or in California are all too apparent. And while we have vast resources—economic and technological—to manage

the challenge...the rising economic costs cannot be sustained indefinitely, even for us. At the same time, the poorer nations of the world lack the resources available to us, and many are in regions of much greater risk. They truly face looming disaster. That will result in international disruption that leads us again into the realms of dystopian science fiction. And very clearly represents a profound threat to the entire world community – ourselves included.

The human cost, especially to the poorer nations of the world is incalculable. 145 million people live fewer than three feet above sea level. How will they respond? Large areas of the African interior will become uninhabitable because of dramatic temperature rise, droughts and agricultural failure. What can they do? The result, according to the most credible estimates, project about 200 million climate refugees by 2050.

Consider the consequences—for the people affected and for ourselves. Climate change is a much greater threat to world stability than is terrorism. Think of the threat to India of tens of millions of Bangladeshi refugees. Also, the civil war in Syria was strongly influenced by four years of serious drought, and the resulting civil war has been a destabilizing influence for the whole of the Middle East. Remember that the movement of thousands of Syrians and then of thousands more African refugees into Europe has been a destabilizing challenge for all of Europe. The effect of tens of millions more is beyond comprehension.

The situation raises not only practical questions, but also serious moral issues. A few years ago the former president of the Maldives (which is a low lying island state in the Indian Ocean) confronted Western polluters with the following options: “You can drastically reduce your greenhouse gas emission so that the seas do not rise so much...or, when we show up on your shores in our boats, you can let us in... Or, when we show up on your shores in our boats, you can shoot us. You pick.” Another perspective: Between 1850 and 2011 the US produced 27% of the world’s CO₂ emissions, the EU 25%, etc. If we assume even 100 million people will be displaced, using the formula of CO₂ emissions, the US should take in 27 million people. For the past few decades we’ve been taking in about a million mostly on-refugee immigrants a year, and only took in about 10,000 Syrian refugees. How much responsibility do we have; what do we owe to these climate refugees and to the Pacific island states facing extinction?

And beyond the human consequences, what responsibilities do we have to the natural communities of plants and animals that are experiencing growing degrees of disruption and unprecedented rates of extinction? Human activities clearly represent a profound threat to the “interdependent web of all existence.”

Thus there are a legion of reasons why action is necessary for the sake of our own interests and for that of all the communities of the earth. The questions then are what to do and how to overcome the inertia and selfishness that have prevented real action so far. We have to recognize that we have waited too long and that the cost of inaction will continue to rise. We can’t be sure we will act soon enough or do enough to stave off long-term disaster. Yet it does seem that there is finally a growing recognition of the threats and greater willingness to act. I marvel at the 35,000 school kids marching in Brussels every Thursday and hope that impulse spreads. In fact, a new movement seeking to raise “an army of young people to stop climate change” is planning “a nation-wide coordinated day of action” on February 26 with events planned in Lansing and in Grand Rapids (sunrisemovement.org). In the meantime, in this country more and more Republican voters and a few Republican leaders are starting to break ranks and look for changes. The storms in Texas and Florida, the fires in California have convinced more and more people at last that action needs to be taken.

These concerns have been reinforced and validated by two major new reports by scientific agencies this past fall. The first, the Intergovernmental Panel on Climate Change, emphasized that the impact of human-induced warming is worse than previously understood; that very serious threats will be felt, not just in future generations, but are happening already and will become steadily more serious. It emphasized the critical need to limit rising global temperatures. Then, the day after Thanksgiving, the Trump administration reluctantly released the Fourth National Climate Assessment. This second report also emphasized that the problems were not future but current and argued for “rapid, far-reaching and unprecedented changes in all aspects of society.” In this spirit two writers offered an op-ed piece entitled “Stopping Climate Change is Hopeless. Let’s Do It.” The world would have to reduce greenhouse gas emissions faster than has ever been achieved and do it everywhere for 50 years. This would require steady pressure on the powerful interests that are restraining action, particularly the fossil fuel industry’s influence in government, education, science and media. Our actions must be to scale, so while we should undertake individual steps to lessen our carbon footprint, we must realize that real progress comes from voting, running for office, marching in protest, writing letters, calls to Congress, donations to non-profits - steady relentless pressure.

A further indication of new pressures for change is the Democratic House of Representative’s Resolution – the Green New Deal. The Democrats launched a sweeping plan to transform the US economy to combat climate change and create thousands of jobs in renewable energy, signaling its likely elevation as a central campaign issue in 2020. The nonbinding resolution calls for a “10-year national mobilization” on the scale of the original New Deal to shift the economy away from fossil fuels such as oil and coal and replace them with renewable energy sources such as wind and solar power. More than 80 percent of registered voters supported the concept of a Green New Deal in a December poll by Yale and George Mason University. “This is now a voting issue across the country,” said Senator Ed Markey of Massachusetts. “The green generation has risen up and they are saying they want this issue solved” as one of the top two or three issues in the 2020 election. The time is now!

Toward that end of pressure for policy changes, one of the most effective organizations working to break the political deadlock in Washington is the Citizens Climate Lobby (CCL). The CCL works through intense organized lobbying efforts in every congressional district. The organization is explicitly non-partisan and has focused on promoting a policy that, while compatible with Republican free-market principles, would be a powerful disincentive to the continued use of fossil fuels.

As a direct consequence of these efforts there is now in Congress a bipartisan House Climate Solutions Caucus. Formed in 2016, this caucus has introduced a bill to reduce greenhouse gas emissions by assessing a steadily rising fee on the carbon dioxide content of fuels and thus incentivizing a movement away from such fuels. The fees would be returned to households rather than be a tax collected and used by the federal government. Thus it is a possible way forward for Republicans. The CCL feels that “This bill is easily the most significant Congressional move on climate change since 2009. And with bi-partisan sponsorship it has a real chance at passage.” Our job would be to help convince our own representative, John Moolenaar, to support it. I hope that some or many of you will join or join with the CCL in its lobbying efforts; and that the campaign to limit climate change becomes an integral part of our own social justice efforts. To do this, I have 30 packets of three short documents that you could use to write to Representative Moolenaar. Please pick one up and let him know that his constituents care deeply about this issue. For some of us, climate change is the crucial

issue, the most critical challenge of our time; for others it is one of many critical issues facing us. How we respond individually will vary greatly. But increasingly, awareness and consequent pressure on our political system are building and promoting long overdue change. It would be gratifying to see the UUFCM as a part of that effort.

As UUs we have covenanted to respect and, implicitly, to protect, the natural world; and to work for and to protect the wellbeing of the world community. As thoughtful human beings we resist being passive observers of life but try to act with meaning and responsibility. We can't do everything, but we can do something. And acting together we can do so much more than we could acting alone.

So be it. Blessed be and Amen.