

Cultivating a Personal Christian Environmental Ethic

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I spent my childhood years near a First Nations American Indian reservation in the Pacific Northwest, in the shadow of a father who was a forester as well as a Boy Scout wilderness leader. During the summers throughout high school and college I worked in the forestry or fishing industries. As a result, I have always felt very close to nature, and I still enjoy the great outdoors every chance I get. Thus, a few years ago when I was asked by Dr. Calvin DeWitt (one of the leading evangelical Christian environmentalists in the United States) to join him as a founding member of the Academy of Evangelical Scientists and Ethicists, working to promote environmental concern and creation care, I embraced the opportunity. By now I have spent a number of years contemplating the notion of a Christian Environmental Ethic, and the time has come to attempt to capture at least part of this evolving idea in words. The objective of this paper is to encourage the reader to intentionally consider his or her own values and beliefs relative to environmental issues, and in doing so develop a framework from which to make ethical decisions in this important arena.

Sometimes it seems as if our culture is inundated with secular jargon regarding environmental issues, with rhetoric about saving Mother Earth, the Gaia Hypothesis, and the idea that the entire earth and everything on it is most properly viewed as a single organism. But what ought to be our perspective as Christ-followers? I believe there is great merit in acknowledging our calling from the Creator to be caretakers of His Creation, and that we as Christ-followers should be leading the charge to care for the earth and all that is in it.

Various verses of scripture speak of the value God puts on creation. There are two specific passages of the Bible that have had the greatest impact on my personal view of creation. The first is at the end of the first creation story in the book of Genesis, chapter 1, verse 31, which reads, "And God saw everything that he had made, and behold, it was very good..."¹ If God reviewed all that he had created and thought it was good, how much more should we respect and care for it? The second, very familiar passage is from the book of John, chapter 3, verse 16: "For God so loved the world that he gave his only Son, that whoever believes in him should not perish but have eternal life."² But worth noting is that the word translated "world" in our Bibles is actually "cosmos", which includes every

created thing in the entire universe! Just think about what that means: God loved all of his creation so much that he sent his son, Jesus, to die for it to reconcile it to himself! God must truly, deeply love everything he made!

Matthew 6:21 reads, “For where your treasure is, there will your heart be also.”³ With the price of fossil fuels today, particularly at the gas pump, the threat to our pocket books may sadly be the motivating factor many of us need to actually do something about energy conservation. God help us if what we treasure most is found in our pocket books.

This planet that we call home is completely unique within our solar system, with:

- ample water in all three physical phases;
- a protective, insulating atmosphere;
- a magnetic field that deflects dangerous charged particles from the solar wind;
- the perfect mass, thus gravity, to hold onto ample amounts of oxygen and water vapor, but not much deadly methane and ammonia;
- the perfect distance from the sun to provide temperate climates and adequate energy.⁴

These components: earth, water, and atmosphere, and the physical, chemical, and biological processes that govern their interactions, make up our “biosphere” (our environment) and provide what we humans and all other organisms need not only to survive, but to flourish and thrive! Juxtaposed with the physical life-giving attributes of our planet, our innately curious human minds inevitably ponder the bigger questions:

- To whom does this planet and its resources belong?
- What is the proper role of humans relative to the earth?
- How can humans live on the earth in synergy and peace with its other inhabitants in a long term, sustainable way?

Consider this passage from the first chapter of the Old Testament book of Ecclesiastes, verses 5 through 7:

The sun rises and the sun goes down, and hastens to the place where it rises. The wind blows to the south, and goes round to the north; round and round goes the wind, and on its circuits the wind returns. All streams run to the sea, but the sea is not full; to the place where the streams flow, there they flow again.⁵

Actually, this is a pretty accurate description of the earth’s systems.

The sun is the primary energy source for all of the earth’s processes. The sun causes atmospheric winds to distribute heat and water vapor around the globe,

controlling precipitation. The sun also powers the water cycle, purifying or distilling earth's water through evaporation, and humidifying earth's air with water vapor, while the frozen water ice serves as storage reservoirs, as well as planetary thermostats, reflecting a portion of the sun's radiation back into space, and preventing the earth from over-heating.

Bio-geo-chemical processes (including the rock cycle and photosynthesis) recycle carbon, nitrogen, sulfur, phosphorus, oxygen and other substances required for life. Photosynthesis is responsible for converting the sun's energy into chemical energy stored in plants, which is ultimately converted into the fossil fuel energy that the entire world economic system is so dependent upon.

Today, we are faced with a number of threats to the creation that God blessed and called "good" in the first chapter of Genesis. This is just a partial list including some of the major issues we are currently concerned with worldwide:

- Energy resources
- Air pollution
- Water resources
- Climate change
- Deforestation
- Loss of biodiversity

We will look at each of these issues in turn, but let us begin with energy resources. At the present rate of energy consumption (nearly 9 trillion joules per second, or watts), all of the Earth's fossil fuel energy (about 3.5×10^{22} joules) - much of it coal - will be consumed in about 125 years. American oil production peaked about thirty years ago, while global oil production is expected to peak within the next ten years.⁶

Closely intertwined with our current dependence on fossil fuels are air quality issues. Eighty percent of Earth's atmospheric gases are located within ten miles of Earth's surface. This "thin blue line" as seen from space is essential for our existence, yet the quantity of man-made pollutants (from industrial, agricultural, and automotive sources; all largely powered by fossil fuels) is now significant enough to contaminate the atmosphere, leading to air pollution and acid rain, with their negative effects on the health and well being of not only humans, animals and plants, but also on inanimate - though still valuable - man-made objects.

Venus, our sister planet in the solar system, contains the same amount of carbon as does Earth. However, instead of the carbon being located predominantly in the ground as it is on Earth, it is located in Venus' atmosphere in the form of carbon dioxide, a potent greenhouse gas. Due to this large amount of atmospheric carbon dioxide, Venus' surface temperature is approximately 900 degrees Fahrenheit, which is nearly twice as hot as Mercury, in spite of Mercury's much closer proximity to the sun! By extracting and burning fossil fuels here on earth, we are in the process of moving our carbon from the ground into the atmosphere. The resultant warming of Earth's atmosphere is obvious and undisputed among reputable climate scientists.⁷

The bottom line is that Earth's fossil fuels are not only limited and nonrenewable, but their use is also damaging Earth's delicately balanced biosphere in unsustainable ways. If current energy consumption rates continue - let alone increase with the growing global population and industrialization of developing countries - we must be able to effectively develop and utilize more not only renewable, but more importantly, sustainable energy sources, such as solar, wind, geothermal, hydroelectric, or even secured nuclear technologies.

Next, let us turn our attention to water issues. The absence of abundant, easily accessible clean water sources in many locations around the world imposes significant constraints on the ability of humans to live long and healthy lives in such locations. How many times have we all heard the old adage "waste not, want not!" When it comes to water, we would do well to heed this advice. We often take our water supplies and earth's water cycle for granted, but only three percent of Earth's total water supply is fresh, and more than two-thirds of that fresh water is frozen. More than thirty percent of earth's fresh water (0.9 percent of earth's total water) is in the ground, leaving only about 0.3 percent of the fresh water (0.009 percent of earth's total water) available at the surface, which is the water that most people use.⁸ When too much water is diverted from natural storage locations (whether snow packs, rivers, or underground aquifers) to places other than where it naturally flows (such as to manmade reservoirs, aqueducts, farmlands, golf courses, swimming pools, and so on), ecosystems are altered and the well-being of the entire planet is impacted. Wherever we turn to explore, water is seen as a sign of life. Where there is water, life tends to thrive. Where there is no water, the land is dry and barren. And no new water is being produced! Here on present-day earth, the water that flows from our streams and rivers to the lakes and oceans is the same water that flowed during Biblical times.

Earth's water is being polluted from both industrial and residential sources. There is a growing demand for safe, clean water as overall populations grow, and there is greater awareness of water borne diseases spread through the use of contaminated drinking and wash water. Here are some important statistics:

- 18% of the world's population has inadequate water;
- 40% lack sanitation treatment to maintain even minimal health standards;
- 80% of sickness in developing countries is traceable to water related diseases that we take for granted as being easily preventable.⁴

The 216th General Assembly of the Presbyterian Church (USA) affirms that the "issues of water rights and regulatory takings are exceedingly complex," and that the "spirit of love and justice and the creation of humans in the image of God that give foundation to rights are God-given." The General Assembly's report goes on to state that water rights are "limited by the community's responsibility to promote the common good and to restrain those who seek individual gain at the expense of others and the community as a whole."⁹

Sustainable water reclamation and purification technologies (such as earth-emulating Living Machines¹⁰) are presently available to solve these problems, given public awareness of the issues coupled with adequate funding to put them in place. The United Nations' Millennium Development Goals stipulate halving the percentage of the worldwide population lacking on-going access to clean drinking water (as well as basic sanitation provisions) by 2015.¹¹ But attaining this goal will require the investment of significant amounts of money, or perhaps redirection of money currently being invested in other sectors (such as cell phone towers and other high tech infrastructures).

Now let us take a look at global climate change. The following list is a brief summary of the evidence:

- increasing average global air and ocean temperatures
- widespread melting of snow and ice
- decreasing average annual Arctic sea ice extent over the last 30 years by:
 - 2.7% per decade in winter
 - 7.4% per decade in summer
- decreasing mountain glaciers and snow cover in both hemispheres
- rising average global sea levels
 - at an average rate of 1.8 mm/year since 1961
- widespread increasing temperatures
 - greatest at higher northern latitudes
 - warming of land regions faster than oceans
- increasing intense tropical cyclone activity in the North Atlantic since 1970¹²

A common conception in popular culture is that what we hear or read about “climate change” or “global warming” is just a natural variation in earth’s weather patterns. However, evidence shows that humans have enjoyed a long stretch of time with relatively stable temperatures for the last ten thousand years. It is important to note that during the last ice age (about 20,000 years ago) when sheets of ice covered the Pacific Northwest, it was only 4 degrees Celsius (about 7 degrees Fahrenheit) cooler. During the 20th century the increase was about 0.6 degrees C, or 1 full degree F. The rate and duration of warming of the 20th century has been much greater than in any of the previous nine centuries, and the current rate of warming is unprecedented in at least 20,000 years.¹³ In addition, ice core sample data tell us that the concentration of carbon dioxide in Earth’s atmosphere (currently at 385 parts per million) is higher now than at any time over at least the past 650,000 years.¹⁴ The vast majority of scientists publishing peer-reviewed climate research today agree that global warming is a man-made phenomenon.⁷

If ice melting continues at its current rate, a Northwest Passage through the Arctic along Canada’s northern coast could open up permanently within just a few short years, which would cut 4000 nautical miles off of commercial sea routes. Arctic sea traffic would increase suddenly and dramatically. Since the Arctic region contains about 40% of world oil and gas reserves, this would open up the area for fossil fuel exploitation. Russia, Denmark, Norway, and Canada, as well as the United States, have already staked competing resource claims in that region.¹⁵

Various impacts are projected globally in this century, such as:

- decreased snowpacks
- increased winter floods
- reduced spring/summer melt-related river flows
- heightened competition for over-allocated water resources;
- initial increase in aggregate yields of rain-fed agriculture, with variability among regions;
- adverse effects on crops already near the warm end of their suitable temperature range, or dependent on over-allocated water resources;
- heatwave-prone cities are expected to be faced with an increased number, intensity and duration of heatwaves;
- coastal communities and habitats will be increasingly impacted by climate change effects combined with growth, development and pollution;
- increased spread of diseases.¹³

Whether we agree that global warming is anthropogenic or not, its predicted effects will be hard to ignore, and the obvious choice for the best possible collective outcome is to join together with all God's people worldwide in doing what we can to prevent and mitigate the worst case scenarios.

The issues of deforestation and loss of biodiversity go hand in hand, so let us look at them together. There are various causes of species declines, including:

- Habitat loss and degradation
- Introduced, non-native species
- Overexploitation (over-hunting, over-fishing)
- Disease & parasites
- Changing ecological interactions
- Climate change

The amount of clear cut of previously forested area now exceeds the area of remaining rain forest timber stands, which is one of the main causes of loss of biodiversity. The issue of harvesting forests in developing countries is very complex, with obvious economic as well as environmental ramifications. But why should we humans care about the protection of other species? There are four prevalent secular approaches to this question:

- First, the Anthropocentric Ethic, in which other species are viewed as having utilitarian, aesthetic, educational and/or spiritual value to humans.
- Second, the Biocentric Ethic, in which all living things have intrinsic value that humans must recognize and respect.
- Third, the Deep Ecology perspective, which asserts the holistic quality of nature and that our utter dependence on it must be respected.
- Fourth, the Eco-feminism perspective, which asserts that the nurturing quality of nature must be emphasized and respected.¹⁶

Professor Max Oehlschlaeger, philosopher at University of North Texas, writes that most of western civilization holds the following perspective relative to the environment (dubbed Oehlschlaeger's Dominant Western Social Matrix):

- Non-human creation has instrumental, or human-oriented value only; claims of biocentric value have no place;
- Short-term economic interests override long-term concerns;
- Environmental risks (including species losses) are acceptable if they are economically beneficial;
- Environmental risks (including species losses) pose no limits to growth, only challenges requiring technological solution;
- Science and technology will ultimately allow us to maintain essential processes of the biosphere within acceptable limits;
- The politics of interest will be sufficient to assure the best uses of technology.¹⁷

This is a very Machiavellian outlook, and it is a bit depressing to think that most of the western world views the environment from such a utilitarian perspective. However, it does go a long way toward explaining why western cultures have stood by and allowed rampant deforestation to take place.

Is the Christian's motivation for caring about the earth and the other living things that inhabit it any different from that of the rest of western civilization? Christians generally view themselves as stewards of creation. "Stewardship" is a word that may be over-used and/or carry negative associations in today's parlance. But what exactly is meant by stewardship? In the best sense of the word, stewardship is management or care that is exercised by one individual on behalf of another. But where did this idea of environmental stewardship come from?

God gives humans responsibility for caring for his creation in Genesis chapter 1, verse 28: "God blessed them, saying, 'Prosper! Reproduce! Fill the Earth! Take charge! Be responsible for fish in the sea and birds in the air, for every living thing that moves on the face of Earth.'"¹⁸

William Johnson of Arizona State University, identifies nine environmental themes woven throughout the Old and New Testaments.¹⁹

The first theme is that of Creation by God, who called his creation "good":

- Genesis 1:31 - *And God saw everything that he had made, and behold, it was very good.*¹
- Jeremiah 32:17 - *Ah Lord GOD! It is thou who hast made the heavens and the earth by thy great power and by thy outstretched arm! Nothing is too hard for thee...*²⁰

The second theme is that of Human Stewardship, wherein God gives humans responsibility for creation:

- Genesis 1:28 - *God blessed them: "Prosper! Reproduce! Fill Earth! Take charge! Be responsible for fish in the sea and birds in the air, for every living thing that moves on the face of Earth."*²¹
- Deuteronomy 22:6-7 - *If you chance to come upon a bird's nest, in any tree or on the ground, with young ones or eggs and the mother sitting upon the young or upon the eggs, you shall not take the mother with the young; you shall let the mother go...*²¹
- Hebrews 2:8 - *You have put all things in subjection under his feet...*²²

Third, we have the theme of Provision by God for humankind through creation:

- Genesis 1:29 - *And God said, "Behold, I have given you every plant yielding seed which is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food."*²³
- Ruth 1:6 – *... the Lord had come to the aid of his people by providing food for them...*²⁴
- Matthew 5:45 - *...for he makes his sun rise on the evil and on the good, and sends rain on the just and on the unjust.*²⁵

The fourth theme is that of the Pleasure of God in his creation:

- Deuteronomy 11:12 - *It is a land the LORD your God cares for; the eyes of the LORD your God are continually on it from the beginning of the year to its end.*²⁶
- John 3:16 – *For God so loved [his creation] that he gave his only Son, that whoever believes in him should not perish but have eternal life.*²
- Revelation 4:11 – *Worthy, O Master! Yes, our God! Take the glory! the honor! the power! You created it all; It was created because you wanted it.*²⁷

Fifth is the theme of Praise, wherein all of creation praises their Creator:

- Psalm 69:34 - *You heavens, praise him; praise him, earth; Also ocean and all things that swim in it.*²⁸
- Revelation 5:13 - *And I heard every creature in heaven and on earth and under the earth and in the sea, and all therein, saying, "To him who sits upon the throne and to the Lamb be blessing and honor and glory and might for ever and ever!"*²⁹

The sixth theme is that of the Authority of God over his creation:

- I Kings 18:1 - *During the third year without rain, the Lord spoke his word to Elijah: "Go and meet King Ahab, and I will soon send rain."*³⁰
- Luke 8:25 - *He said to them, "Where is your faith?" And they were afraid, and they marveled, saying to one another, "Who then is this, that he commands even wind and water, and they obey him?"*³¹

The seventh theme is that of the Witness of Nature to God's authority and provision:

- Exodus 9:28-29 - *Moses said, "As soon as I'm out of the city, I'll stretch out my arms to God. The thunder will stop and the hail end so you'll know that the land is God's land..."*³²
- Acts 14:17 - *Yet he has not left himself without testimony: He has shown kindness by giving you rain from heaven and crops in their seasons; he provides you with plenty of food and fills your hearts with joy.*³³

Eighth is the theme of Consequences to Creation – including humans - for mankind's wickedness:

- Jeremiah 12:4 - *How long will the land lie parched and the grass in every field be withered? Because those who live in it are wicked, the animals and birds have perished. Moreover, the people are saying, "He will not see what happens to us."*³⁴
- Revelation 11:18 - *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 saints and those who reverence your name, both small and great-and for destroying those who destroy the earth.*³⁵

And finally, the ninth theme is that of Perspective, in that God is high above his creation:

- Psalm 113:3-6 - *From the rising of the sun to the place where it sets, the name of the LORD is to be praised. The LORD is exalted over all the nations, his glory above the heavens. Who is like the LORD our God, the One who sits enthroned on high, who stoops down to look on the heavens and the earth.*³⁶
- Matthew 12:8,11-12 - *For the Son of Man is Lord of the Sabbath...He said to them, "If any of you has a sheep and it falls into a pit on the Sabbath, will you not take hold of it and lift it out? How much more valuable is a man than a sheep! Therefore it is lawful to do good on the Sabbath."*³⁷

The Reverend Jim Ball, executive director of the Evangelical Environmental Network, refers to four distinct worldviews (or frameworks of basic beliefs about the world and our place in it) that various individual Christians hold relative to stewardship of God's creation:

- Wise Use
- Anthropocentric Stewardship
- Caring Management
- Servant Stewardship³⁸

The Reverend Ball and Dr. Randy Van Dragt from Calvin College elaborate on each of these worldviews as follows.

First, in the "Wise Use" typology, God is seen as the ultimate provider of resources for human use, with the goal of maximizing human good. Humans are seen as the rulers God has put over of creation. The rest of creation (ROC) is viewed as providing resources for human use, with human-attributed value only. Humans are to make effective and efficient use of ROC. The emphasis of this typology is stewardship rhetoric as a guise for exploitation, and the prevailing attitude is extreme arrogance toward the environment. The scriptural basis for this typology is attributed to a pre-critical understanding of Genesis chapters 1-11.

Second, in the “Anthropocentric Stewardship” typology, God is seen as the Creator and Owner of creation, with the goal of maximizing human benefit while conserving ROC. Humans are seen as the kings with power over creation. ROC is viewed as providing resources for human use, but also as God’s property. Since God is the Owner of creation, wasteful use of ROC could be considered sinful. Value is attributed to ROC by both God and humans, humans have the highest value and thus take priority. Humans are to take what they need, but also work to improve ROC. The emphases of this typology are based on the notion that human redemption has implications for ROC, so complying with God’s commands and leaving resources for future generations are chief ethical guidelines. Still, the prevailing attitude is arrogance toward ROC. The scriptural basis for this typology is attributed to a pre-critical understanding of Genesis chapters 1-11, along with Psalm 24, and Matthew chapter 6.

Third, in the “Caring Management” typology, God is seen as the Creator and Owner who loves ROC, but loves humans more. The goal is to have humans and creation flourish and thrive under caring management. Humans are seen as the lords and servants of creation. ROC is viewed as resources and fellow creatures, with intrinsic value, but less than that of humans. ROC can be sinned against. Humans are to make effective and efficient use of ROC. Humans are to nurture and use ROC sustainably, and human plans are to be carefully evaluated vis a vis their impacts on ROC. The emphases of this typology are cosmic redemption, human imago dei and responsibility. The prevailing attitude is paternalism toward ROC. The scriptural foundation for this typology is attributed to a more contextual and charitable understanding of Genesis chapters 1 and 2, and the cosmic redemption described in John chapter 3.

Finally, in the “Servant Stewardship” typology, God is seen as the Creator and Redeemer of all, who loves and desires shalom for all creation with the goal of all creation flourishing. Humans are seen as servants, keepers and preservers of ROC. ROC is viewed as fellow members of Christ’s creation, with intrinsic value. As such, ROC can be sinned against. Humans are to live so as to preserve and nurture creation. The emphases of this typology are cosmic redemption, with human uniqueness downplayed and Christ’s servant-hood as the key paradigm. Human responsibility is stressed over and above human priority, and the prevailing attitude is humility toward the environment. The scriptural foundation for this typology is attributed to a more contextual and charitable understanding of Genesis chapters 1 and 2, Psalm 104, and Philippians chapter 2.³⁹

In summary, let me suggest consideration of the following roles:

- God: Creator, Redeemer, Lover, Sustainer, Restorer, and Covenanter with all Creation
- Humans: image-bearers of God, Servants and Lords of creation, caretakers and nurturers
- Rest of Creation: resources and fellow members of Christ's creation; testifies to and glorifies God

In conclusion, we would do well to study, contemplate, and discuss in humility what ought to be our proper perspective on God, ourselves, and the rest of creation, as well as the implicit and explicit values and interrelationships of these entities. Once we have framed that perspective, the next – and vital – step is to discover what actions are required to best put into practice our environmental code of ethics.

Finally, I would suggest that we consider Professor Max Oelschlaeger's Challenge to the Church:

*"I think of religion, or more specifically the church...as being more important in the effort to conserve life on earth than all the politicians and experts put together. The church may be, in fact, our last, best chance. My conjecture is this: There are no solutions for the systemic causes of ecocrisis, at least in democratic societies, apart from religious narrative."*²⁰

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