

# Creation, preservation and dominion: part 2—Christianity, development and environmentalism

*Andrew S. Kulikovsky*

The first paper in this series discussed God's present work in creation and humanity's relationship with the created order. This second part seeks to expound a Christian view of both development and environmentalism. Because of the Fall, humanity's stewardship role has not ended, but it has become much more difficult. The Fall and its effects are not what God intended for His creation, and our stewardship role implies that we resist the Fall and reverse its effects. This means we must find ways to develop our environment and use the natural resources God has given us for our own benefit and the benefit of our fellow human beings. Such development and utilisation of resources does not mean or imply that pollution or other environmental damage are inevitable. Both common sense and our stewardship role require us to seek ways to develop the environment and use natural resources in sustainable ways. Sometimes, however, compromises must be made.

The first paper in this series discussed God's present work in creation and humanity's relationship with the created order, including the dominion that God has given us and the stewardship role that He has entrusted to us. This paper focuses on the Christian view of development and environmentalism, including discussions of human environmental impact in relation to pollution and extinction of species.

## **Development and environmentalism**

Many modern environmentalists hold to a highly romanticized, virtually pantheistic view of nature. Images and stories of simple, yet idyllic, tribal life reinforce the erroneous "noble savage" stereotype—mankind living in glorious harmony with nature without pollution or overcrowding. These environmentalists, therefore, oppose any development that involves any alteration to nature. Such alteration is inherently bad, amounting to a moral violation. As Paul wrote to the Romans, such people have "exchanged the truth of God for a lie, and worshiped and served created things rather than the Creator" (Rom 1:25).

Yet many Christians also appear to have accepted this notion. The Evangelical Environmental Network's "An Evangelical Declaration on the Care of Creation" points to a number of degradations in creation that they claim are a result of resource consumption and sustained population growth:

"These degradations of creation can be summed up as 1) land degradation; 2) deforestation; 3) species extinction; 4) water degradation; 5) global toxification; 6) the alteration of atmosphere; 7) human and cultural degradation. Many of these degradations are signs that we are pressing against the finite limits God has set for creation. With continued population growth, these degradations

will become more severe. Our responsibility is not only to bear and nurture children, but to nurture their home on earth."<sup>1</sup>

For many Christian environmentalists, industrial and agricultural development, and the utilization of resources in the natural world are viewed as morally equivalent to destroying the Garden of Eden, and a crime not only against God but humanity in general. Such views have no theological support, and proponents seem to have forgotten that the Fall has taken place. In fact, such ideas are essentially pagan. As Hore-Lacy explains, "harmony with nature becomes the prime virtue, rather than a proper corollary of harmony with the Creator."<sup>2</sup> Or as Schaeffer put it: "Man is not to be sacrificed, as pantheism sacrifices him, because after all he was made in the image of God and given dominion."<sup>3</sup> Therefore, it is the duty of all human beings, as image bearers of God, and as stewards of His creation, to explore, study and analyse the natural world and then apply that knowledge for the benefit of human society.

Nevertheless, virtually all environmentalists, including some Christian ones, believe that resources are limited and are rapidly running out due to increased demand. The reality, however, is that such claims have been circulating since the time of Tertullian in the second century AD, and we have still yet to run out of any significant resource, nor are we likely to in the foreseeable future. In truth, we have an abundance of natural resources, which is what one would expect from a generous God who provides. Those who claim that humanity will exhaust fundamental natural resources if population growth continues, and development persists, are ultimately denying God's capacity and ability to provide.

## **Resisting the Fall and reversing its effects**

Scripture not only teaches that creation was subjected to bondage and decay as a result of humanity's Fall, but also

that it will be liberated and restored as a result of humanity's redemption (Rom 8:19–23). The liberation of our bodies from sin is linked with the liberation of the entire fallen subhuman creation. Therefore, at the consummation of the kingdom, not only will our bodies be restored, but so will the whole of the subhuman creation.

Christ proclaimed that the kingdom of God is near (Mark 1:14–15), but also that it will not come immediately (Luke 19:11). Although the kingdom has not yet fully come, we are commanded to resist the reign of sin in our mortal bodies, and offer our bodies as instruments of righteousness (Rom 6:11–14). Therefore, establishing and participating in the kingdom of God and living in anticipation of its consummation, implies not only that we resist the power of sin, but also the effects of the Fall. The effects of the Fall, like the power of sin, will not be overcome until the kingdom fully comes, but the Christian duty is to resist, and to live in anticipation of what will eventually be. This point was made long ago by Francis Bacon:

“For by the Fall man declined from the state of innocence and from his kingdom over the creatures. Both things can be repaired in this life to some extent, the former by religion and faith, the latter by the arts and sciences. For the Curse did not make the creation an utter and irrevocable outlaw. In virtue of the sentence, ‘In the sweat of thy face shalt thou eat bread’ (Gen 3:19), man, by manifold labours ... compels the creation, in time and in part, to provide him with bread, that is to serve the purposes of human life.”<sup>4</sup>

Although the fallen creation is naturally in a state of decay, as creative image bearers of God (Gen 1:1, 27), mankind is not only capable, but obligated, to find ways to repair any damage we have caused, to heal and to restore, and to improve the overall state of creation, making it serve our needs in more productive and more efficient ways. As Bacon hinted, this is best achieved by the application of scientific knowledge and technological innovation to the abundant natural resources God has given us.

### **Natural resources, science and technological innovation**

Natural resources are part of God's provision to humanity, and our very survival depends on our capturing, extracting and applying these resources for the benefit of human society. Clearly, the capture, extraction and application of natural resources for use in power generation, water supply, food production, communications, transport, building, and medical treatments require detailed scientific knowledge and innovative uses of various resources. But as Goldsworthy rightly notes: “The human search for knowledge and technology, and indeed our whole cultural development, are tasks assigned to us by God.”<sup>5</sup>

The benefits to humanity from the application of science and technology in the area of medicine and general health

are obvious. The decay caused by the Fall has wreaked havoc with our bodies. Yet modern medicine, by intervening in the natural processes and functions of the body, has been able to not only cure once incurable diseases, but to repair serious injuries resulting from accidents, and to reconstruct gross deformities inherited at birth. As John Feinberg explains:

“... most medical procedures involve intervention into the natural order ... We live in a fallen world where things do not always work as they should. God has commissioned people to subdue the created order and has given them a certain dominion over it (Gen 1:28). While this does not allow us to harm or exploit the natural order, permission to subdue a natural order that does not always function as God intended because of sin's disruptive influence seems to necessitate our intervention into natural processes.”<sup>6</sup>

Indeed, by intervening in the natural process using *in vitro* fertilization (IVF) technology, it is now possible for once infertile couples to conceive and have children.

But when it comes to utilizing the earth's natural resources, the benefits gained appear to be not so clear to most environmentalists, including many Christians. Christian environmentalists fail to recognize the implications of God's provision in creation for people's needs. Because we live in a culture where it is easy to take for granted the benefits that science and technology have given us, many people fail to appreciate the extent to which industrial, agricultural and technological development have improved the duration and quality of life of all people in modern society.

Yet, rather than acknowledging that God is a faithful provider and has abundantly supplied us with all the resources we could ever need, environmentalists seem obsessed with the notion that our natural resources are limited and that we are close to exhausting many of those resources we presently rely on. They regard the existing supply of economically useable natural resources as nature-given, rather than as God-given, and they fail to acknowledge the contribution of human intelligence and innovation. In essence, they deny (1) God as provider, and (2) mankind as a creative bearer of God's image.

Having no conception of the role of human intelligence in the creation of economically useable resources, and failing to distinguish between the present supply of natural resources, and the sum total of those available in nature, environmentalists and conservationists naïvely believe that every act of production that consumes natural resources is an act of impoverishment because it uses up allegedly priceless, irreplaceable treasures of nature.<sup>7</sup> Such notions are nothing new. Cyprian, writing in the third century, stated:

“You must know that the world has grown old, and does not remain in its former vigor. It bears witness to its own decline. The rainfall and the sun's warmth are both diminishing; the metals are nearly exhausted ...”<sup>8</sup>



Photo from <www.morguefile.com>

**Figure 1.** Natural resources are part of God's provision. Open-cut mining is a safe and efficient method of extracting natural resources so that they may be used for the benefit human society.

But, as George Reisman points out,

“... the fact is that the world is made out of natural resources—out of solidly packed natural resources, extending from the upper limits of its atmosphere to its very center, four thousand miles down. This is so because the entire mass of the earth is made of nothing but chemical elements, all of which are natural resources ... Even the sands of the Sahara desert are composed of nothing but various compounds of silicon, carbon, oxygen, hydrogen, aluminum, iron, and so on, all of them having who knows what potential uses that science may someday unlock.”<sup>9</sup>

Although the form or compounds in which the various elements may be found may change, there is no

danger of ever running out of any particular chemical element. Nor is there any real shortage of energy in the world. The Law of Conservation of Energy states that energy can neither be created nor destroyed. More energy is discharged in a single thunderstorm than mankind currently generates in an entire year. Therefore, the task before us is not one of generating energy without consuming exhaustible resources, but one of finding efficient ways to harness and deliver the energy already present in creation. Moreover, heat from the sun provides a constantly renewed supply that is billions of times greater than the amount of energy we presently consume. Therefore, for all practical purposes, the energy available to humans is infinite.

In reality, resources are becoming more abundant, not less. Mined minerals, crops (including wood), livestock, and fish are now more abundantly available to human societies than ever before in the past, despite the fact that human population has grown faster than at any other time in history.<sup>10</sup> This is largely due to human ingenuity, especially in the past two centuries, which has devised increasingly more effective and efficient ways to extract, refine, and use the earth's natural resources. For example, it is now possible to mine at greater depths with less effort, and to gain access to regions of the earth previously inaccessible, or to improve access to regions already accessible.

Developed societies have also found uses for things previously thought to have no uses,<sup>11</sup> and discovered new applications for commonly available resources that may be substituted for less common, less efficient or more expensive resources, but still provide the same benefits. As a result, the demand for

the substituted resources is reduced or eliminated.<sup>12</sup>

In agriculture, the development of chemical fertilizers and more efficient methods of irrigation have enabled farmers to radically improve the productivity of fertile land, and, indeed, to create fertile land from land that was previously infertile. Land that was previously desert or semidesert has been made vastly more productive than the very best lands available to previous generations.<sup>13</sup> In fact, it is even possible to grow many crops in scientifically controlled soils in multistory buildings, in virtual factory conditions. Moreover, the possibilities for food production offered by genetically modified crops are enormous.

Nevertheless, environmentalists and conservationists have argued that industrial and agricultural development has led to senseless deforestation. This has undoubtedly

happened in the past, but it is not a necessary consequence of development. Timber is a valuable resource and it makes no sense for a commercial operation to cut down trees without bothering to replant them. They would be destroying their future source of income. In essence, trees are a crop like any other, such as wheat or corn. The only difference is that the time to harvest is much longer.

Note, however, that although the earth has effectively limitless resources, the range of applications for those resources is limited. Agricultural land may be used to produce food, or it may be used to produce biofuels. Governments, commercial operators, and society in general will determine whether biofuel production is more important than food production. Unfortunately, at the present time, due to the supposed threat of “global warming”, there is a definite shift away from food production toward biofuel production. This will have severe ramifications, especially for the poorest people in the world. United Nations World Food Program officials have pointed out that the use of more land and agricultural produce for biofuels has led to significant increases in food prices.<sup>14</sup> The British Government’s Chief Scientific Adviser, Professor John Beddington, has also pointed out that the move toward biofuels poses a serious threat to world food production and the lives of billions of people: “It’s very hard to imagine how we can see the world growing enough crops to produce renewable energy and at the same time meet the enormous demand for food.”<sup>15</sup>

In summary, it should be noted that, in western developed countries in the twentieth century, life expectancy has dramatically increased as a result of the enormous contribution of industrial civilization, which generates an ever improving supply of food, clothing, shelter, medical care, and all the conveniences of modern life. Famine does not exist in such societies because industrial and agricultural development has produced the greatest abundance and variety of food in the history of the world, and has created the storage and transportation systems required to bring it to everyone. Furthermore, developed societies have put an end to famines and plagues, and eliminated once dreaded diseases such as cholera, diphtheria, smallpox, tuberculosis, and typhoid fever, among others.<sup>16</sup> All of these developments are a result of human ingenuity in the areas of science and technology, which are themselves products of the Christian worldview.<sup>17</sup>

Therefore, to be effective stewards of God’s creation, our task is to discover how the earth’s effectively limitless natural resources may be used, applied or transformed in order to meet the needs of human societies. Mankind, made in the image of God, is creative, and this creativity should be applied to the task of discovering this knowledge through scientific research and technological innovation.

In contrast, implementing environmental and conservationist policies that result in the suffering and

death of millions of human beings who are created in God’s image, is not God-honoring or good stewardship—it is pagan Gaia worship.

### Pollution

Pollution is a serious problem and it is a problem that mankind—as stewards of God’s creation—has a duty to address. Human societies cannot operate in such a way that destroys or causes significant long term damage to the environment. Not only does this imply a disrespect for God’s creation, but a person, organization or society that pollutes the environment is, in effect, not loving their neighbor as themselves (Matt 22:39), since a polluted environment has the potential to negatively affect many people.

However, the term “pollution” has increasingly been used to refer to any change in the state of nature caused by humans. The traditional, common understanding of pollution referred to how harmful substances had been introduced into the environment in ways that had significant detrimental effects on other people and other creatures (e.g. the discharge of human fecal material into drinking water). Now, any kind of industrial or agricultural development is viewed as just another form of pollution. This is a radically different concept of pollution to the traditional, common understanding. This new understanding of pollution has led to the false implication that all industrial development implicitly involves the emission of harmful by-products that pollute the air and water, poison the fish, and destroy rivers and lakes. Industrialization is also said to be responsible for acid rain, the destruction of the ozone layer, the onset of a new ice age, and the contrary onset of global warming. Environmentalists also claim that pesticides, herbicides and heavy metals are poisoning the food chain, and that chemical preservatives and radiation from atomic power plants, electric power lines, television sets, microwave ovens, and other electrical appliances, cause cancer and other detrimental health problems. This has naturally led the environmental movement toward pathological anti-industrialization and anti-development.

Thus, most environmentalists argue that, regardless of resource availability, the pollution emitted by the growing human population and the resultant economic expansion, threatens life itself—human and non-human alike.<sup>18</sup> They believe that fewer people means a cleaner environment, and suppose that a decline in population would increase the amount of food and other resources available to the poor.

Yet, in developed countries today, the air and water are far cleaner than they were fifty to sixty years ago. Although air quality in large towns and cities is lower than that in rural areas—and always has been—it is still far better today than in the past, precisely because of industrial development. Before the advent of modern industry, the open streets served as sewers. All large towns and cities with a heavy concentration of horses suffered from the



**Figure 2.** The ability to generate baseload power in a cheap and efficient manner is essential for the health and prosperity of all civilisations.

enormous pollution problem created by the dropping of vast quantities of animal manure and urine. The introduction of sewage systems eliminated this sewage problem, and the development of the automobile industry eliminated the need for horses. In fact, technological innovation and industrialization have not only provided the knowledge of how to build large scale plumbing and sewage systems, but also enabled us to produce materials such as iron, steel, copper and PVC, with which to build these systems. Central heating, air conditioning, indoor plumbing, and modern ventilation methods also made significant contributions to improving the quality of air in which people live and work.<sup>19</sup> In fact, studies have shown the biggest contributor to air pollution is high density dwellings—a strategy preferred by many environmentalists and conservationists.<sup>20</sup>

Furthermore, technological progress and innovation has led to more efficient and cleaner uses of resources, so that modern cities are no longer choked with smoke from steam engines and wood heaters, and cars and trucks get better mileage and are far less polluting. Similarly, population growth has driven society to find more productive ways to grow food, and because of increased crop yields, per capita food production is higher than ever before despite the fact that the global human population has surpassed six billion.

Therefore, there is now more forested land in developed countries because so much less acreage is needed for farmland. Also, commercial realities have motivated loggers to replant.<sup>21</sup> In other words, in learning to make more and more from less and less, we are also learning to do it while creating less and less pollution.

Regarding the quality of drinking water, it is well known that the actual safety of drinking water is in direct proportion to a country's degree of economic advancement. One can safely drink tap water in virtually every modern developed country, because the safety of water supplies is guaranteed by chemical purification plants, and the water is safely distributed by a network of pipelines and pumping stations providing instant access to safe drinking water, hot or cold, every minute of the day.<sup>19</sup> However, drinking the water in south and central America, and most of Asia and Africa, would be a dangerous proposition because there are no purification plants, and no secure distribution systems.

In regard to medical and general health benefits, science and technological innovation has produced the vaccines, anesthetics, antibiotics, and all the other “wonder drugs” of modern medicine, along with all kinds of new and improved diagnostic and surgical equipment. These developments, along with improved nutrition, clothing, and shelter, radically reduced the incidence of almost every type of disease, and put an end to the plagues that ravished medieval Europe and polluted the countryside with rotting, infecting corpses. Indeed, as Beisner points out, one only has to read the accounts of the loathsome effects of famines and epidemics on the lives of all people before the nineteenth century, “to make us appreciate the healthier environment we enjoy today—an environment made that way largely by the introduction of chemicals that kill pests and germs and protect crops.”<sup>22</sup> Daniel Boorstin makes the same point:

“We sputter against The Polluted Environment—as if it was invented in the age of the automobile. We compare our smoggy air not with the odor of horsedung and the plague of flies and the smells of garbage and human excrement which filled cities in the past, but with the honey-suckle perfumes of some nonexistent City Beautiful. We forget that even if the water in many cities today is not as spring-pure nor as palatable as we would like, for most of history the water of the cities (and of the countryside) was undrinkable. We reproach ourselves for the ills of disease and malnourishment, and forget that until recently enteritis and measles and whooping cough, diphtheria and typhoid, were killing diseases of childhood, puerperal fever plagued mothers in childbirth, polio was a summer monster.”<sup>23</sup>

In addition, the average citizen in a modern western society generates far less garbage today than at any time in the past. As a result of modern packaging methods, there is much less need to dispose of large quantities of

animal and vegetable matter, such as chicken feathers, fish scales, and corn husks. Even the kinds of garbage unique to modern developed societies, such as disposable diapers/nappies, fast-food containers and all plastics, make a relatively small and insignificant contribution to overall garbage generation.<sup>24</sup> In contrast, third world, undeveloped, non-industrialized countries are the epitome of pollution and squalor, with all manner of garbage and pollutants including human excrement and, indeed, human corpses contaminating the water ways.

### Extinction

Human beings have also been responsible for causing the extinction of various species.<sup>25</sup> In most cases, this has been due to overhunting. But many environmentalists and conservationists also blame industrial and agricultural development and urban sprawl because they claim it destroys animal habitats.

Although the reckless destruction of species should be avoided and the impact on animal habitats minimised, there will often be a fundamental and unavoidable conflict between the needs of humans and the needs of a particular variety of plant or animal. Therefore, one may ask: Is it critical for every species to survive? Putting it in context, is it acceptable to set aside vast tracts of land for agriculture and/or housing in order to provide food and shelter for hundreds of thousands of people, in exchange for the loss of a particular species of parrot or lizard? Clearly, the answer depends on the relative value one places on human beings compared to other creatures. It is a question of whose needs should ultimately prevail. Human beings are faced with the choice of fulfilling their own needs or sacrificing themselves (or their fellow human beings) for the sake of some variety of plant or animal. For many environmentalists and conservationists, it is human beings who should submit.

The motivation behind such views are rooted in the philosophy of anti-speciesism—the belief that it is wrong to assign rights to creatures purely on the basis of the species it belongs to.<sup>26</sup> To assert that the rights of human beings are superior to any other species is, on this view, morally equivalent to racism.<sup>27</sup> In fact, environmentalists and conservationists even object to the destruction of animal and vegetable species that are useless or even hostile to mankind. Any extinction is inherently immoral. This brand of nature worship and human self-loathing is best illustrated in the comments of David Graber:

“We are not interested in the utility of a particular species or free-flowing river, or ecosystem, to mankind. They have intrinsic value, more value—to me—than another human body, or a billion of them. Human happiness, and certainly human fecundity, are not as important as a wild and healthy planet . . . Somewhere along the line—at about a billion years ago, maybe half that—we quit the contract and

became a cancer. We have become a plague upon ourselves and upon the Earth . . . Until such time as Homo sapiens should decide to rejoin nature, some of us can only hope for the right virus to come along.”<sup>28</sup>

Similar views have been expressed by some theologians. St. Francis of Assisi believed in the equality of all living creatures: man, cattle, birds, fish and reptiles.<sup>29</sup> Indeed, precisely on the basis of this philosophical affinity, St. Francis was officially declared the patron saint of ecology by the Roman Catholic church. Likewise, Albert Schweitzer advocated a form of pantheism where every manifestation of life stood in a personal, spiritual relationship with the rest of the universe.<sup>30</sup>

But such views are clearly not compatible with the biblical view that God made human beings in His image and gave them dominion over the rest of creation. In the biblical view of creation, the needs of human beings surpass the needs of any other creature or plant.

Moreover, when environmentalists and conservationists deny the special status of human beings, they do not, as a result, elevate flies, snails and rats to the level of mankind, but rather, reduce human beings to the level of flies, snails and rats. If human beings are regarded as no better than flies, then that is exactly how they will be treated. Indeed, this is precisely what has happened in other irrational cultures.<sup>31</sup>

There is also a great deal of inconsistency in the “equality of rights” position advocated by environmentalists and conservationists. They do not appear to realise that their view of nature as a beautiful and harmonious utopia apart from the interference of mankind, bears no resemblance to actual reality. As Tennyson described it in his poem *In Memoriam*, nature is “red in tooth and claw”—a place where one creature tears another apart or eats another alive. If human beings are just another animal species, they would be entitled to act in the same way that many other animal species act—by hunting other species for no other reason than to ensure their own survival. Indeed, if human beings were no better than lions or leopards, then an individual human being would have as much right to the fur of a mink as a lion has to the flesh of a gazelle.

Another inconsistency exists in the way “equality of rights” advocates appear to value human life as actually being less than that of animals. In fact, human life is not only below that of animals whose furs they may wear or whose flesh they may eat, but also below the value that some animals attach to other animals. For example, lions value themselves above zebras, yet animal rights advocates value humans below cattle and as less worthy of eating cattle than lions are of eating zebras.

In any case, the disappearance of species has been going on since the Fall. Extinctions appear to be no more frequent now than in the past. Moreover, to what extent have extinctions been caused by human activity? Many extinctions have occurred naturally, due to catastrophic events such as meteorite strikes, large scale flooding,

bush fires etc. The fossil record is full of extinct creatures (many of which are marine organisms) that had little or no contact with human beings.

Furthermore, the extinction of some species should be contrasted with the emergence of new species. Speciation<sup>32</sup> is very likely to have occurred quite often and quite rapidly due to genetic drift,<sup>33</sup> or selection pressure.<sup>34</sup> Indeed, an eighteen year study by zoologist Peter Grant showed that a new species could arise in only 200 years.<sup>35</sup>

In actual fact, human civilization is responsible for the existence of many species of animals and plants in their present numbers and varieties. Human beings are responsible for the existence of the overwhelming majority of the varieties of cattle, sheep, pigs, chickens, goats, horses, cats and dogs that are alive today.<sup>19</sup> The populations of all varieties of domesticated animals would be greatly reduced if there were no human beings to feed them, promote their health, and protect them from their natural enemies. In the same way, human beings are responsible for the fact that many grain crops, vegetables, flowers and grasses grow where they would not naturally grow, and are far less susceptible to disease than they normally would be. Furthermore, where forest land is privately owned, human beings are also responsible for the existence of many trees and forests that have commercial value as a long-term crop. Of course, human beings also plant trees for aesthetic purposes in order to enhance their surroundings. Indeed, virtually all of the trees in many portions of Southern California and other arid areas are not native to those areas but were planted and maintained by humans.

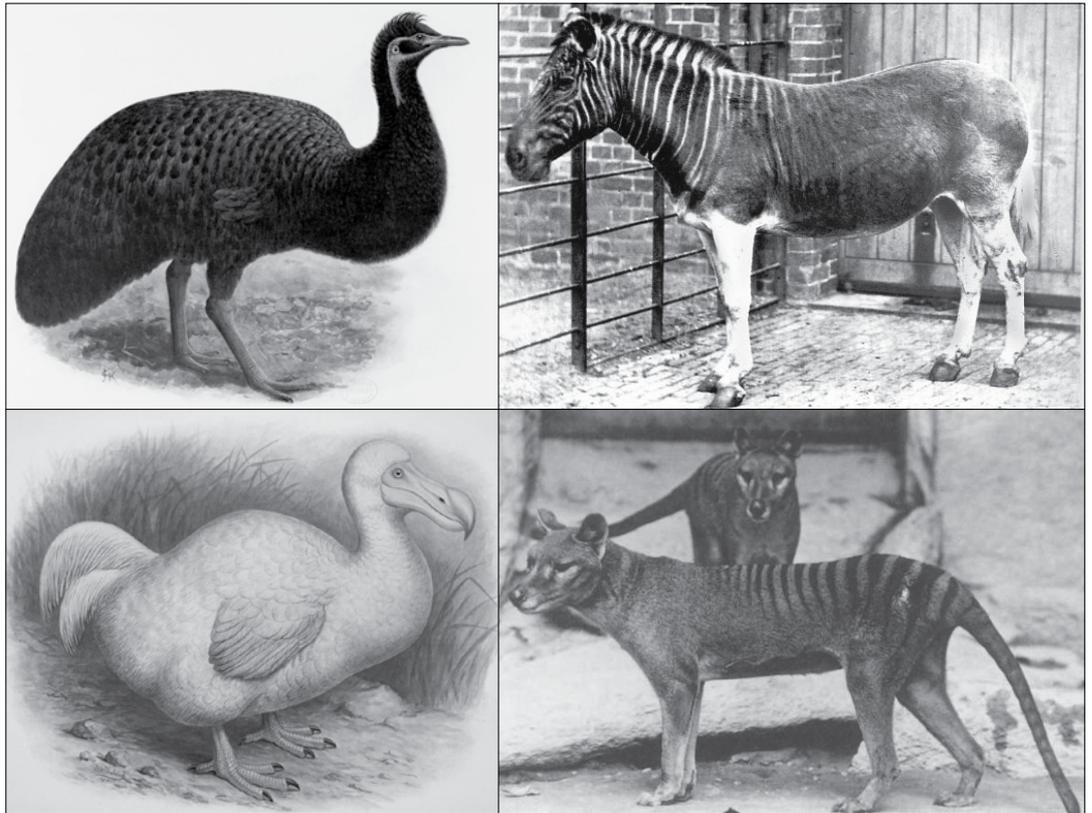
Thus, human beings are not inherently destroyers of species. Mankind has greatly promoted and protected those species that are of benefit to human society. In general, human beings have destroyed only those species that are harmful to human society or harmful to other species that humans desire to promote and protect.

Human beings have also destroyed those species that they have judged to be expedient because their destruction would lead to overwhelmingly beneficial outcomes for human society.

### Summary

It appears that most non-Christian environmentalists and conservationists make their claims concerning the expiration of natural resources, the destruction of species, and the problems of air and water pollution, not out of any actual concern for human life and well-being, but instead, based on their belief in the intrinsic value of nature.<sup>36</sup> Instead of acknowledging their Father God, they bow before Mother Nature. They worship creation instead of the Creator (Rom 1:25).

In the case of Christian environmentalists and conservationists, although they rightly point out that our God given role is to act as God's stewards of creation, it appears that many have uncritically accepted the views of environmental scientists with loud voices and strong political and media connections. Such environmentalists either have a purely materialistic outlook, or hold to a neo-pagan deistic or pantheistic worldview. However, Christians are neither carrying out their stewardship role, nor loving their neighbor, by advocating antidevelopment



**Figure 3.** Kangaroo Island Emu (top left), Quagga (top right), Dodo (left) and Tasmanian Tiger (right). Their disappearance has had no measurable impact on the earth or any human community.

Illustrations courtesy of <www.wikipedia.com>

policies that will lead to the death of millions of people, and ensure that millions more endure lives of poverty and destitution.

We are called to usher in the kingdom of God and fight against the Fall, including the poverty and death that it brought into world. The best way to do this is to employ our God-given creative abilities to use the many resources that God has provided in the natural world, more effectively and efficiently in order to develop our environment in ways that enhance and sustain human society. Furthermore, we are to have faith in God and His providential work, having full confidence that He can and will protect His creation and provide all that we need, because it is part of His universal plan of salvation.

### References

1. The full declaration can be found at <[www.creationcare.org/resources/declaration.php](http://www.creationcare.org/resources/declaration.php)>.
2. Hore-Lacy, *Responsible Dominion*, 30.
3. Schaeffer, "Pollution and the Death of Man" in *Complete Works* 5:43.
4. Jardine, L. and Silverthorne, M., *Francis Bacon: The New Organon*, Cambridge University Press, Cambridge, p. 221, 2004.
5. Graeme Goldsworthy, *According to Plan*, 125.
6. Feinberg, J.S., A baby at any cost and by any means? The morality of in vitro fertilization and frozen embryos, *Trinity Journal* 14(2):162, Fall 1993.
7. Reisman, G., *Capitalism: A Treatise on Economics*, Jameson Books, Ottawa, IL, p. 71, 1998.
8. St. Cyprian, *Ad Demetrium*; in: Jones, W.T., *A History of Western Philosophy*, 2<sup>nd</sup> ed., Harcourt, Brace, and World, New York, vol. 2:6, 1969.
9. Reisman, ref. 7, p. 63; original emphasis.
10. Beisner, E.C., *Imago Dei* and the Population Debate, *Trinity Journal* 18(2):192–193, Fall 1997.
11. For example, silicon (used in integrated circuits) and quartz (used in high resolution digital timers and clocks).
12. Beisner, ref. 10, pp. 193–194. An example of such a resource is whale oil from the blubber of whales, which is no longer commercially available, and has been substituted by other products such as jojoba oil.
13. Israel and California are prime examples.
14. Rising prices eat into UN food aid, *The Australian*, 27 February 2008; <[www.theaustralian.news.com.au/story/0,25197,23281157-25837,00.html](http://www.theaustralian.news.com.au/story/0,25197,23281157-25837,00.html)>.
15. Smith, L. and Elliott, F., Rush for biofuels threatens starvation on a global scale, *The Times*, 7 March 2008.
16. Reisman, G., ref. 7, pp. 76–77.
17. Stark, R., *For the Glory of God*, Princeton University Press, Princeton, New Jersey, p. 197, 2003.
18. Beisner, ref. 10, p. 194.
19. Reisman, ref. 7, p. 83.
20. Staley, S.R., *The Sprawling of America: In Defence of the Dynamic City*, Policy Study No. 251, Mackinac Center for Public Policy and Reason, Public Policy Institute, LA, pp. 39–40, February 1999; <[www.reason.org/ps\\_michigansprawl.pdf](http://www.reason.org/ps_michigansprawl.pdf)>.
21. Bradford Wilcox, W., Fertility, faith and the future of the west: a interview with Phillip Longman, *Christianity Today* 13(3):28, May/June 2007.
22. Beisner, ref. 10, p. 195.
23. Boorstin, D., A case of hypochondria, *Newsweek*, 6 July 1970, p. 28.
24. See Rockwell, L.H., Government garbage, *Free Market* 8(2):2, 8, February 1990. See also Passell, P., The garbage problem: it may be politics not nature, *New York Times*, 26 February 1991, pp. B5, B7.
25. For example, the Tasmanian Tiger, Dodo, and Great Auk.
26. See, for example, Regan, T., *The Case for Animal Rights*, University of California Press, Berkeley, CA, 2004.
27. See, for example, Cavalieri, P., *The Animal Question: Why Non-Human Animals Deserve Human Rights*, translated by Catherine Woollard, Oxford University Press, UK, 2001.
28. Graber, D.M., *Los Angeles Times Book Review*, 22 October 1989, p. 113.
29. These sentiments are expressed in his poem, Cantic of the Sun, <[www.ncca.org.au/departments/youth/resources\\_for\\_peace/cantic\\_of\\_the\\_sun](http://www.ncca.org.au/departments/youth/resources_for_peace/cantic_of_the_sun)>.
30. See Schweitzer, A., *The Philosophy of Civilization*, Prometheus, Buffalo, NY, 1987.
31. Reisman, ref. 7, p. 78.
32. Speciation (the emergence of a new species) is *not* the same as biological evolution. The new species is still of the same kind as the parent species (i.e. if the parent species is a bird, the new species is also a bird), it simply can no longer interbreed with the parent species. Speciation does not occur as a result of the creation or development of *new* genetic information. Rather, it occurs as a result of either a change in the frequencies of existing genes or the total loss of existing genes.
33. Genetic drift is the change in the allele frequencies (or gene frequencies) of a population from one generation to the next caused by the fact that offspring inherit a random sample of the parents' genes, and that their reproductive success has a chance component. Genetic drift can result in a concentration of particular genetic characteristics and elimination of others.
34. Selection pressure refers to the filtering of various physical characteristics as a result of harsh environmental circumstances.
35. Grant, P.R., Natural selection and Darwin's finches, *Scientific American* 265(4):60–65, October 1991.
36. Grant, ref. 35, p. 85.

---

**Andrew S. Kulikovsky** has a B.App.Sc.(Hons) in Computer and Information Science from the University of South Australia and an M.A. in Biblical Studies and Theology from Louisiana Baptist University. He is the author of *Creation, Fall, Restoration: A Biblical Theology of Creation* and is an active supporter of *Creation Ministries International* and a member of the Adelaide (Australia) CMI Support Group.

---