Climate Change and the Healing of Creation Romans 8:18-22

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The earth's radius is \sim 4,000 miles. The earth's breathable atmosphere is less than 7.5 miles thick. This thin layer of gas sustains life on earth. We use this precious gift of God's creation as a toilet, pumping billions and billions of tons of CO_2 into it every year, mostly from burning fossil fuels for electricity and transportation. This behavior is unsustainable!

Today we will look at Paul's message in Romans chapter 8:18-22 where Paul provides a theological understanding of the scientific fact that creation is "subjected to futility" and "enslaved to decay." "Futility," says no process is 100% efficient. Everything that humans do produces waste. "Decay," says things that will deteriorate over time. If we make something and use it, we must maintain it, or it will wear out, fall apart and become useless – this is the lament of our existence. There is no escaping it, and nothing we can do will change it. This fundamental fact of life on earth can lead to fatalism, despair, and denial.

Futility and decay govern all that we do. For some, this may lead to a fatalistic attitude that assumes everything we do is pointless, as the writer of Eccl. 1:2 points out, "Meaningless! Meaningless! Says the teacher. Utterly meaningless! Everything is meaningless."

Fatalism becomes a voice that tells us that everything is predetermined and, therefore, inevitable. In John 10:10, Jesus says, "The thief comes only to steal, kill, and destroy. I have come that they may have life and have it abundantly." Fatalism "steals" our hope, "kills" the inspiration of the Holy Spirit, and "destroys" the God-given purpose for our lives. A fatalistic attitude about climate change says it is inevitable; anything we try to do to change it is meaningless. Christ promises abundant life that offers hope and gives purpose. Purposeful living calls us to climate action because it creates hope that it is not too late to reverse the direction of climate change. Climate action is for a purpose, has meaning, and makes a difference.

For some, the inescapable nature of futility and decay becomes the source of great suffering, leading to despair. Paul reminds us that "the sufferings of this present time are not worth comparing with the glory about to be revealed in us" (8:18). The promise of salvation is full communion with our creator. The present difficulties are a fact of Christian life in the age between Christ's resurrection and Christ's return. The struggles of this age are not an end but a prelude to glory. We do not let the difficulties of this present life drive us into despair. We live in the hope that God, who subjected creation to frustration, will one day set creation free from "its enslavement to decay" (8:21). The magnitude of climate change may seem overwhelming and feel desperate. Rather than giving up in despair, we engage in the struggles of caring for the earth; we focus on what we know and can do. By taking climate action, we do our part to make real improvements.

Since God subjected the earth to futility and decay and humans can do nothing about that, it may be appealing to escape into denial of our complicity in the climate crisis and our responsibility to care for creation. We may say that the best we can do is trust that God will provide and wait for the day Christ returns; then, we will rapture into a new heaven and earth. This fallen, broken, sinful earth is disposable; it will one day be replaced by a better one. Climate catastrophe predictions are frightening; many ignore them because they are beyond human control. Denial saves us from unnecessary worry.

Unfortunately, ignoring the problems and struggles of this life will not make them go away. Paul is teaching us that because the issues of this age persist, we must not fall into denial. Paul reminds us that God "foreknew" (8:29) the ultimate destiny for our lives; God's plan of salvation "predestines us to be conformed" to the image of Christ (8:29). This teaching calls us out of denial. We live into our anticipated future by doing the works God has prepared in advance for us to do today (Eph 2:10). This means we do not deny the problems of climate change; we work to solve them. We identify root causes and take climate action to correct the sources of climate change. The denial of this life's difficulties leaves us unresponsive. Living into God's promise for the future charts our course of action and moves us in the right direction.

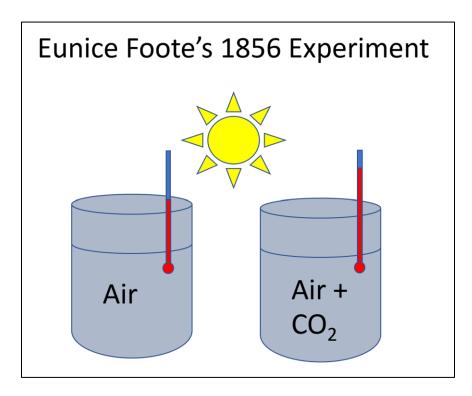
Fatalism, despair, and denial affect our response to God's command to be cultivators and caretakers of creation. Responsible caretaking includes working to avert the coming climate catastrophe.

Dominion Approach

- Climate change is not human-caused
- God is in control
- Trust in God's care
- Worship God, not creation
- Earth is for human use

Some people hold to a "dominion" approach, which says, "You have to cut a tree to make something from the tree." Dr. Katharine Hayhoe, an evangelical Christian climate scientist, points out that due to the "influence of culture and religion," more than two-thirds of evangelical Christians in the United States maintain that climate change is not human-caused. Some evangelicals deny the threat of climate change, believing God is in control. The environmental outcomes are "not humanly determined and therefore not up for debate." Humans are to trust in God's care and provision. God's care for the earth is greater than anything humans can do to destroy it. Humans are to worship God, not creation. God gives humans dominion over the earth, which means the earth is for human use.

Hayhoe presents a point of view that recognizes human dominion *and* responsibility. In Genesis 1:28, we read that humans are to be "fruitful" and "multiply," "fill" and "subdue," and "have dominion" over every living creature. According to Hayhoe, Humans are to rule the way God does, walking among the subjects and responsibly caring for them. In Genesis 2:15, God places humans in the garden and gives humans the responsibility to "till it and keep it." Dominion over the earth is not authorization for humans to exploit the earth. Each part of creation, living and nonliving, received God's blessing as "good." Humans' reckless exploitation of natural resources and destruction of the earth's life-giving ecosystems "is sinful because it violates" God's mandate for humans to be caretakers of the earth.



In 1856, Eunice Foote experimented with air and CO₂ mixtures. She took some sealed glass jars and filled them with air. Then, she added ever-increasing amounts of CO₂ gas to some jars. She then placed the jars in the sunlight and measured the gas temperature in each jar. She found that the gas temperature increased greater in the jars with CO₂. More CO₂ resulted in higher temperatures. When she removed the jars from the sunlight, the jars with CO₂ took much longer to cool down. Her research indicated that if we burn fossil fuels and increase the amount of CO₂ in the atmosphere, we will increase global temperatures.

Science Approach

- Eunice Foote's 1856 research confirmed
- Burning fossil fuels produces CO₂
- CO₂ increase = global temperature increase
- Melting ice sheets = sea level rise
- Severe flooding = forced migration & conflict

These experimental results have been adequately confirmed by scientists today. Burning fossil fuels produces CO₂, which absorbs heat-producing sunlight. The CO₂ acts as a blanket covering the earth. As the CO₂ level increases, the climate gets warmer. As the climate warms, the ice sheets on Greenland and Antarctica melt. As the ice sheets melt, the ocean levels rise. Over the past 200+ years, the CO₂ level has increased from about 280 to 420 ppm, directly correlating to the burning of fossil fuels. Global temperatures have risen about 2°F. Sea levels have risen about one foot. If we continue business as usual, by the end of the century, the global temperature may increase by as much as 8.5°F, and the sea level may rise by as much as 7 feet. This projected magnitude of sea level rise would affect tens of millions in the U.S. and hundreds of millions globally. Roughly 40% of the human population lives within 60 miles of the coast. Severe flooding in coastal regions damages homes, industry, and infrastructure, forcing mass migration and will lead to conflict.

Caretaker Approach

- Moral problem
- Causes Injustice: The poor will suffer the most
- Spiritual Consequences
- Poor Stewardship
- Climate change is real and caused by humans

Some people hold to a caretaker approach. Caretakers say if you cut a tree, plant a tree. Caretaking for Christians goes beyond sustainable use of the earth's resources. The caretaker approach incorporates building reconciling relationships with each other and God. The climate crisis becomes a moral problem because it causes physical loss, emotional trauma, spiritual despair, relational brokenness, and conflict. The climate crisis causes injustice resulting from forced migration. People will lose their homes and livelihoods, and many, especially the poor,

will suffer the most. According to the Biblical scholar Dr. Harold Snyder, these outcomes oppose God's plan of salvation, which "is the healing of all creation."

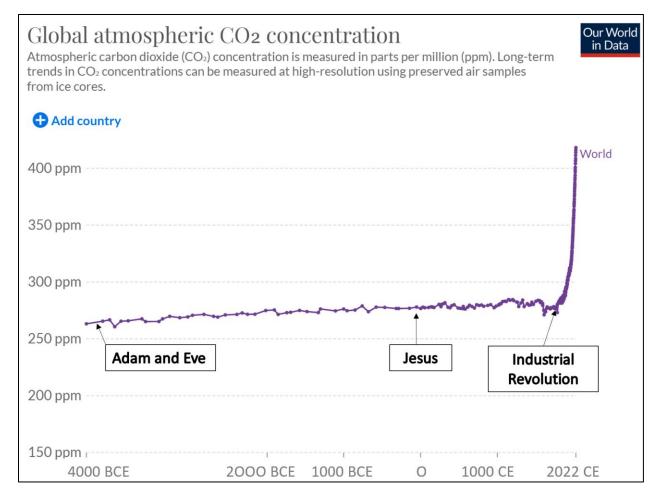
Paul reminds us in Eph 2:8 that God sent his Son to die for our sins, to be saved by grace through faith. This teaching speaks to the hope we all have in Christ. Paul's writing is not intended to justify not caring for the earth. John 3:16 reads, "For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life." Looking closely at this text, we see that the Greek root word for "world" is *kosmos*. *Kosmos* is the ordered system God created and called good. This text does not say, "For God so loved humans..." if that were the case, the Greek root word would have been *Anthropos*, not *kosmos*. God loves humans whom God created, and God has a plan of salvation for humans. God loves the world that God created, and God's plan of salvation includes the earth. God plans to heal all creation materially and spiritually and calls for humans' active participation in that work.

Revelation 11:18 warns, "The nations were angry, and your wrath has come. The time has come for judging the dead and for rewarding your servants, the prophets and your people who revere your name, both great and small – and for destroying those who destroy the earth." This passage follows the sounding of the seventh trumpet, (11:15) which announces the advent of the Messiah's "reign forever and ever" (11:16). God's wrath will come against the wicked and immoral. God will "destroy" those whose sinful and corrupt behavior "destroyed" the earth. They will receive utter destruction as their reward.

Climate change has spiritual consequences. Acting on the causes of climate change is biblical. Hayhoe points out that climate change results from the poor stewardship of God-given resources and produces global justice issues. "The poorest and most vulnerable will be most affected by climate change. That is why Christians are called to care about this issue…" Hayhoe then says, "If we took our faith seriously, we would be at the front of the line demanding climate action rather than dragging our feet at the back." Hayhoe sees the earth as a gift for which God has given us dominion *and* responsibility.

Some have told me that climate change is a hoax, that I believe in untruths, and that I am being deceived. I inform them that over 200 years of research by 2,000 scientists in over 20,000 peer-reviewed papers have produced 99.9% agreement [Chart 19, click] that climate change is real and caused by humans. I remind them that God gave us the ability to figure things out about the earth. For example, God allowed us to discover penicillin and gave us the capability to figure out how to use it as a treatment against bacterial infections. God gave us the ability to build an airplane and figure out how to make it fly. God provides us with the capability to figure out what is happening with the climate.

God also gives us the freedom to choose to obey or rebel. God assures us of salvation, and God promises judgment. Jesus calls us to hear his words and put them into practice. [Chart 20] In Matthew 7:21, Jesus reminds us that not all who say, "'Lord, Lord,' will enter the kingdom, but only the one who does the will of my Father who is in heaven." Human destruction of the earth is the destruction humans bring upon themselves.



This chart plots the atmospheric CO₂ concentration in ppm over time. As you see in the chart, when Adam and Eve were in the garden about 6,000 years ago (according to some Biblical calculations), the atmospheric CO₂ level was about 265 ppm. When Jesus walked on the earth some 2,000 years ago, the CO₂ level was about 275 ppm. At the beginning of the industrial revolution, a little over 200 years ago, the CO₂ level was about 280 ppm. We know this by analyzing the CO₂ trapped in layers of ice in glaciers. In the past 200+ years, CO₂ has gone from 280 to 420 ppm. The atmosphere's CO₂ level has changed very little for thousands of years. But since the industrial revolution, it has increased by a considerable amount. Scientists have shown that the increase comes mainly from burning fossil fuels primarily to generate electricity and for transportation. We cannot keep doing this!



This is a picture of the Mt. Storm Lake power generation plant in West Virginia. It burns coal to make electricity—the power lines from this plant run to Rockingham County. Much of our Harrisonburg electricity comes from burning coal.



Fortunately, God gave us more than one way to make electricity and power vehicles. Solar and wind sources provide lower-cost electricity and do not produce CO₂. Automobiles with electric batteries, charged by electricity from solar or wind, run without emitting CO₂ and cost less than running on gasoline. A responsible transition from fossil fuels to renewable energy for electricity and transportation will significantly reduce CO₂ emissions.

Trees & Photosynthesis

$$\frac{Carbon}{Dioxide} + Water \xrightarrow{\text{sunlight}} Glucose + Oxygen$$

$$6CO_2 + 6H_2O \longrightarrow C_6H_{12}O_6 + 6O_2$$

In addition, planting trees helps reduce CO₂. You may wonder why did make the earth with CO₂ in the atmosphere. One reason may be that God planted trees in the garden. Trees need CO₂ to grow. Trees use sunlight and chlorophyll to convert carbon dioxide and water into glucose and oxygen. Trees have enzymes that convert glucose into cellulose, wood's material. Trees are the earth's lungs. They take in carbon dioxide and release oxygen. [Chart 23, click] The great thing about photosynthesis is that trees take six molecules of CO₂ to make one glucose molecule. That ratio is an excellent benefit for the reduction of atmospheric CO₂ levels.

God has given us the capability and the know-how to use the earth's resources. God gives us agency and calls us to use the earth's resources responsibly and sustainably. So, the questions for us become: Do we believe what we do makes a difference? Will we let fatalism, despair, and denial discourage us from caring for each other and the earth in a way that pleases God?



Creation Care Litany

Leader: Creator God, we give You thanks for the beauty and wonder of all that you have made - sun and moon, wind and water, plants and animals, and people of countless varieties.

People: Forgive us for the times that we have not been good stewards of Your creation.

Awaken in us a renewed commitment to care for the earth and all her inhabitants.

Leader: May we respond with compassion to those whose lives have been upended by climate crises, whether it be drought, flood or fire. May we live simply, so that others may simply live.

People: Grant us wisdom and courage to act for the good of our world and for future generations. May our response grow from our faith in You, our creator and redeemer. Amen.

(Carmen Schrock-Hurst, 11/13/22, adapted from "prayers for the Environment" by Xavier University)