



BIBLICAL PRINCIPLES OF ENVIRONMENTAL STEWARDSHIP

Environmental issues have become centerpieces in recent elections, policy-making, and public discourse.

A 2018 Angus Reid poll found that 66% of Canadians believe that climate change is primarily driven by human causes, compared to 19% of Canadians who believe that natural changes primarily drive climate change. Nine percent of Canadians think that climate change is a theory that has not yet been proven.¹ Canadians are vehemently divided on whether new oil pipelines should be built. Environmentalist crusader and Swedish teen, Greta Thunberg, was named Time's 2019 person of the year and was nominated for a Nobel Peace Prize. Climate strikes and blockades have become increasingly popular in Canada, with even elected politicians like Elizabeth May willing to be arrested for participating.² Given this prominent place in Canadian political discussions and the daily realities of life, environmental issues and related policy proposals are unlikely to abate anytime soon.

Christians must promote a biblical understanding of what the environment

is, what humanity's relationship with the environment is, and what God's plan for the environment is. The mandate to care for the planet – including the animals, plants, land, water, and air – is a theme present throughout God's word. Christians have a responsibility to articulate these biblical principles and to shape environmental public policy in a way that is consistent with Scripture.

ARPA Canada's *Biblical Principles of Environmental Stewardship* outline seven biblical principles about the environment and how humanity should interact with the non-human creation. These principles form building blocks for a Reformed Christian perspective on public policy concerning environmental care and expose flaws in other environmental perspectives. The principles articulated here are born out of a biblical worldview. They provide a rationale for concrete environmental policies while leaving room to debate specific scientific claims.

“be fruitful and multiply and fill the earth and subdue it and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth.” — Genesis 1:28

Biblical Principles of Environmental Stewardship

PRINCIPLE 1: *God, the Creator of all things, has commanded mankind to exercise fruitful stewardship over His creation.*

“In the beginning, God created the heavens and the earth.”³ Those opening words of Scripture form the foundation of environmental stewardship. Because He created the earth and everything in it, God is the sole proprietor of all creation. All of creation belongs to Him.⁴ No human can lay ultimate claim over any aspect of creation – land, natural resources, or animals.

Nevertheless, God delegated authority over creation to humanity at the very beginning of history. In Genesis 1:28, often called the cultural mandate, God commands mankind to “be fruitful and multiply and fill the earth and subdue it and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth.”⁵ In Genesis 2:16, He also placed the man “in the garden of Eden to work it and keep it.” Caring for the earth is one of God’s purposes for humanity.

The first command in the cultural mandate - be fruitful - can be understood through the Parable of the Talents.⁶ In this parable, Jesus likens the Kingdom of God, which encompasses all of creation, to a master who entrusts his property to his three servants. The servants understand that the property under their care is not ultimately theirs but belongs to their master. This master will

eventually demand an account of how his servants managed his property. The two servants who fruitfully invested their master’s money were rewarded. The third servant, who neglected to fruitfully invest it, was condemned for his unproductivity. If the servant who allowed his master’s property to remain stagnant was condemned, how much worse would it be for a servant who deliberately wastes or ruins his master’s resources?

This framework of fruitful stewardship over financial resources can also be applied to mankind’s treatment of the rest of creation. God entrusts the non-human creation to humanity, not necessarily so that humanity can simply preserve it in its natural state, but so that humanity might be fruitful with it.⁷ This requires mankind to develop and transform the earth’s natural resources, while also preserving ecosystems that provide valuable goods and services to mankind and that declare the glory of God (see Principle 2).

Progress and development are implicit commands of God.⁸ “The divine mandate involves harnessing creation’s resources and making the most of its potential while being careful to use the resources wisely... It is telling that although the world began with a garden it will end with a great and beautiful city.”⁹ At the end of our lives or at the end of the world, God will reward those who fruitfully managed the creation that He has given to humanity, but will punish those who have not repented from their neglect or active destruction of it. Fruitful stewardship is mandatory.

PRINCIPLE 2: *All creation is valuable, but humanity, as the image-bearers of God, is the most valuable created being.*

Scripture demonstrates that the whole of creation has intrinsic worth in the sight of God.¹⁰ After each day of creation, God declared his creation to be good – day and night, land and sea and air, plants, sea creatures, birds, and all animals.¹¹ He commands the living creatures to “be fruitful and multiply”¹² and to “abound on the earth.”¹³ After the great flood, God covenants with Noah *and* “every living creature” that He will never again destroy the earth with a flood (Genesis 9:8-17); in this passage, God mentions “every living creature” *six times*.¹⁴ God also covenants with the earth (Genesis 9:13) and *the day and the night* (Jeremiah 33:19-25). The book of Job and the Psalms abound with descriptions of how God delights in His creation. Matthew 6:25-33 also illustrates God’s care for His creation; He feeds the birds of the air and clothes the grass of the field with glorious lilies. The various parts of creation, in turn, also declare the glory of their Creator.¹⁵

The environment also has utilitarian value to mankind.¹⁶ The resources of creation – food, water, air, stone, wood, metals – nourish us and allow us to improve our standard of living. Unlike our Creator who can create out of nothing, humanity can only create and produce with the existing resources found in the environment. Over time, more of these resources become economically traded commodities, with

market values determined by scarcity and demand.

Other parts of creation are also valuable to mankind in ways that are not easily subject to ownership, trade, or market valuation, but which are essential to human flourishing.¹⁷ For example, plants use photosynthesis to transform carbon dioxide into the oxygen required for human respiration. Bees pollinate crops that humans consume; without bees and other pollinators, humans would have to expend time and resources pollinating crops directly. Ozone in the atmosphere absorbs cancer-causing radiation, thereby protecting human health. Although the monetary value of these environmental goods and services may be challenging to evaluate, their value to humanity is undeniable.¹⁸

Because creation is valuable both in the sight of God and humanity, God decreed how Israel was to exercise responsible stewardship over the environment in the Old Testament. Humanity was to allow animals to rest on the Sabbath¹⁹ and to treat animals well.²⁰ Productive fruit trees were not to be cut down during the siege of a city, so that the productive capacity of the land would not be diminished.²¹ Even the land itself was supposed to rest fallow every seven years.²² Although these commands were made in the specific context of Old Testament Israel, the underlying principle to be responsible stewards over creation still applies.

While God values all of His creation, He uniquely values mankind that He made in His image.²³ Although after every day of creation God pronounced His creation to be *good*, God declared that creation was *very good* only after His creation of man. Thus, humanity is not merely equal to the animals or some other part of creation. He set humanity to rule over the rest of creation and gave plants²⁴ and later animals²⁵ to humanity as food. God established His original covenant with humanity and made humanity the object

of this covenant. And, in Matthew 6:25-33, Jesus says that if God devotes such care for birds and grass, how much more will He care for humanity?

Nevertheless, humanity must acknowledge its relation to the rest of creation. God created man from “the dust of the ground” on the same day as the animals, and named the first man (*Adam*) after the ground (*adama*).²⁶ Thus, a hierarchy exists in the created order.²⁷ God, the sovereign and providential Creator, presides over both humanity and the other parts of creation. Humanity, the image-bearers of God, is below God but above the rest of creation.²⁸ The non-human creation, although inherently valuable in the sight of God and man, rests at the bottom of this hierarchy. Humanity therefore should not adopt a “biocentric” philosophy that aims to preserve all life, nor an “ecocentric” philosophy that aims to preserve the environment in its natural state, nor an “anthropocentric” view in which nature’s only purpose is to serve humanity. Instead, humanity should adopt a “theocentric” view of both caring for and subduing the rest of creation in a manner prescribed by God.²⁹

Humanity should also reject the deification of creation – a modern form of pantheism – that some secular environmentalists either explicitly or implicitly practice.³⁰ For example, humanity must reject the proposition promoted by secular environmental groups – such as Earth First, the Earth Liberation Front, and the Animal Liberation Front – that other members of the biological community have or should have equal rights to humanity.³¹ These living creatures are indeed valuable and should not be subjected to wanton destruction or cruelty, but they do not have the same status as humans made in the image of God. Humanity also should avoid the deification of itself – humanism. Both of these perspectives “exchange the

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truth about God for a lie and worship and serve the creature rather than the Creator.³² Instead, humanity must order its activities according to God's will by exercising fruitful stewardship over the environment.

PRINCIPLE 3: God commands that humanity exercise both dominion and care over all of creation.³³

In the cultural mandate of Genesis 1:28, God commands humanity to have *dominion* over the earth and to *subdue* it. Theologians point out that the original Hebrew word for *subdue* (*kavash*) is a “fairly strong term” that “means to overpower, to conquer, to bring under control.”³⁴ This subduing of the environment includes extracting the natural resources of creation to increase human standards of living (both before and after sin infected the world). For example, God created hills out of which humanity “can dig copper”³⁵ and trees that men could “cut down” for wood.³⁶ Jesus both curses an unfruitful fig tree and suggests that it should be cut down, for “why should it use up the ground?”³⁷ Fruitful stewardship also includes controlling viruses, bacteria, fungi, plants, and animals that harm human flourishing (only after sin infected the world).³⁸ For example, the Mosaic Law prescribed a number of practices to prevent the spread of disease. This command to have

dominion and to subdue the earth is not optional.

Unfortunately, our ability to properly exercise dominion over God's creation is limited by humanity's finitude and is marred by sin.³⁹ Humanity has the capacity to overconsume, pollute, and destroy as we endeavour to exercise dominion over the non-human creation.⁴⁰ Focusing only on Genesis 1:28 may lead us to think we have the “right to do anything we want to the earth”⁴¹ – that the sole purpose of the environment is to serve as raw materials to fuel human needs and desires.⁴² We might ignore the health of other living creatures or long-term sustainability.

In case humanity is tempted to simply exploit nature, God balances this command to subdue the earth by revealing His purpose for humanity: to *keep* (ESV), to *take care of* (NIV), to *tend* (NKJV), or even to *serve* (YLT) the garden.⁴³ Exclusive attention to this command in Genesis 2:15 may also lead to an incomplete understanding of environmental stewardship. Under a care-only philosophy, humanity is to preserve the environment the way it is, to never harm or kill animals, or to make conservation the highest calling of humanity.

Combining the commands of both of these verses (*subdue* and *serve*) may seem contradictory, but a proper Christian

understanding of these terms makes them perfectly compatible. Authority and service go hand in hand within families, within government institutions, and within environmental stewardship.⁴⁴

Christians acknowledge that human beings have an imperfect capacity to exercise responsible stewardship over the rest of creation. This requires humanity to continuously refine and re-evaluate its exercise of dominion and stewardship over the environment. We should study how our activities may threaten animal species, interfere with a nutrient cycle, or pollute a water source. The solution to imperfect stewardship is not to abandon the responsibility of stewardship altogether, but to develop our stewardship techniques.

PRINCIPLE 4: God commands humanity to multiply and fill the earth.

In the cultural mandate, God also commands humanity to multiply and to fill the earth, exercising stewardship – fruitfulness, dominion, and care – as they go.⁴⁵ Indeed, He scattered humanity when they failed to spread out around the world.⁴⁶ Humanity's capacity for multiplying and filling the earth expanded markedly with the Industrial Revolution and modern medicine, prior to which the world population grew much more slowly and numbered only in the hundreds of millions. Earth's population has multiplied many times over in the past two centuries, reaching approximately 7.8 billion people in 2020. The UN projects that the human population will peak at around 11 billion by the end of the century.⁴⁷

Although this rapid population growth allows humanity to fulfil God's command to multiply and fill the earth at a whole new level, this significant growth has come with growing pains. This growth has led to problems such as the overexploitation of natural resources and excessive pollution. However, these



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problems are the result of specific human choices and habits, such as rampant materialism and consumerism,⁴⁸ not simply the overall number of people. Although a large and growing population may exacerbate existing problems and even create new challenges, a growing population should be considered inherently good. Indeed, “inquisitive, creative, and resourceful human beings” are “the ultimate resource” in this world.⁴⁹

Many secular environmentalists fail to recognize this. In their zeal to care for the environment, they oppose both population growth and particular human habits. Some go so far as to claim that humanity is a parasite destroying the environment, worthy of eradication.⁵⁰ But such a perspective ignores the fact that God has placed humanity as active stewards over His creation. Human multiplication must be considered “a blessing, not a curse.”⁵¹

PRINCIPLE 5: *Although God allows humanity to suffer the consequences of poor environmental stewardship, the end of history will occur according to God’s sovereign plan.*

A society’s eschatology – their view of how the world will end – will inform its policies on environmental stewardship. Secular environmentalists, ignoring the creation and providence of God, attribute the end of the world to human action or some natural disaster – an asteroid, a virus, or variation in the sun’s rays, for example. The fate of the planet rests in either the hands of humanity or the whims of chance.

A biblical worldview, however, understands that all of history, including the end of this world, is directed

by God. God “created heaven and earth and everything in them” and continually “upholds and rules them by His eternal counsel and providence.”⁵² This includes animals, plants, and the physical environment. God upholds His creation in ways we describe as laws of nature (e.g. the law of gravity, the law of thermodynamics, the law of biogenesis, etc.). Indeed, these laws of nature illustrate the covenant faithfulness of God.⁵³ Although humanity may mistakenly ascribe these laws of nature to nature itself, Christians know that these laws are issued by a Supreme Lawgiver. Absolutely nothing in creation occurs without God’s direction or permission.

Despite the reality of God’s providence, God also allows humans to suffer the natural consequences of their actions. Adam and Eve’s disobedience and its consequence – the introduction of sin and evil into a good world – profoundly changed creation.⁵⁴ As a consequence of man’s actions, God said, “Cursed is the ground because of you; in pain you shall eat of it all the days of your life; thorns and thistles it shall bring forth for you; and you shall eat the plants of the field. By the sweat of your face you shall eat bread.”⁵⁵ These thorns and thistles represent how all of creation has been impacted by the Fall. Because of the original human sin, the living creation now naturally experiences suffering, sickness, and death.⁵⁶ Romans 8:19-23 also speaks about how “creation was subjected to futility,” is in “bondage to corruption,” and is “groaning together in the pains of childbirth.”

Humanity must continue to grapple with the environmental effects of sin today. Human activity can cause catastrophic environmental damage

(e.g. the Chernobyl nuclear disaster or the Exxon-Valdez oil spill). A basic Christian eschatology does not “guarantee that some form of global or cosmic catastrophe [resulting from the actions of humanity] will be averted,” just as we do not believe that any natural catastrophe – a devastating earthquake, hurricane, or volcanic eruption – will be averted because of God’s promise to Noah.⁵⁷ Our belief in human responsibility requires that we must evaluate our actions and respond to their consequences. Christians must never cite their belief in God’s sovereignty as an excuse for inaction, laziness, or a lack of stewardship.⁵⁸

Although God allows humanity to suffer the environmental consequences of sinful actions or negligence, the fate of the world is in God’s hands, not in human hands. Many prophesy that human activity will cause an environmental apocalypse, while others envision a technological utopia. Christians should reject both visions as unfounded since “Christian eschatology runs counter to both pessimistic and optimistic views of the future”⁵⁹ and “the day of the Lord [the end of the world] will come like a thief in the night.”⁶⁰ In the closing verses of Genesis 8, God promises to “never again curse the ground because of man” or “ever again strike down every living creature as I have done. While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease.”⁶¹ Although the world will not be destroyed by human actions, humanity cannot usher in an environmental utopia either. Romans 8 speaks into how both the human and non-human creation together eagerly await redemption. Although human care

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and dominion may contribute to the redemption or reconciliation of creation, only God can ultimately fix the sin and brokenness that afflicts this world.⁶²

PRINCIPLE 6: *God created the environment to be simultaneously resilient and dynamic.*⁶³

God created every individual organism, plant, animal, person, and the wider environment with an astounding resiliency. The human body, for example, can survive weeks without food, can heal cuts to its skin, and can run a marathon. The earth also has positive and negative feedback loops that keep weather patterns predictable, animal populations in check, and nutrients recycling themselves all across the globe.

However, the environment is also fragile.⁶⁴ Microscopic doses of certain natural and man-made drugs are lethal.⁶⁵ An extra copy of a particular gene on a particular chromosome causes Down syndrome. The eruption of a single volcano – such as the eruption of Mount Pinatubo in 1991 – can temporarily lower the world temperature and cause local or global famines. A single virus like COVID-19 can kill millions of people worldwide.

The environment is sufficiently resilient to support huge numbers of people, even well beyond the current number, without apocalyptic impacts to our atmosphere, oceans, or critical habitats, if managed well.⁶⁶ This is a comfort to Christians who rest in the sustaining, providential care of God who will bring history to its conclusion in His timing. But the environment is not so resilient that we can do whatever we

want without regard for our impact on the environment. The fragility of the environment necessitates the exercise of environmental stewardship by Christians and non-Christians alike so that we do not reap the consequences of our unwise actions.⁶⁷

PRINCIPLE 7: *Although cost-benefit analysis is an important tool to determine the wise use of resources, cost-benefit analysis cannot be completely comprehensive.*

Many attempts to preserve or exploit the environment stem from an incomplete assessment of the value of the environment. Carefully weighing the costs and benefits is required in effective environmental stewardship.⁶⁸ Of course, the challenge is to account for all the relevant costs and benefits (e.g. monetary, health, and environmental costs and benefits across wide swaths of the human population) as much as is reasonably possible.

These costs and benefits cannot be properly estimated by experts in any single field. Although ecologists, biologists, chemists, and atmospheric and environmental scientists may lead the evaluation of the effect on the environment, experts in other fields – economics, political science, law, ethics, sociology, and psychology – must also contribute to developing the best human response.

However, much debate exists about how to value the benefits that the environment provides and the cost of disturbing the environment. Some secular environmentalists, immersed in their study of nature, assign almost infinite value to the natural environment.

Other professionals and laypersons, ignorant of the existence of many goods and services that the environment provides, assign virtually no value to the environment. Although this report cannot provide a detailed methodology of how to value the environment, Principle 2 outlined three ways that the environment is valuable. All three must be considered when estimating costs and benefits.

First, creation holds valuable resources (e.g. iron, wood, and water) to fuel humanity’s development. Second, nature provides many services (e.g. plants transform carbon dioxide into oxygen, rainfall irrigates crops, and vegetation reduces soil erosion) that are essential to humanity’s survival. Lest environmental policy be boiled down to sheer utilitarianism, Christians must remember that the environment has a third source of value: intrinsic value in the sight of God. God values His creation because it is *His* creation and because all of creation praises Him. It is impossible to precisely appraise this value that God places on His creation and plug it into a cost-benefit equation. Instead, Christians should marvel at the handiwork of God, remembering that humanity is a steward of *His* creation. Even if a forest did not help convert carbon dioxide into oxygen or its trees provide useful timber for construction, it still reflects God’s creativity and praises Him; it should not be destroyed without ample cause, even if humanity cannot assign monetary costs and benefits to it. Thus, although empirical cost-benefit analysis is critically important, the moral component of environmental stewardship must be considered as well.

A Policy Framework for Environmental Stewardship

Environmental issues often result from the tragedy of the commons

Many environmental issues arise from a classic economic problem, *the tragedy of the commons*.⁶⁹ The tragedy of the commons occurs when people overexploit a specific resource because no single person holds the property rights – the incentive to exercise stewardship – over that resource. Economic markets – the free exchange of scarce goods and services – are predicated on private property rights. Clearly defined property rights are also indispensable to the proper stewardship of property and goods. The tragedy of the commons is exacerbated by *externalities*, the impact of someone's actions on other people.

For example, in a public pasture in which no one has a property right to

the pasture or a personal incentive to exercise stewardship, a shepherd will be tempted to allow his sheep to eat up all the good grass before another shepherd's sheep eats the grass. Since no one can personally exercise stewardship over the public pasture and because the actions of each shepherd affect the rest of the community, all the grass is quickly eaten, and everyone suffers from the end result: a destroyed pasture.⁷⁰

This tragedy of the commons lies behind many environmental problems. For example, no single person, business, or government owns the atmosphere above them, the water that flows in the river beside them, or the animals that occasionally enter their yard. Because no one person bears the full consequences of an atmosphere filled with smog, a river filled with sewage, or an extinct animal population, each person lives their daily lives without experiencing

all the consequences their actions have on others.

The preferred solutions to environmental issues are market-based policies – over command-and-control policies – that strengthen property rights and minimally impair human liberty.

Policy proposals to address environmental issues generally fall into one of two categories: market-based policies that leverage the laws of supply and demand to affect change (e.g. monetary incentives, taxes, or tradeable permits) or command-and-control policies that rely on direct prohibitions to affect change (e.g. regulations, bans, and licenses). Policymakers should give first consideration to market-based policies over command-and-control policies to solve environmental issues because they best address the underlying economic problems and they also respect two important concepts in the Christian

“This tragedy of the commons lies behind many environmental problems.”



worldview: private property and human liberty.⁷¹ Scripture implicitly supports private property rights over common ownership.⁷² Scripture also emphasizes the importance of human liberty to serve God as He has commanded and the corresponding limitations of the state.⁷³

For example, when a natural resource like a local fish population is owned collectively or by no one in particular, each recreational and commercial fisherman may catch as many fish as they want as fast as they can. Why leave some fish to repopulate if the next fisherman might just scoop them up instead of you? Under these conditions, fishermen will eventually deplete the stock of fish because no one has ownership of the entire fish population. However, if conservationists estimate how many fish can be caught per year while keeping the population of fish stable, the local government assigns fishermen the right to catch a specified number of fish, and the fishermen are allowed to trade these fishing rights, then property rights can be established and a market can be created.⁷⁴

This approach allowed Iceland to avoid the depletion of its fish stocks,⁷⁵ a tragedy that befell the Atlantic cod fisheries. Such a policy approach would be preferable to a command-and-control approach that would forbid anyone from fishing or only allowing a particular group of people to fish.

Another example of a market-based solution is to tax the production of a pollutant,⁷⁶ as Sweden did on nitrous oxide, a pollutant that contributes to acid rain.⁷⁷ Such a tax increases the cost of the pollution to the producer – the private cost – to more closely match the pollution's impact on everyone else – the societal cost (e.g. *internalizing an externality*). This approach also leverages the economic law of supply and demand to reduce the amount of emissions produced.

Conclusion

These seven principles outline what we believe to be a faithful Christian understanding of environmental

stewardship that is fundamentally different from a secular understanding of the environment. Christian environmental stewardship recognizes that the environment is the creation of God and properly understands the responsibility of humanity, as the image-bearers of God, to exercise stewardship over the resilient yet fragile environment. Although humanity should carefully consider the consequences of their actions, Christians understand that God – not man – controls the end the world. Taken together and joined to an overarching preference for market-based policies, these principles are pieces of a more comprehensive commitment to exercise responsible stewardship over the rest of creation.

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