# "What Can We Do About Global Warming?"

**Genesis 1:24-31, 2:4b-9, 15**

A sermon by Bill Gordon

**May 29, 2016**

---

So, we're under way through a new sermon series organized by Pastor Jenny called, Hard Questions. She began the series last Sunday with the first question: "Is it OK if I have doubts & questions?" And the short answer is, "Of course it is." Not only are questions OK in the church, and in our life of faith, (or should be anyway), not only are they welcomed — they are strongly encouraged. How else are we to learn and grow deeper and stronger in our relationship with God and one another, unless we ask questions?

It's quite a list of questions that are set before us in the weeks to come, isn't it? Hard questions. Intriguing questions. Good questions. The thing about hard questions, as I'm sure you all know, is that there are no easy answers. That's why they're hard questions. And "hard questions" in a faith community, that are ***good*** questions, are the kinds of questions that don't imply a stock answer, like a denominational catechism—a question is posed and immediately following is a concise, doctrinal answer. Accept the answer, or you don't "pass the test." You aren't accepted. You are outside the fold. Instead, hard questions that are good questions are the kinds of questions that open up some space and invite us in to explore our own thoughts, our own uncertainties and doubts, where God can converse with us, work in us, and offer us new possibilities.

So, as we explore these hard questions in the weeks ahead, let's agree that while we preachers will do our best to provide some light—maybe even some insight—even our very "answers," such as they are, may very well open up even more questions in your mind. And that's a good thing. Right? That's OK. Because that's what our faith journey together is all about.

OK. So, our "hard question" for this week: "What Can We Do About Global Warming.?"

The question I've been wrestling with all week is "where to begin?" And "how much to say?" "How much to include?" This is such a huge topic. It's a subject and a question that is literally global—planetary—in scale.

So let me begin by simply turning to you for a few minutes, to ask what you know about this question. What do you know about global warming? . . .

*(Here, I walked about in the congregation to hear what folks already know about climate change and global warming.)*

Thank you! You already know a great deal about this issue and how immensely important it is. With everything else that's being talked about in this "political season," this question isn't getting anywhere near the priority attention in our public discourse that it should have.

ability to support liquid water on the surface, and atmospheric pressure high enough for water to exist without boiling off to vapor.

We live on an amazing planet! This planet that we live on at this very moment makes its journey around the sun in what scientists refer to as the "Goldilocks zone." The "Goldilocks zone" in astronomy describes a planet's "ideal" orbit and distance from its star—like our planet, Earth—where the planet's surface and atmosphere are able to sustain liquid water and enough radiant warmth to produce life. So, our planet Earth, for example. Just a few million miles more distant from the sun, we would be much, much colder. The average temperature on Mars, for example is -85° (in the summer, -70°). Much closer to the sun, and we would begin to fry. The average temperature on Venus? +865°! Of course, it's not just the closer proximity to the Sun that makes Venus so hot. The average temperature of Mercury, the closest planet to the Sun, is actually cooler than Venus. The difference? Venus's atmosphere is composed primarily of carbon dioxide, and thus, incredibly dense. We are living on an astoundingly rich, complex, intricate, interconnected, and fragile piece of real estate spinning in this vast expanse of the universe.

Will you allow a little science lesson, because it's so key to understanding global warming.

[slide of sun radiating Earth]

Earth is surrounded by an atmosphere that protects us like a warm blanket, consisting of gasses that are retained by Earth's gravity. Radiant energy from the Sun passes through five layers of gasses in our atmosphere. Some of the radiation is reflected back out into space by some gasses and by water vapor in the form of clouds. The majority of it, though, comes through, striking the planet's surface and is absorbed. The surface warms a bit. The warmed surface then radiates some of the heat energy back out.

On its way back out into space, some of that energy is trapped by certain atmospheric gasses, especially water vapor and carbon dioxide.

A molecule of carbon dioxide is linear; that is, it forms in a straight line. [slide of carbon molecule] It's an atom of oxygen, connected to an atom of carbon, connected to another atom of oxygen, all in a row. Visible light from the sun, as you may remember, radiates along a spectrum of wave lengths, from shorter (blue to ultraviolet) to longer (red/infrared). Carbon dioxide molecules are at just the right length to allow the shorter wave lengths of light to pass right by, but the longer, infrared, warm wavelengths are blocked and captured. [slide of sun radiating Earth] This is what's called the Greenhouse Effect. Sunlight comes though Earth's atmosphere, some deflected, the rest hitting the Earth's surface, heating it, sending radiation back out, the infrared wavelengths captured by carbon dioxide, warming the atmosphere, and trapping more of the Earth's surface heat, sustaining the warmth.

Obviously, some "greenhouse effect" is good. Otherwise, Earth would be uninhabitable for us. It would be a frozen world. The problem is not that we HAVE a greenhouse effect. The problem is that the greenhouse is getting stronger by the year. The extra buildup of heat in the atmosphere is altering weather patterns all over the world, and warming the oceans as well.

It gets even more complex than that. The increasingly warming atmosphere is melting glaciers and ice sheets all over the world. Take the Arctic ice cap, for example. Average temperatures in the Arctic have increased at twice the average rate over the past 80 years. The Arctic ice has shrunk by 34% just since 1979. As the ice melts, more dark sea is exposed, absorbing more heat from the Sun. Ice reflects the Sun's radiation. Water absorbs it. The warmer the temperatures of air and water, evaporation takes place, putting more water vapor into the atmosphere, trapping more radiated heat from the surface. There's more energy in the atmosphere, leading to more powerful storms like hurricanes, typhoons, tornadoes, and extra heavy and sustained rainstorms, leading to floods, like those of South Carolina and Texas that are happening now.

And what is the principle cause of this ever-increasing heat and water vapor in our atmosphere? We're back to carbon dioxide. There's always been carbon dioxide in the atmosphere. It's a vital element that has kept our planet warm, sustaining and nurturing life. But something has changed, and changed dramatically over the past two centuries. There has been a dramatic increase of heat trapping carbon dioxide in the atmosphere, and that increase has been almost exponential over the past 40 years.

James Watt patented the steam engine in 1781. Using wood, but mostly coal as fuel, water could be super-heated to steam, which in turn propelled continuous rotary

motion for manufacturing machines. The Industrial Revolution was sparked and set into high gear. Coal was the principle fuel for the manufacturing industries and steam-powered transportation, until oil and its refining capabilities was discovered also to be an effective fuel to power ever-modernizing technology. Coal is almost pure carbon. All fossil fuels are carbon-based, derived from the remains of plants and animals that lived hundreds of millions of years ago. When burned, every atom of carbon hooks up with two oxygen atoms from the atmosphere to make carbon dioxide.

Before the steam engine took off around the end of the 18th century, carbon dioxide made up about 280 parts per million of Earth's atmosphere. It was enough to sustain every plant form on earth and beneath the surface of the oceans. These plants in turn sustain all the Earth's animals, including you and me. The carbon cycle sustains the planet. As long as it stays in balance, it's a wondrous thing. But now it is far from being in balance. As of this year, carbon dioxide levels worldwide have topped 400 parts per million for the first time in all of human history. And the average temperature of the Earth continues to rise.

Carbon dioxide is the most significant greenhouse gas that persists in our atmosphere. And it stays a gas. It doesn't come down like water does as rain or snow. It allows the Sun's light to pass through, and it traps the infrared light as heat coming back up. The amount of carbon dioxide in the atmosphere continues to increase dramatically. And it persists. It doesn't dissipate. It doesn't degrade. It lasts and lasts. It stays in the atmosphere for thousands of years. That's why there's global warming and climates are changing and becoming more severe all over the world.

Forests fires are more frequent and ferocious, ice sheets in the Arctic, Greenland, and Antarctic are disappearing, sea levels are rising, floods from torrential rains are more common, droughts are longer lasting, and deserts are advancing, historic record temperatures of 124° in India, oceans are becoming more acidic and thus coral reefs are dying. More than one-third of the Great Barrier Reef has been destroyed by the warming ocean, and in some parts of the Pacific Ocean, 95% of the coral reefs are dead. No less than 11 island nations from the Marshall Islands to the Maldives are close to being covered by the rising seas. The principle source of all this? Our burning of fossil fuels: coal, oil, and natural gas—mostly coal, and oil refined in the forms of gasoline.

I know this is overwhelming and difficult to hear. There are so many issues facing us today—political, economic, social, and global threats to peace. But we cannot afford to shove this to the back burner, hoping it will take care of itself, or that someone will take care of it, or that somehow a new technology in the future will be discovered to scrub our atmosphere clean again. We must give this our attention and care. Our very survival depends on it.

Truth be told, at the core of it all, this is as much a spiritual issue as it is an environmental and a social issue. In so many ways we have become disconnected from creation, and from the planet that is source of our very life, our very existence, and our home. We want to be protected from the less kind elements of nature, or to master it, or to harness it for our personal benefit, or exploit and use it for our profit. Respect, reverence, and care for our planet have been overcome in larger circles by selfishness, denial, and greed.

[slide: Need a reconnection with our spiritual resources]

I believe we need a spiritual revolution as a part of a strong and broad movement to slow and reverse the damage we are doing to our planet Earth and ultimately to ourselves and our very survival.

I believe that it begins with a reconnection to creation, to nature itself, and our place and calling in it. So, how do our Christian faith and values inform us?

Well, the first step is to listen again to the voices and the wisdom of our spiritual forbears.

> "The earth is the Lord's and everything in it (declares the psalmist)
> The world and its inhabitants too.
> Because God is the one who established it on the seas;
> God set it firmly on the waters." (Ps. 24:1-2)

We are not God. Earth was here before us, and it very well may be here long after us. This planet Earth is a gift to us, not one to be used and abused as we see fit, but to be received as a loving gift to be appreciated and cared for. The author of Genesis sets this out clearly, but it has so often been misunderstood and misapplied.

When the Genesis account of beginnings describes the creation of humankind and commissioning us to fill the Earth and to have "dominion" over it, that does mean "domination," the unrestrained exploitation of it. It means to learn mastery over every living thing on the Earth. Not mastery in the sense of master/slave, do whatever you want, but responsible, constructive, caring power. As Genesis says further, we are given this gift of planet Earth to "till it and take care of it;" that is, to "co-create with God, and to cultivate and provide for our planet's well-being."

This Earth is our home. Most of us know what being a homeowner is all about, with all the responsibilities that go along with it. Until Judy and I retired 5 years ago, we didn't really fully appreciate all that that entails, especially financially! Oh, certainly we always treated whatever house we lived in, whether a parsonage or a rental home, with

the same care as though it were our own, always having in mind of wanting to leave it better than when we moved in. But now owning our home means it's really up to us and to us alone to care for all its maintenance and improvements, weighing the costs and benefits. We could take it for granted. But it's our home. We live in it. It's our yard and garden. Every effort we put into it returns to us in satisfaction, and every improvement is an investment for the future.

So it is with this planet, our home. This is where we live, and where we all live in it together. We need to fully understand that whatever we do affects not just us, but everyone else who lives in this home with us. We are all interconnected, with each other, and with every living thing in our Earth home. It's all we have. There is nowhere else to move to. If we manage to deplete it or destroy it, that's it.

There are some Christians I have talked to over the years who believe deeply that Christ is about to return to Earth any day, very soon. And so there is no need to really be too concerned about preserving and wisely using Earth's natural resources, or about its ability to sustain life. "We'll all be taken away from this Earth soon," I've heard it said. "This Earth is *not* our home. Heaven is our home, and soon I plan to be there."

What heaven there is in store for me, or for any of us, I can't be sure. But this I do know for certain: for now, this is home, and God will hold me responsible for my care of it now, and what I leave for future generations.

So, what can we do about global warming?

[slide: What can we do?]

The first thing is to reconnect with the heart of our living faith and our relationship with God who has created all that is in this universe, and to remember our place in it…with reverence, awe, humility, and responsive, loving care for what has been given to us, and for all who share it with us—people and all living creatures. Jesus was once asked what the Greatest Commandment was. He replied, "Love God with all your heart, soul, mind and strength, and your neighbor as yourself." I apply that to the whole of creation. All creation is my neighbor. And "all creation is groaning." (Rom. 8:22)

Then, there is another imperative equally as urgent. This is very urgent. We must join the movement to press for greatly reducing and ultimately ceasing the production and burning of all fossil fuels—coal, oil, and natural gas. We must leave that carbon in the ground, or it will greenhouse us out of existence. Oppose any more drilling, or fracking, or extraction of tar sands, the worst of all. Oppose any more exporting of coal from the U.S. to China and other coal importing countries. And certainly we must

vigorously oppose any mining interests or fracking in our National Parks, even on other national public lands. These places were set aside for a reason, to nurture our collective spiritual souls. They must not be put up for lease or sponsorship to the highest bidder! Letting the land also have its Sabbath is one of God's foremost instructions (Lev. 25:2-7).

Press corporations and nonprofits, including church denominations, like our own United Methodist Church, to divest from fossil fuel corporations. And reinvest in renewable energies—solar and wind, and other new technologies.

In order to help that along, let's look in our own homes for ways to save energy: the things we all know about, but may have been neglecting or postponing, like using chloroflourescent or LED lightbulbs in place of incandescents wherever possible. Buy energy efficient appliances—washers, dryers, refrigerators. Conserve on heating and cooling.

Consider high gas mileage cars when ready for a new purchase. Find ways to use alternate transportation.

Cut back on the eating of beef. The increased demand for beef in the world has prompted developing nations to cut down long-standing and even ancient forests to provide for grazing land and raising grain for feed. Massive feedlots require huge amounts of water, and antibiotics and hormones to keep cattle reasonably healthy, and they are enormous emitters of methane, a greenhouse gas. The raising of beef now currently accounts for 14% of the planet's greenhouse emissions.

Buy food locally as often as you can, and buy organic as much as you can. And when you shop, refrain from plastic bags. Ask for paper. Better yet, bring reusable shopping bags. As much as plastic bags are a harm to our environment, they are also a petrochemical product.

Recycle, recycle, recycle!

When is the last time our church has done an energy audit?

Well, I'm sure you can add many more things to this list.

I know this all seems overwhelming. But we must not let the enormous nature of this problem to subdue us into helplessness and inaction, or to succumb to the deceptions of the deniers, the "merchants of doubt," who would tell us that all this is a natural cycle of our planet's climate history and we don't need to do anything. It is not, and we must act. Individually, we may not be able to do all-encompassing things, but we each can do

something. And as the apostle Paul says, "the whole creation is groaning in labor pains until now," looking to us.

If you've seen the movie, *Schindler's List,* you may recall the scene near the end of the movie, when Schindler's factory is liberated. Oskar Schindler comes out of his factory, having saved over 1,200 Jews in Poland during the Holocaust by employing them in his factories. He greets the liberating soldiers and calls for his car to take him home, a car he is particularly proud of. Surrounded by over 1100 Jews whose lives he had saved, he says, "I haven't done enough." He looks at his car and realizes that if he had sold it, he could have saved maybe another ten people. He is completely grief stricken by this thought, despite the fact that he has saved a great many Jews already.

No, we can't do it all. By ourselves, we can't save the whole world. But together we can. Each of us can do something. And we must not allow what we *can't* do stop us from doing what we CAN do.

Will you join me?

Amen.