The Biblical View on Care of the Creation

A Case Study of Nigeria

By
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Abstract

“In the beginning God created the heavens and the earth… and God saw everything that he had made, and, behold, it was very good” (Gen.1: 1a, 3a).

Nigeria used to have beautiful forests, clean rivers and streams for drinking water, healthy food, and people were morally sound in taking care of God’s creation. What happened to these?

There are factors, e.g., overpopulation, i.e., too many people for the resources. Pollution of different kinds (oil spills, air, water and soil contamination, noise and visual pollution) has devastated many Nigerian people and their land. Modernity, with its pure scientific agenda, has caused greater attention to be paid to materialism because of its premise that the earth is to be subdued, harnessed and exploited for the benefit of human beings. Pantheism and new age are contributing factors to creation damage in Nigeria. Therefore, these worldviews are not good alternatives for sound ecological practices. After examining the biblical view, I am convinced that it addresses the heart of the problem. It provides a foundational and adequate view of creation. God is the Creator and has established a pattern for human beings to relate to him, and for humans to relate to each other, and to nature.

The Old Testament has given us the starting point of creation, humanity’s fall and its consequences. The New Testament gives us the picture of salvation and future glory.

The rightful stewardship of creation is seen in the principles of work, Sabbath rest, harvesting and tithing, it is also certain that any social, technical, legal or educational approach that does not violate biblical principles, but is instead based on them, will be a positive solution towards creational stewardship.
Acknowledgments

With much gratitude to God, I express acknowledgments to all who contributed in one way or another to the successful completion of this thesis. My special acknowledgment goes to Dr. Robert Van Voorst who started this journey with me. Dr. Leanne Van Dyk and Dr. David Stubbs, whose directions, suggestions and helpful comments as my advisers proved quite invaluable.

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A long overdue word of thanks to my sponsors: World Council of Churches (WCC) who recommended me to Western Theological Seminary and the lady who generously sponsored me. Thank you for the support and love.

I thank my children, Yeshua and Khemla, for their love and understanding. Special thanks to my sisters in-law Mrs. Grace Tache and Joy Yem, my younger sisters Murna and Tina for the invaluable aid they provided in caring for my children so that I could achieve my goal. But most of all I express thanks to my dear husband, Pastor Nathaniel Dasaro. Words are inadequate to describe all his particular contributions to the completion of this project.

My thanks go, above all, to God the Father who raised me from the dust, saved and transformed me to do His work of service.
It is my sincere prayer that this piece of work will faithfully communicate the mind of God concerning the stewardship of creation in Nigeria, Africa and the world at large.
Table of Contents

Introduction ..................................................................................................................... 1

Chapter 1: A Survey of the Environmental Health of Nigeria ......................................... 11

Chapter 2: The Contemporary View on the Care of Creation ....................................... 43

Chapter 3: A Biblical Perspective of Creation ............................................................... 73

Chapter 4: Conclusions and Recommendations ....................................................... 113

Recommendations ....................................................................................................... 116

Bibliography ............................................................................................................... 121
Introduction

All over Nigeria “creation is groaning, waiting for the revelation of the children of God” (Romans 8). Environmental degradation is on the increase, global warming is at its peak, solid wastes are a menace to people’s health, biodiversity and desertification are encroaching on a fast lane. Poverty, famine, and crises are elements of the groaning of creation.

This failure in human behavior, caused, traditional Christianity believes, by sin, has resulted in unrest and agony to God’s creation, especially in Nigeria. Lawson propounds that “the good work of caring for creation has been corrupted by sin in exhausting toil. We find ourselves at odds with, rather than at home in, creation” 1 Creation health is inexorably tied to the spiritual well-being of humanity to whom God has entrusted the care of creation.

“God created the heavens and the earth in the beginning and God saw everything that he had made, and indeed, it was very good” (Gen.1: 1a, 31a). “Authentic Christian faith requires ecological obedience. To care for the earth is integral to Christian faith.” 2 God blessed the world and saw it as “good,” even before humankind came on the scene. All creation, not just humankind, was viewed as “very good” in God’s eyes (Gen 1:31). God continues to bless the world: “When you send forth your spirit, they are created; and you renew the face of the ground” (Ps. 04:30). By faith, God is seen to be deeply,

mysteriously, and unceasingly involved in what happens in all of creation. God showers care upon sparrows and lilies (Matt. 6:26-30) and brings “rain on a land where no one lives, on the desert, which is empty of human life” (Job 38:26).

Everywhere in the country, rivers are polluted with disposable polythene bags. Leather and rubber items, industrial waste, domestic garbage and other indissoluble materials litter the rivers and the environment in general. These materials cause rivers to become undrinkable and are a health menace to the people. Human beings are being slaughtered like animals. Biodiversity - different species of animal or plant life - become extinct every year, every week, even every eight hours. Similarly, forests are gradually being depleted through indiscriminate deforestation which has reduced many Nigeria jungles or forests into semi-desert areas, thus hastening the threat of desertification. The loss of these forests is not just the mere loss of the different species of trees but the destruction of distinctive African flora and fauna.

The exploitative and indiscriminate activities of deforestation in the absence of alternative energy for those who use these woods for cooking and other domestic chores, and the many lumbering industries that cut down trees without a corresponding replacement, render the country landscape and

3 Steven Bouma-Prediger, 45.
ecosystem different from what it should be. Environmental degradation degrades God’s creation.

Stassen and Gushee note that:

When the twentieth century began, neither human technology, nor human numbers were powerful enough to alter planetary life systems...Soil erosion was not exceeding soil formation...Species extinction was not exceeding species evolution. Carbon emissions were not exceeding carbon fixation. Fish catches were not exceeding fish reproduction. Forest destruction was not exceeding forest regeneration. Fresh water use was not exceeding aquifer replenishment...nature was still resilient and forgiving.

How then did such a balance disintegrate? Some people have blamed the bastardization of creation on Christianity, e.g., pollution, extinction, wastefulness, and the poor ecological state of the planet. White in his article, “The Historical Roots of Our Ecological Crisis” argues that “both our present science and our present technology are so tinctured with orthodox Christian arrogance toward nature that no solution for our ecologic crisis can be expected from them alone. Since the roots of our trouble are so largely


religious, the remedy must also be essentially religious, whether we call it that or not. We must re-think and re-feel our nature and destiny.”

Going with the thought of White, ecological problems in Nigeria are traceable to two conceptual frameworks that provide the theoretical and philosophical justification for the subsequent ecological crisis that characterizes many Nigeria communities. These frameworks lie, first, in the activities of the early missionaries and, secondly, in the influence of modernity.

Thoughtless exploitation of our natural resources is the result of the sinful nature of humans. It should be remembered that we have to do with a very broad view of things here. Dewitt notes that Jesus did not just come for the human world but for the whole created earth, indeed the universe. Paul says that “the whole creation waits expectantly and longs earnestly for the children of God to be liberated” (Romans 8:21, 23). If sin affected the whole creation through Adam, salvation should affect all creation through Jesus Christ.

The human misconception about creation has caused a lot of havoc in the care and stewardship aspect. For example, Thomas Aquinas, of the medieval period, taught that animals exist entirely for human pleasure and

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7 White; Francis Schaeffer, Pollution and Death of Man: The Christian View of Ecology (Wheaton: Tyndale House, 1969).
8 www.Creationdefense.com 2005
profit. Francis of Assisi treated them as his equals, his brothers and sisters.\textsuperscript{10} Between these two extremes are many variations.

This thesis will present a correct understanding of creation and how to take care for it. Who or what determines the “correctness?” Conflicting views have arisen over this issue. For example, Lynn White blames the environmental crises on Christianity’s mandate to ‘dominate’ and ‘subdue’ the earth (Genesis 1:26, 28).

Matthew Fox, a Catholic theologian, proposes that we turn from a theology centered on sin and redemption to develop a creation-spirituality, with nature as our primary revelation and sin as a distant memory. The development of the “Gaia hypothesis” centers on the thesis that the earth is a living entity and therefore imputes divine power to it.\textsuperscript{11}

In order to reverse, or at least to minimize, the harmful trends of modern life on creation in Nigeria, this thesis will examine the ecological imbalance from three perspectives: contemporary environmental problems specific to Nigeria, contemporary cultural-philosophical views, and the biblical witness. It is important to understand the factors that contribute to the rapid degradation of the natural environment in Nigeria if change is to be established in people’s behavior towards God’s creation.

Purpose of This Study

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The purpose of this study is to create awareness, especially for Christians and policymakers, of the impending threat to creation and to life itself. In doing so, this thesis will develop a biblical view on the care of creation that will be understood in the Nigerian context. This study also will propose positive changes that will reverse destructive behavior and practices, thus improving the stewardship of the creation.

My Research Method

This study is focused on issues involved with the care of creation that relate to worldview problems and solutions. Biblical principles are utilized as much as possible to establish the basis for suggested approaches - these approaches being especially for Christian stewardship, a Christian worldview, and Christian values and education. Although Nigeria is used as a case study, attempts are made to relate it to other relevant areas on the African continent.

I desire to see things organized as God created them in Genesis 1–2. It is clear that God created things in an orderly manner, and that after He finished, He created humans so that they would live in a good environment to worship Him with comfort and reverence. God confessed that the work of His hands was good.

The lure of the beauty and goodness of God’s creation has consumed my heart. I want to see a change in people’s behavior, the way they treat God’s work, and especially other human beings. In the past, there were forests, clean rivers and streams for drinking water, healthy food, and people were morally
sound in taking care of God’s creation. My passion is to see how I can help to
totally reverse this havoc or at least to minimize it.

My research is mainly a library-based work. It includes both biblical
and scientific information on the subject of the care of creation. It is biblical in
the sense that research information and solutions are viewed in the light of
biblical scenarios and principles. It is scientific in the sense that natural
processes and concepts are not ignored. A review of literature is drawn from
books, journals and newspapers written by Christian and non-Christian
authors. Materials from research libraries, personal libraries, and the Internet
are utilized.

Chapter one surveys the problems of overpopulation. Chapter two
examines selected perspectives on the care of creation. These include the
modern view as a philosophy and practice, the phenomenology perspective -
its origin and modern development - and the cultural perspective that is
prevalent in traditional Africa, including Nigeria. Chapter three analyzes the
biblical perspective of creation. It builds on issues raised in earlier chapters and
forms the foundation on which problems are solved. Chapter four serves as a
conclusion to our study. It assesses the implications for Nigeria and Africa and
presents approaches to solving the care-of-creation crisis.

At this point, we should notice two additional things: for one thing, the
various theological approaches used, followed by a definition of terms.
Theological Approaches

1. Biblical Theology: This term implies a theology that answers the questions of what the Bible says about creation and stewardship (God and human beings). Both Old and New Testament perspectives about the subject are considered.

2. Systematic Theology: This theological approach is used in order to know what traditions/history say about the doctrine of God, humanity, sin - and how it affects creation.

3. Ecological Theology: This theology is used in order to know what contemporaries are saying about creation and stewardship in terms of modern, cultural, and phenomenological factors.

4. Ethical Theology: This theology addresses contextual ethical and moral issues concerning the care of creation as to what is right and wrong in treating God’s creation.

Definition of Terms

What follows is an exposition of some of the terms that, although often used interchangeably, will be used with *precise meaning* in this thesis. They are nature, ecology, environment, earth, and creation.

*Nature* is a broad term that includes the entire creation.

Harper defines nature as follows:

Nature, in the broadest sense, is equivalent to the natural world, physical universe, material world or material universe. “Nature” refers to the phenomena of the physical world, and also to life in general. The term generally does not include manufactured objects and human interaction unless
qualified in ways such as, e.g., “human nature” or “the whole of nature”.

Nature is also generally distinguished from the supernatural. It ranges in scale from the subatomic to the galactic. The word “nature” derives from the Latin word *natura*, or “the course of things, natural character."

The word nature in this research refers to physical world or universe.

*Ecology*: The term “ecology,” from the Greek οίκος, oikos, “household”; and λόγος, logos. It is “the scientific study of the distribution and abundance of living organisms and how the distribution and abundance are affected by interactions between the organisms and their environment. The environment of an organism includes both physical properties, which can be described as the sum of local biotic factors such as insulation (sunlight), climate, and geology, and biotic factors, which are other organisms that share its habitat. The term *oekologie* was coined in 1866 by the German biologist Ernst Haeckel.” Ecology in this research is the study of the interrelationships of organisms and their environment.

*Environment* refers to a complex of surrounding circumstances, conditions, or influences in which a thing is situated or is developed. Environment is the external force affecting living things, while nature is the inner force.

Stott describes the term “environment” as a range of issues (for which there is an ethical dimension) which involve the relationship of

humankind to the animate and inanimate world. Environmentalism, then, is a response to the (perceived) threat to the natural environment. It highlights such issues as the destruction of ecosystems, pollution, population growth, global warming, corruption, and the depletion of resources.

*Earth* is home to the human species. It is the third planet from the Sun and is the largest of the terrestrial planets in the Solar System, in both diameter and mass. Earth in this research refers to place or planet which human species inhabit while *land* is the part of the earth that is not covered by water.

*Creation*: According to Genesis, creation refers to the formation of the heavens and the earth by the Hebrew deity *YHWH Elohim* as depicted in Genesis, the first book of the Pentateuch (as well as of the Hebrew and Christian Bible). Kaiser argues that the term creation includes everything except God (the Creator) literally and biblically i.e., angels, humans, other creatures both celestial and terrestrial. This research focuses on the “planet of the earth,” as well as the activities of humans and other creatures on this planet.

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15 Stott, New Issues Facing Christianity Today, 349.
Chapter 1: A Survey of the Environmental Health of Nigeria

Introduction to the Survey

The term *creation* “includes everything: angels, humans, other creatures both celestial and terrestrial except God the creator”19 Bouma-Prediger supports this view as he points out that “to speak of caring for creation, as many do, thus literally implies concern for angels, moon, and for the stars . . .” 20 The term ‘creation’ in this paper, however, focuses on the *earth* and calls the people of Nigeria to re-think activities and avoid embarking on those that cause havoc to our environment and land. Care of creation is a deliberate effort to prevent activities that are harmful and to participate in activities that further promote Christ’s reconciliation of all creation to God (Colossians 1:20).21

The controlling governments of the past forty years have not made an impact on the environmental welfare of our country. Mogbo notes that Nigeria was faced with the trauma of a three-year civil war (1967 –1970) which gave the military the opportunity to interfere in the government. The country was impoverished by fortunes that came from mismanagement of natural resources and was faced with the various aspects of environmental deterioration.22 He

19 Bouma-Prediger, 17.
20 Bouma-Prediger, 17.
implies that, since there was no acceptable democratic framework for inhabitants to express their complaints, dissatisfaction grew, and the people resorted to more ways of destruction and sabotage. Democracy was established on 29 May 1999, but the problem of the care of creation has become almost worse than before. The hope of a new beginning has not made any impact. The problem continues and will increase unless concerned citizens and the government decide that caring for Nigeria’s resources is a priority.

DeWitt rightly observes that “a crisis of degradation is enveloping the earth,” and he lists seven major abuses brought on by our assault on God’s creation: land conversion and habitat destruction, e.g., deforestation; loss of topsoil to wind and water erosion; resource conversion and production of wastes and hazards; species extinction; greenhouse effect and ozone depletion; global toxification (oil spills); the alteration of the atmosphere; human and cultural degradation (the displacement of agriculture by agribusinesses).23

The Energy Information Administration (EIA) also observes that the problem of creational care in Nigeria is due to exploitation of the oil industry, overpopulation, air pollution and desertification:

Ever since the discovery of oil in Nigeria in the 1950s, the country has been suffering the negative environmental consequences of oil development. The growth of the country’s oil industry, combined with a population explosion and a lack of environmental regulations, led to substantial damage to Nigeria’s environment, especially in the Niger Delta region, the center of the country’s oil industry. The country also faces environmental challenges from air pollution and desertification, with the encroachment of the Sahara Desert in the north and severe air pollution in overcrowded cities such as Lagos and Abuja.24

23 DeWitt, 19-21.
Creational problems in Nigeria vary according to the geographical zone – desertification in the north; illegal mining (of precious stones and uranium, exposing harmful radiation and destroying land surface) in the northeast; tin and gold mining in the middle belt; soil erosion, gas flaring, oil spills, and neglect in the south. In many urban centers like Lagos, Onitsha, Ibadan, and Abuja, people have to contend with problems of waste disposal due to the issues of urbanization and overpopulation.25

As we continue with a few more survey-related introductory thoughts to chapter one, we will look at the population of Nigeria, and then discuss the effect of overpopulation.

The Population of Nigeria

Population has been defined as the collection of people or organisms of a particular species living in a given geographic area or space, usually measured by a census. In population dynamics, size, age and sex configuration, mortality, reproductive behavior, and growth are considered.26

The population of Nigeria in 2003 was estimated by the United Nations to be 124,009,000, which placed it tenth in population among the 193 nations of the world. It is the most populated country in Africa. In 2003, approximately 3% of the population was over 65 years of age with another 44% of the population under 15 years of age. There were 101 males for every 100 females in the country. According to the UN, the annual population growth rate for

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2000–2005 was 2.9% with the projected population for the year 2015 at 161,726,000. The population density in 2002 was 141 persons per square kilometer (364 per square mile). Regional differences are significant: population is densest in the south and sparsest in the north.

It was estimated by the Population Reference Bureau that 44% of the population lived in urban areas in 2001. The principal cities include Lagos, the former capital and still the largest city, with an estimated metropolitan population of 13,488,000 and the highest population density of any major African urban area. The capital city, Abuja, had a population of 403,000 in 2003. Ibadan had a metropolitan population of 1,739,000, and Kano had over 1 million people. According to the United Nations, the urban population growth rate for 2000–2005 was 4.1%.27

A census was conducted in 2006 in Nigeria, and recent results show that Nigeria has a population of 140,003,542 (2006 preliminary census) with males out numbering females by 1%.28 The table that follows on the next page shows a summary of the population of Nigeria.

Summary of the Population of Nigeria as of 2006

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<td>Total</td>
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Nigeria and Its Resources

The people of Nigeria live of course on its land. Nigeria has a total area of 923,770 square kilometers, a land area of 910,770 square kilometers, a water area of 13,000 square kilometers and land boundaries of 4047 kilometers. It is richly endowed with abundant and diverse resources, both renewable and non-renewable. The country is blessed with mineral, physical, biological and energy resources. The mineral wealth of the country, if properly used, could sustain a firm economic development. The country has fishery resources, wildlife, timber, medicinal plants, mineral resources, water, and ornamental and food crops. Climate is equatorial in the south, tropical in the central area, and arid in the north. Rainfall is 500 – 1800 mm per year, temperature a minimum of 200C – 250C and a maximum of 280C -320C. The terrain is varied with rugged hills, undulating slopes, gullies, waterlogged areas, flat and undulating land surfaces. Specifically, it is characterized by southern lowlands merging into central hills and plateaus, mountains in the southeast, and plains in the north. Natural resources include forests, crude oil, natural gas, solid minerals, e.g., bitumen, tin, limestone, columbite, iron ore, coal, etc. Marine and aquatic resources consist of fish, shrimp, etc. Nigeria’s industries are oil (upstream and downstream), agro-processing, manufacturing, farming, iron and steel processing, plastics, textiles, and pharmaceuticals.

In general, the environment provides life-support systems in the air, on water and on land as well as the materials for fulfilling developmental

30 Solomon Olaye, 9
aspirations. However, the Nigerian environment today is faced with many problems arising from the impact of human activities and natural phenomena. From the above statistical analysis, it is obvious that Nigeria is blessed with abundant natural resources; however, the population is greater than the resources, and herein lies the crux of the problem.

**Overpopulation**

Overpopulation is the ratio of population divided by resources. If a given environment has a population of ten but there is only enough food and drinking water for nine, then that environment is overpopulated; if the population is 100 individuals but there is food and water enough for 200, then it is not overpopulated. Overpopulation can result from an increase in births, a decline in mortality rates which is linked to an increase in life expectancy, and from an unsustainable use and depletion of resources or a combination of these factors.

The United Nations rightly observes that overpopulation is not simply a function of the number or density of the individuals but rather the number of individuals compared to the resources (i.e., food production, water resources) needed for survival. Some scholars have observed that the effect of overpopulation is a threat to the environment. Nielsen notes that overpopulation has had a major impact on the environment of Earth, starting at

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least as early as the 20th century. He posits that the human population has expanded, enabled by over-exploitation of natural resources, with resultant adverse impacts upon biodiversity, aquifer sustainability, climate change and even human health.

Environmental author Jeremy Rifkin states, “Our burgeoning population and urban way of life have been purchased at the expense of vast ecosystems and habitats. It’s no accident that as we celebrate the urbanization of the world, we are quickly approaching another historic watershed: the disappearance of the wild.”

Jonathan and Amos Turk argue that as the population density in a given area increases, each person’s proportionate share of available supply of land, water, fuels, and other resources must decrease. The ultimate supporting capacity of the earth is unknown. Essentially, this argument claims that population is not the problem, but management of available resources is. To some extent, this could be true in Nigeria. People do not have a sense of responsibility when using the assets of their environment. Corruption, one of the key problems in Nigeria, has also created a huge gap between the rich and the poor.

Bouma-Prediger observes that one need not be a mathematician to grasp the significance of the trend of overpopulation. The concern here

includes the social and environmental effects as well as the sustainability of human life. There should be a balance between people and earth’s natural resources or, human and a non-human environment. Bouma-Prediger further quotes Brown in response to the question about sustainability:

Population growth has already surpassed sustainable limits on a number of environmental fronts. From cropland and water availability to climate change and unemployment, population growth exacerbates existing problems, making them more difficult to manage. The intersection of the arrival of a series of environmental limits and a potentially huge expansion in the number of people subject to those limits makes the turn of the century a unique time in world demographic history.

With this assertion, resources to be taken into account when evaluating overpopulation include clean water, air, food, shelter, warmth, or other necessities related to survival. In the case of human beings, there are additional resources to be considered, such as arable land and medical care. For all but tribes with “primitive” lifestyles, other needs apply: employment, money or other economic resources, education, fuel, electricity, healthcare, proper sewage treatment, waste management, and transportation.

Natural creation and wildlife exist because the Creator created them just as he created humans, so there is an actual need to preserve nature if only for our own benefit, e.g., trees help to provide oxygen, and of course we all need to breathe. Yet another reason is simply the right of other species to exist and live their lives.

Future Population

35 Bouma-Prediger, 41.
36 Bouma-Prediger, 42.
Abby Clark et al attribute the current exponential population growth primarily to developing countries where the population has soared since the mid-twentieth century. Developing countries, including much of Africa, continue to experience exponential growth.38

A comparative study of the population growth of Mexico and Nigeria shows that Nigeria’s population increased from 68.3 million in 1980 to 132.8 in 2002, and it is expected to double by the year 2050. While the fertility rate dropped from an index of 6.9 in 1960 to 5.5 in 2002, it still remains high compared to Mexico’s fertility index of 2.5, and population of 100.9 million for the same year. The data also reveals that the use of contraceptives contributes to this difference. While Mexico has made progress with about 70% of the sexually active population using contraceptives, Nigerian use remains at only 15%.39 This trend reveals that issues of family planning are limited by ineffective public education in Nigeria. Literacy rates, especially among women, are 60.6 % or lower. The study notes that much of the culture in Nigeria is dictated by religion: Islam, Christianity, and various indigenous belief systems where men are in positions of authority and make decisions even regarding family planning. However, many of the family planning initiatives and educational programs are targeted at women. In addition, poverty and language diversity (over three hundred languages in Nigeria) are an obstacle to any sort of widespread, homogenous education. The country

38 Morphe, 9.
39 Morphe, 6.
simply does not have the resources to educate with such a vast spectrum of languages.

Population growth has had serious environmental consequences for Nigeria. As the nation is undergoing rapid urbanization, with Lagos alone having over ten million inhabitants, it is accompanied by scarce and low water quality, urban air and water pollution, inadequate waste disposal, street begging, and organized crime. Oil pollution of the air, water, and soil are common with the development of oil fields. In the rural areas, rapid deforestation for development and domestic use, soil degradation, desertification, and the loss of arable land are key problems.40

Consequences of Overpopulation

In the context of Nigerian societies, overpopulation has caused an impaired quality of life, serious environmental degradation, and long-term shortages of essential goods and services. Wooldridge asserts that overpopulation is rapidly depleting the earth’s resources; he contends that overpopulation has resulted in traffic congestion, poverty, and devastation of the environment.41 (In many cities of Nigeria, one can be delayed for three to five hours because of traffic congestion.)

Global Warming

40 Morphe, Toward a Biblical View of Environment, 10.
One problem associated with Nigeria’s overpopulation is global warming. Recently, it has been observed by the Intergovernmental Panel on Climate Change (IPCC), and corroborated by several other extensive analyses, that an increase of so-called greenhouse gases in the atmosphere seems to bring on the phenomenon of global warming. The United Nations Population Fund (UNPF) has identified carbon dioxide as responsible for 50% of all global warming. Carbon is naturally recycled between the atmosphere, ocean, rocks and biosphere. What has upset creation, especially the natural balance, is the burning of huge quantities of fossil fuels, and massive deforestation, releasing carbon normally locked up in forests and in the mineralized remains of prehistoric plant life.42 Carbon dioxide is produced in Nigeria because of deforestation, caused by oil companies, and also by the lack of constant electricity that makes many people use generators as a source for electricity. Overpopulation exacerbates this problem.

**Hunger**

Overbeek has notes that 10% to 15% of the world’s population is undernourished. Most of the undernourished and malnourished people live in Asia, Africa, and Latin America.43 Many people, especially those of the lower class who are the majority in Nigeria, do not have or eat a balanced diet. The poor in Nigeria live below the poverty line. As Bouma-Prediger asks, “If the hungry people in the world today were lined shoulder to shoulder, how long

would the line stretch?” I believe that if hungry Nigerians were lined up shoulder to shoulder, there would not be enough space to accommodate the people. Those in the core north and southeast who believe having many children will help them to fight their enemies are not eating well. Their lands are no longer fertile, and desertification is taking over because of an overuse of natural resources.

Pollution

Jonathan and Amos Turk define pollution as the introduction of substances or energy into the environment, resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment.

Primitive human settlements in Africa can be recognized by their pollutants, namely shell mounds and rubble heaps. But pollution was not a serious problem as long as there was enough space available for each individual or group. With the establishment of permanent human settlements by great numbers of people, however, pollution became a problem and has remained one ever since.

Cities of ancient times were often noxious places, fouled by human wastes and debris. In the Middle Ages, unsanitary urban conditions in Europe favored the outbreak of population-decimating epidemics. Until the 19th

44 Bouma-Prediger, 43.
45 Bouma-Prediger, 18.
century, water and air pollution and the accumulation of solid wastes were largely the problems of only a few large cities. But, with the rise of advanced technology and with the rapid spread of industrialization and the concomitant increase in human populations to unprecedented levels, pollution has become a universal problem. However, in the Bible, God instructed the Israelites not to tolerate anything harmful (pollutants) around their environment (Exodus 20-23). Pollution reduces the quality of creation and, therefore, causes disorder in the environment. The major forms of pollution in Nigeria have to do with air, water, noise, and visual effects. We will now discuss each of these in order.

Air Pollution

Air pollution is defined as the release of chemicals and particulates into the atmosphere. Studies carried out by the Federal Environmental Protection Agency Nigeria (FEPA) show a moderate-to-high concentration of pollutants such as carbon monoxide, sulfur dioxide, nitrogen oxides, organic acids and hydrocarbons in the atmosphere, the majority of which come from automotive engines and industries.

The population explosion in some major cities like Lagos, because of the oil boom, has caused tremendous pressure on the cities, and their resources cannot manage traffic adequately. Despite the high population, many cities in Nigeria do not have a subway or intra-city rail service, leaving residents dependent on automobiles for transportation. The country’s oil boom and low

oil prices also have led to an influx of cars and the consequent traffic congestion which continues to get worse.

The irregular power supply in Nigeria has prompted residents to turn to diesel-fired electricity generators during frequent power cuts which add to the air pollution with their thick, dark smoke when they start operating. Almost every skyscraper in the country has several standby generators contributing noxious fumes to the air, and most homes also have a generator just in case the power goes off.

**Water Pollution**

Water pollution in Nigeria occurs in both rural and urban areas. In rural areas, drinking water from natural sources such as rivers and streams is usually polluted by organic substances from upstream users who use water for agricultural activities. The most common form of stream pollution associated with forestry activities is increased concentrations of soil particles washed into the stream by land disturbance. The large particles sink to the bottom and increase the beds of the streams while, depending on the stream velocity, smaller particles remain in suspension. In the River Niger, for example, studies have shown that the suspended matter can obstruct the penetration of light and limit the photosynthetic zone to less than 1 m depth.48 Suspended sediments in watercourses have become a serious concern for water supply to authorities because of the increase in water treatment costs.

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Many factories in Nigeria are located on river banks and use the rivers as open sewers for their effluents. The major industries responsible for water pollution in Nigeria include petroleum, mining (for gold, tin and coal), wood and pulp, pharmaceuticals, textiles, plastics, iron and steel, breweries, distillery fermentation, paint, and food. Of these, the petroleum industry presents the greatest threat to water quality. From time to time, accidental oil spillages occur which endanger local sources of water supply and freshwater resources, especially in the rural areas.

The problems associated with the lack of adequate water resources in the country threaten to place the health of about 40 million people at risk. Recent World Bank studies suggest that it would cost in excess of one hundred and nine billion U.S. dollars a year to correct such problems if ground and surface water contamination goes unchecked.49 The people most affected tend to be the urban and landless poor. In the long-term, the present level of environmental degradation could create health problems from water-borne diseases for most of this population. Many people are already affected by having to consume unsafe drinking water. Water contamination also places other resources at risk. Fisheries and land resources, for example, have already been affected significantly. Most of the environmental pollution problems arise from anthropogenic sources, mainly from domestic and industrial activities.50

Water resources in Nigeria for domestic, industrial and commercial use is scarce as a result of pollution of water bodies by wastewater which contains

49 Helmer P. Hespanhol, 5.
50 Helmer P. Hespanhol,108.
heavy metals, bacteria (pathogenic), etc. Flooding is a serious problem in some parts of Nigeria’s metropolitan areas because of poor drainage systems, the relatively high water table and the flat topography of the south-south and southwest (except in the northern most part of that section of the country) areas which retards the flow of surface water run-off and prevents rapid discharge into the sea. Flooding of such places is usually caused by a combination of human and natural factors. The human factors are a result of poor wastewater disposal and other sanitation practices (e.g., blocked drains by refuse, silt, sludge, etc). The natural factors include rainfall, flat topography and poor infiltration.

The consequences of water pollution are health hazards that may lead to serious epidemics. The septic tank /soak ways and pit-latrine systems also have negative impacts on groundwater, gradually and steadily increasing pollution from seepage indiscriminately discharged into the rivers and the seas. Human excreta contain many organisms which are major factors of water-related diseases. These organisms include: viruses which can cause poliomyelitis, viral meningitis, hepatitis, fevers, and diarrhea; bacteria which can lead to cholera, typhoid / paratyphoid, and diarrhea; protozoa etc. which cause dysentery, colonic ulcers and diarrhea; helminthes which result in guinea worm, round worm, live flukes and schistosomiasis.

Likewise, the industrial wastewater is full of heavy metals which results in chemical pollution of water bodies. Such heavy metals are mercury, arsenic, copper, cyanide, iron, lead, cadmium, chromium, nickel, phenols, etc.,
causing chronic diseases such as cancer in the inhabitants of Nigeria and neighboring countries using the same coastal waters.51

Pollution: Soil Contamination

This occurs when chemicals are released by spill or underground storage-tank leakage. Among the most significant soil contaminants are hydrocarbons, heavy metals, herbicides, pesticides and chlorinated hydrocarbons. This type of contamination typically arises from the rupture of underground storage tanks, the application of pesticides, percolation of contaminated surface water to subsurface strata, and leaching of wastes from landfills or direct discharge of industrial wastes on the soil. The most common chemicals involved are petroleum hydrocarbons, solvents, pesticides, lead and other heavy metals. The occurrence of this phenomenon is correlated with the degree of industrialization and the intensity of chemical usage.52

Farmers depend on fertilizer and pesticides, while the government extracts oil from the land without proper measures to control soil contamination. These problems, affecting soil fertility in Nigeria, bring the threat of hunger, and thus are a menace to human health.

Akpan states that many African countries have lost a significant quantity of their soil to various forms of degradation. Many areas in the

continent are said to be losing over fifty tons of soil per hectare per year.\textsuperscript{53} Erosion is found in Nigeria. Gullies of the Ikpa River Basin in Akwa Ibom State are typical examples of land degradation.

As EIA observes, the immense and sustained growth in population further increases the rate of soil pollution. It is a threat to the environment, to food safety and to sustainable agriculture.\textsuperscript{54} Increase in population causes decrease in land space because of continuous land fragmentation and proliferation of land holdings. With the decrease in land space for each family, the steep slopes of the gullies are constantly being cleared for crops, resulting in a process known as intensification of land use. The basic concept of intensification is that the agricultural land is forced to be more productive in some way. With the application of synthetic fertilizers and pesticides, the normal fallow period of seven years that allows the land to rest is shortened to less than two years.\textsuperscript{55}

Soil contamination is also caused by mining activities in Nigeria, especially tin and columbite mining. Drastic mining took place in Jos of the Plateau State by British mining companies in 1915. Although tin production has declined, the effects are felt on the topography as well as in social and economic structures. This mining has left huge hazardous surfaces such as

\textsuperscript{55} A Mende & P. A. Akpan, \textit{The Need for Effective Environmental Management in Ikpa River Basin of Akwa Ibom State, Nigeria} (Jos: University of Jos,1999), 15.
open-pit ponds, and some of these open pits have contributed to the death of many people. Little children are usually the victims. 56 In 1999 a woman with her five children fell into one of the open ponds and two of her children died.

Pollution: Noise pollution

This is also called environmental noise. Residential noise or domestic noise is defined as noise emitted from all sources except noise at the industrial workplace. The main source of community noise includes road, rail and air traffic; construction and public works; and the neighborhood. 57

Noise has always been an important environmental problem for humankind. In ancient Rome, rules existed concerning the noise emitted from the iron wheels of wagons which battered the stones on the pavement, causing disruption of sleep and annoyance to the Romans.

In Medieval Europe, horse carriages and horseback riding were not allowed during the night in certain cities to ensure a peaceful sleep for the inhabitants. However, the noise problems of the past are incomparable with those of modern society. 58

WHO observes that noise causes psychological and health trauma. Sleep disturbance is a major effect of environmental noise. It may cause primary effects during sleep and secondary effects that can be assessed the day after night-time noise exposure. Uninterrupted sleep is a prerequisite for good

57 Birgitta Berglund, Thomas Lindvall, Dietrich H Schwela, eds. Pollution (London: Stockholm University/Karolinska Institute, 1999), 20.
58 Berglund, Lindvall, Schwela, eds, 12.
physiological and mental functioning, and the primary effects of sleep
disturbance are difficulty in falling asleep; awakenings and alterations of sleep
stages or depth; increased blood pressure, heart rate and finger pulse
amplitude; vasoconstriction; changes in respiration; cardiac arrhythmia, and
increased body movements. Noise disturbs the peace of mind. Nigerians
sometimes unconsciously react angrily because of the noise surrounding them.
They like loud music, loud talking, and shouting or yelling at each other. Many
people have died because of shock from noise, especially people with
hypertension and heart problems.

In Nigerian neighborhoods, noise can come from cars (an immense
number of cars regularly cross the cities and countryside of Nigeria), trains,
sirens, live or recorded music, playgrounds, car parks, domestic animals such
as barking dogs, cell phones, the media, amusement centers, vehicles, etc.

In comparison to other pollutants, the control of environmental noise
has been hampered by insufficient knowledge of its effects on humans and
how they respond to various levels of sound as well as to a lack of defined
criteria. The effects of noise and the long-term consequences for health,
however, are widespread.

Pollution: Visual Pollution

Visual pollution refers to the presence of overhead power lines,
motorway billboards, scarred landforms (as from strip mining), and open

59 Berglund, Lindvall, Schwela, eds, 17.
60 Berglund, Lindvall, Schwela, eds, 22.
storage of trash or municipal solid waste. Visual pollution also refers to those elements of the landscape or “townscape” that the community finds unattractive. These may include buildings, business signs, stoplights, street signs, telephone and utility poles, weeds, and litter.61

Bills are posted on the streets, and billboards, advertising things that are not helpful to people, especially movies and tobacco, line the roadways. Heaps of solid waste are strewn everywhere because people eat meals and throw away their empty bags. In some places human excretions are evident because toilets or rest rooms are not available. Disabled humans and the less privileged, people who are very poor and unable to help themselves, are seen on the streets begging for food, and some do not have a place to sleep. Mentally ill people are everywhere with no one to take care of them. Unwanted things are seen on all of the streets of Nigeria (rural areas do not have streets).

The major visual pollution in Nigeria is solid waste, called by some Municipal Solid Waste (MSW). It is defined as non-air and sewage emissions created within and disposed of by a municipality and include household garbage, commercial refuse, construction and demolition debris, dead animals, and abandoned vehicles. The majority of substances that make up municipal solid waste include paper, vegetable matter, plastics, metals, textiles, rubber, and glass. Municipal solid waste disposal is an enormous concern in developing countries across the world as poverty, population growth, and high

urbanization rates combine with ineffectual and underfunded governments to prevent efficient management of wastes. The impact of the lack of municipal solid waste management involves the consideration of a large number of components. Health impacts include exposure to toxic chemicals through air, water and soil media; exposure to infection and biological contaminants; stress related to odor, noise, vermin and visual unseemliness; risk of fires, explosions, and their subsequent consequences; and spills, accidents, and transportation emissions. Environmental impacts can be clustered into six categories: global warming, photochemical oxidant creation, abiotic resource depletion, acidification, eutrophication, and ecotoxicity to water. Landfills are associated with a plethora of health and social effects.

Pollution: Crude Oil Production

The oil industry in Nigeria has had a number of environmental and socio-economic effects both in the regions where oil drilling and shipping primarily take place, and in the larger country itself.

Oil extraction in the Niger Delta region has caused severe environmental degradation owing to the legacy of oil spills, lax environmental regulations, degradation of farmland, and damage to aquatic ecosystems. All of these have caused serious health problems for the inhabitants of areas surrounding oil production. Pollution is caused by gas flaring, above ground

62 Sandra J. Cointreau.
pipe leakage, oil waste dumping, oil spills, and government complicity during
the military regimes that once governed the country.65

The social and environmental costs of oil production have been
extensive. They include destruction of wildlife and biodiversity, loss of fertile
soil, pollution of air and drinking water, degradation of farmland, and damage
to aquatic ecosystems. All of these have caused serious health problems for the
inhabitants of areas surrounding oil production. Oil pollution is caused by gas
flaring, above ground pipeline leakage, waste dumping, and oil spills.

Approximately 75% of the gas produced is flared annually, causing
considerable ecological and physical damage to other resources such as land,
soil, water and vegetation. Gas flares, which are often situated close to
villages, produce “soot which is deposited on building roofs of neighboring
houses. Whenever it rains, the soot is washed off and the black ink-like water
running from the roofs is believed to contain chemicals which adversely affect
the fertility of the soil.”66 Without fertile soil, indigenous groups lose their
mode of survival and are faced with the crisis of food shortages.

Gas pipelines have also caused irreparable damage to lands once used
for agricultural purposes. These pipes should be buried to reduce risk of
fracture and spillage. However, they are often laid above ground and run
directly through villages, where oil leaks have rendered the land ecologically
useless. An account of Shell Oil Company’s record in the Ogoni region
uncovers a “ravaged environment (in which) oil pulses out of burst pipes and

66EIA, 10.
slicks dead vegetation.” Although in its operation in various countries Shell ensures that it does not degrade the environment, it does not take such precautions in Nigeria. For example:

For Shell’s pipeline from Stanlow in Cheshire to Mossmoran in Scotland, 17 different environmental surveys were commissioned before a single turf was cut... A detailed Environmental Assessment Impact covered every measure of the (pipeline) route. Elaborate measures were taken to avoid lasting disfiguring and the route was diverted in several palaces to accommodate environmental concerns. The Ogoni have never seen, let alone been consulted over, an environmental impact assessment.

Oil spills and the dumping of oil into waterways have been extensive, often poisoning drinking water and destroying vegetation. These incidents have become common occurrences due to the lack of laws and enforcement measures within the existing political regime. Between 1970 and 1982, 1,581 incidents of oil spillage were documented in Nigeria. In addition, “according to an independent record of Shell’s spills from 1982 to 1992, 1,626,000 gallons were spilt from the company’s Nigerian operations in twenty-seven separate incidents. Of the number of spills recorded from Shell - a company which operates in more than 100 countries - 40% were in Nigeria.”

The current crisis is largely concentrated in the southwestern oil-producing areas of Rivers, Cross River, and Delta States. These areas of the country have been severely damaged by environmental pollution from oil spills, dumping of waste products, burning of excess gases, pipe-line leaks, oil-well blowouts, and gas-flaring operations.

67 EIA, 10.
68 Seongwon, Environmental Impact, 90.
Environmental regulations which are common practice in developed nations are seldom followed in Nigeria due to the lack of power, wealth and equity of the affected communities. As a result, oil companies often evacuate inhabitants from their homelands, further marginalizing them. The system of oil production in Nigeria is heavily skewed in favor of the multi-nationals and Nigerian government elites who are the direct recipients of the oil production revenue.

One particular ethnic group in Nigeria, the Ogonis, have organized and protested against both the Nigerian federal government and Shell Oil, the major oil producer in the region. The Ogonis have charged that Shell Oil has consistently damaged the local environment by operating a number of offshore rigs and oil port facilities which have seriously damaged “the tropical rain forest in the northern reaches of the Delta and mangrove vegetation to the south.”

Consequences: Deforestation

Deforestation is the conversion of forested areas to non-forest land-use such as arable land, pasture, urban use, logged area or wasteland. Generally, the removal or destruction of significant areas of forest cover has resulted in a degraded environment with reduced biodiversity. In many countries, massive deforestation is ongoing and is shaping climate and geography.

About 2.2%—or 11,089,000 hectares—of Nigeria is forested. Of this, 2.9%—or roughly 326,000 hectares—is classified as primary forest, the most

70 E. Hutchful, 12.
71 E. Sucoff, Deforestation (Detroit: Gale, 2003), 358-359.
biodiversified form of forest. Between 1990 and 2000, Nigeria lost an average of 409,700 hectares of forest per year. This amounts to an average annual deforestation rate of 2.38%. Between 2000 and 2005, the rate of forest change increased by 31.2% to 3.12% per annum. In total, between 1990 and 2005, Nigeria lost 35.7% of its forest cover, around 6,145,000 hectares. Nigeria has some 1,417 known species of amphibians, birds, mammals and reptiles according to figures from the World Conservation Monitoring Centre. Of these, 1.2% are endemic, and 3.5% are threatened. Nigeria is home to at least 4,715 species of vascular plants of which 4.3% are endemic and 3.6% are threatened. Analysis of figures from the Food and Agriculture Organization of the United Nations (FAO) shows that tropical deforestation rates increased 8.5% from 2000-2005 when compared with the 1990s, while loss of primary forests may have expanded by 25% over the same period. Nigeria’s rate of primary forest loss has doubled since the 1990s.

FAO estimates that 40% of the world (2.6 billion people) rely on wood or charcoal as their primary source of energy for cooking and heating. Fuel wood consumption has increased 250%, while the world’s population only increased by 90%. The collection of fuel wood and building material from the rainforest remains an important cause of deforestation.

The bulk of Nigeria’s citizens depend almost exclusively on wood as their source of energy for cooking. Although Nigeria produces significant amounts of oil, a large percentage of the population prefers the cheaper

alternative, wood. While wood for fuel is most important in rural areas, there are a substantial number of urban residents who depend on wood for cooking.

The construction of roads to access logging, oil, and mining sites in the rainforest opens vast stretches of forest to exploitation by landless peasants who are responsible for the majority of rainforest destruction today. As great expanses of forest are increasingly chopped into smaller blocks, side-effects alter the flora and fauna of forests. Fragmented patches of forest are subject to drying winds that increase the frequency of tree falls. Tree falls tear gaps in the canopy, destroying its function of moderating the humidity, temperature and heat conditions of the forest floor. These changes affect the floral species that inhabit the forest patches, usually reducing diversity. Many rare species that dwell in deep primary forests are unable to cope with the new conditions and are replaced by more common, weedier species. The drier forest also means that agricultural fires set in the surrounding scrubland and savanna are more likely to burn through the forest patch.73 Africa’s forests and woodlands are being depleted at an alarming rate, threatening the continent’s most important resources.

Trees play an important role in protecting the environment. They are the principal source of rural energy and provide countless medicinal and industrial products used in both the home and in small-scale industries.

Bouma-Prediger quotes John Muir who asserts that:

Needless to say, we imperil ourselves when we wreak havoc on the forests, for the goods and services that forests provide are many. In addition to timber, forests provide products such as food, fodder, fish, oils, resins, species, and medicines. The services forests provide include purification and regulation of water; decomposition of waste; cycling of nutrients; creation and maintenance of soil; provision of pollination, pest control, and habitat; moderation of disturbances such as floods and storms; regulation of local and global climates; and the sustenance of millions of people, including educational, recreational, and cultural benefits.

Consequences: Desertification

Acceleration of desertification is largely responsible for the fact that many countries in Africa south of the Sahara are losing the capacity to provide food for their people. Compounded by the rapid population growth at the rate of 3%, between 1970 and 1980 per capita food production in sub-Saharan Africa dropped by 11%. And that was before these countries felt the full impact of the last drought. In effect, desertification is rapidly destroying the natural resource base on which the future of our nations so much depends.

The recent assessment of desertification and drought by the United Nations Statistical Office (UNSO) shows that the main threats to sustainability in the Sudano-Sahel zone are low and erratic rainfall, coupled with soil erosion by wind, water, and the drying up of surface water resources, the depletion of ancient ground water, and the salinization of soils. As a result of the extended drought which peaked during the early 1970s and mid 1980s, Lake Chad, at its worst point, contracted to one-third of its normal size. Several other lakes and rivers throughout the Sudan-Sahel area in western and eastern Africa have fallen to record low levels, and the land has been severely damaged by erosion.

74 Bouma-Prediger, 41.
Many pastoral communities in the Sudan-Sahel region “have simply ceased to exist as such after the desiccation of the last 20 years.”

The droughts and famines that have swept over Africa in the past, and which are likely to strike again, are not sudden natural disasters. Nor are they simply caused by lack of rainfall. They are the end-results of a long deterioration in the ability of Africa to feed itself, a decline caused largely by mistakes and mismanagement - both inside and outside the continent. It seems that Africa has taken too much from its land. It has overdrawn its environmental accounts, and the result for much of the continent has been environmental bankruptcy.

In addition to erosion caused by drought and demographic pressures, deforestation is a primary cause of desertification. Wood is an important source of fuel for poor northern people who do not necessarily realize the consequences of cutting down trees. It is essential, therefore, to limit the extent of deforestation and to replant trees, but such projects are impossible without the support of local communities. “We try to explain to them the economic and environmental value of trees, which the local people are often unaware of,” said Yusuf Ubaid.

*Crystal Magazine* records nineteen states that are most affected – Adamawa, Bauchi, Benue, Borno, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Nassarawa, Niger, Plateau, Sokoto, Taraba, Yobe, and

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Zamfara. Desertification has resulted in low crop yields, lean livestock, dried out lakes and streams, and decreased vegetation cover. Agricultural land expansion and reduced land for grazing sometimes result in serious conflicts between farmers and herdsmen. Kilometers of green savannah are rapidly being turned into stretches of barren, hot and dry sand dunes. Towns and villages in the northernmost fringes along the border of the Niger Republic are being submerged by sand.

Nigerian farmers have been made to believe that the problem of desertification can be solved by using more fertilizer. A farmer expressed his grief in an interview. ‘We can’t go anywhere, all the land is taken,’ said farmer Idi, shrugging his shoulders resignedly and explaining that the only solution is to use more fertilizer and switch to more drought-resistant crops.”

There is a general sense that the desert’s advance can only be stopped if Nigeria’s authorities start taking the threat more seriously. Despite treaties signed, agencies formed, and policies articulated in the years leading up to the Nigerian government’s launch of a national action plan against desertification in 2001, there has been no tangible improvement, observers say. In a poor, populous country like Nigeria, the once beautifully forested areas can quickly be destroyed. As mentioned earlier, intensification and habitat fragmentation produce the same effect. As deforestation in the south leads to coastal and

77 Lanre Oyetade, 8.
gully erosion, deforestation in the Savannah Belt of the north leads to soil erosion and desertification.78

In an interview, the executive National Coordinator of National Forests Conservation Council of Nigeria highlighted other effects of desert encroachment on the national life of Nigeria: population drifts to already overpopulated urban cities, low economic remuneration for the states and the nation, loss of social values, increased communal clashes, and loss of Nigerian wildlife as a result of lack of forest cover.79 Thus, desertification poses a major problem for the whole of Nigeria.

Summary of Chapter One

Like other countries in Africa and some other parts of the world, Nigeria is faced with the challenge of overpopulation, i.e., too many people for the resources she has. Pollution of different kinds (oil spills, air, water and soil contamination, noise and visual pollution) has devastated many Nigerian people and their land. These pollutions are not only to be evaluated in the light of rational decisions about whether to bury, burn, recycle, or produce less, or stop using the land, but they are also to be seen in terms of the impacts on health, society, and the environment must be considered. Some solutions to these problems will be discussed in the next section of this paper.

78 Morphe, Toward Biblical View of Environment, 18.
Chapter 2: The Contemporary View on the Care of Creation

Introduction

In the past, nature was seen in Nigeria as something sacred which belonged to their ancestors who were watching closely, so one dared to mistreat nature. In some typical, traditional Nigeria settings, even fishing indiscriminately in rivers was forbidden. In some specified areas like Birnin Kebbi, fishing was done seasonally, thus preserving the fish and other living organisms in these rivers. The belief that the rivers were the abode of the gods was in harmony with primal beliefs of the African traditional religions and helped toward the preservation of nature because nature was feared, hallowed and worshipped. The evidence for the annual fishing tradition of some parts in Nigeria could be seen in the annual Argungu Festival in Birnin Kebbi state in northern Nigeria, while the belief that the river inhabits the gods can be seen in the modern day Osun Festival in western Nigeria.  

Similarly, many Nigerian forests were treated as the sacred abodes of the gods, and thus many forests were preserved out of reverence for the said deity. Contrary to this understanding, these same forests have gradually been depleted through indiscriminate deforestation which has rendered many former Nigerian jungles or forests into semi-desert areas, thus hastening the threat of encroaching desertification. The loss of these forests is not just the mere loss of

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the different species of trees but the destruction of distinctive flora and fauna and the gradual loss of the mystical affinity and awe that many generations have felt in their daily contact with nature.81

Okaba notes that the exploitative and indiscriminate activities of deforestation in the absence of alternative energy for those who use the wood for cooking and other domestic chores, and the many lumbering industries who cut down trees without a corresponding replacement, render the African landscape and ecosystem different from what it used to be in the past.82

Similar violence to nature is also seen in many Nigerian contemporary hunting expeditions, whereby hunting expeditions are undertaken to hunt down animals indiscriminately without the general, traditional African understanding of hunting. In most traditional African societies, wide-scale hunting expeditions are restricted to specified seasons. Although the intricacies of modern preservation of nature were not known yet by such practices, traditional African societies sought to preserve and conserve nature in a way that did not degenerate to the extinction of various animal species. In some typical traditional societies, some animals were treated as exclusive properties of the gods or associated with the royal clan or the tribe as a whole. Thus, the killing of such species of animals was tabooed. This practice of designating an animal as the exclusive property of the gods, royal clan or tribe helped in the

82 Matthew Micheal, 2-3.
preservation of many species. Without such societal restrictions, many of these species would have become extinct by now.83

Similar attitudes toward animals were extended to mountains, hills and other aspects of nature. For instance, most of the Nigerian mountains were regarded as the abode of the gods. Cutting down trees in those mountains or even climbing those mountains was clearly prohibited. In some Nigerian societies, visiting the tops of those mountains was celebrated annually with a celebration and festivity in honor of the god concerned.84

It is unfortunate that such a reverence for nature that was practiced in Nigeria has suddenly disappeared in most Nigerian cities and rural areas. Passing through some of the cities, one has to close one’s nose because of the stink of defecation, dirt and littered rubbish. Most rivers have become dumping grounds for toxic waste and other ecological, hazardous substances from modern industries. It seems by such violence to nature that Nigerians are undergoing a paradigmatic shift from their primeval worship of nature to the contemporary abuses and bastardization of it.

What has happened to the primeval worship of nature is the main subject of this chapter. I now specifically propose that culture and modernity have devastated the care of nature in Nigeria.

Cultural View of Nature

83 Matthew Micheal, 2-3.
Culture has many functions in society. It is a lens of perception, a standard of judgment, a basis of stratification, and a means of communication. Culture also conditions patterns of production and consumption and provides a basis for identity.85

Contemporary African culture is a vibrant combination of the old and the new - a synthesis of traditional beliefs with both colonial and modern ideas. Africans (i.e. Nigerians) are neither cold nor hot, but lukewarm. And this is not effective because it is then hard for them to change a culture.

In a general study of nature in primal societies, John B. Taylor rightly observes that religion is a religion of nature. Taylor’s study significantly establishes the thesis that in a primal society the connection to nature was not seen just in the mere category of daily religious endeavors, but significantly, primal societies saw themselves as fully in relationship with nature and consequently respected this relationship as all other relationships within the community.86 In a similar study, Harold Turner investigates the Primal Religions of the world, and among other features of the primal worldview, he emphasizes the paramount respect accorded to nature in the primal thinking. According to Turner, in the primal religions’ kinship to nature, it is stressed along with “people as children of the Earth, brothers to plants and animals.”87 Speaking particularly of the African understanding of nature, Kwesi Dickson,

acknowledging the intimate relationship of Africans and nature, aptly describes it as “the fellow-feeling” of oneness with nature.

Further, Dickson observes that this understanding of nature is a very important dimension of African religion, one which has been the source of much misunderstanding. That is, the fellow-feeling that the African has with nature has led sometimes to the description of African religion as a ‘nature’ religion. This fellow-feeling is of course much less in evidence in urban areas of Africa than in the rural. In the cities, evidence of pollution is not difficult to find. Generally speaking, however, the environment has a special meaning for the African. He loves the environment, he fears it, and he senses something mysterious about it. The elements, the plants and animals, the land and all that is within it, and on it, play a vital role in the African’s apprehension of reality. However, this persuasion of the African feeling of oneness with nature is not to presuppose that the African primal societies were pantheists. Though Africans in the primal society perceived themselves to form some mystical alliance with nature, they conceived themselves as maintaining distinctive identities from nature. Significantly, instead of a pantheistic theological persuasion, Africans saw mystery in nature that warranted their continuous adoration, reverence and worship. However, such worship or veneration of nature, as earlier observed, stemmed from their intuitive realization of the close connection of the African deities with nature.

Similarly, observing the intimate interaction of Africans with nature, John Mbiti divides spirits in African understanding into two broad realms, namely, nature spirits and human spirits. In the quest of systematization, Mbiti further divides these nature spirits into the nature spirits of the sky and the nature spirits of the earth. According to Mbiti, the nature spirits associated with objects in the sky include the sun, the moon, stars, falling stars, rainbows, rain, storms, wind, thunder and lightning. Concerning this category of spirits, Mbiti reveals, “People say or believe either that such objects or forces are themselves the spirits, or that there are spirits occupying and controlling them.”

Regarding the second class of nature spirits, those associated with the earth, Mbiti notes that “just as there are spirits associated with nature, the things and forces of the sky, so there are those associated with things and forces of the earth.” This class of nature’s spirits includes spirits of the earth, hills, mountains, rocks and boulders, trees and forests, metals, water in various form such as lakes, ponds, rivers, waterfalls rapids, lagoons and river banks, different animals and insects, and certain diseases, etc. Speaking generally of nature spirits, Mbiti observes that:

Nature spirits are those, which people associate specifically with natural objects and forces. Some are thought to have been created by God initially as spirits; other are said to have been humans of the distant past. The spirits propagate among themselves, and their population is on the increase. Nature spirits are largely the personifications of natural objects and forces. This means that people give ‘personal’ characteristics to these objects and forces of the

90 John Mbiti, 67.
91 John Mbiti, 67.
universe, regarding them as if they were living, intelligent beings of the invisible world. 92

According to Mbiti, the African personified nature, and thus by such a process of conceptualization indirectly conferred sacredness on nature. This understanding by Mbiti presupposes that Nature in itself is not sacred, but its treatment as a living personal entity in the African primal worldview is the product of African culture.

While Mbiti’s thesis is well stated, it raises some serious epistemological questions: Did the African know or understand nature as actually a living being or was this understanding just in the mere category of cognitive personification of nature as suggested by Mbiti? For Mbiti, the latter proposition is true and in line with this understanding he further observes:

As scientific knowledge increases the people’s understanding of these forces and objects of the universe, they will gradually give up the idea of nature spirits. But religion came long before science, and it will be a long time before rural communities are convinced by the spread of scientific ideas that there are no spirits behind the powers and forces of nature. Science looks on these phenomena as governed by natural laws; but religion may continue to think of them as ruled by spirits. 93

The displacement of the African worldview in favor of the Western scientific worldview is partly responsible for the ecological crisis currently experienced in Nigeria.

Modernity Period and Creation

Background: Ancient Period

92 John Mbiti, 66.
93 John Mbiti, 67.
For the ancients, the world was the primary context. In their view, the universe was eternal, reliable, and generally supportive of human affairs. They saw God or gods within nature as perhaps its best and most important part. Philosophers like Plato considered forms as eternal and reliable, those unchanging principles of order or blueprints that are the foundations of existence, speech, morality, etc. They are the stable and supportive and unchanging basis of all concrete existence. Even God is subordinate to them and works according to their model. For Aristotle, the natural universe as a whole was eternal and unchanging. God, the apex of all natural striving, is the highest part, the most spiritual element of the world. Also unchanging are the types of all individual beings. For Epicurus, the universe as atoms and void was eternal and absolute. Atoms are not created, and they do not perish. For the Stoics, Nature, which is both calm and movement, reason (logos) and flux, internal and external, was what is ultimate and eternal. The best Stoic life imitated the reasonableness of reason within nature. In general, for all the Greeks, nature was best and eternal.

Background: Medieval Period

Christian concepts of creation in the late Middle Ages motivated scientific inquiry which had been discouraged before that time.

The dominant view of reality in the medieval period was essentially Greek, having been co-opted by the Church and adapted for Christian service. It offered no motivation to investigate nature by observation and experiment.

To the Greeks, reality consisted of forms and essences, not material things. In a world where ideals subordinate material reality, observing “what is” becomes less important than reasoning “what ought to be.” The Greeks viewed nature as a living organism imbued with attributes of divinity. Nature was eternal and self-existent, not created. Nature was considered impregnated with final causes and with divine purposes and as such was self-revealing. These had only to be apprehended by the mind, and, hence, the significance placed on intuiting axioms and principles from which all particular truths could be derived by deductive reasoning.

The medieval world-picture inherited from the Greeks consisted of a vast hierarchy of beings extending from the deity in the Empyrean heaven at the outer edge of the universe, through a graded series of angels inhabiting the ten concentric crystalline spheres surrounding the central earth, to the levels of men, animals and plants on the earth itself which formed the system’s cosmic center. A sharp qualitative distinction separated the terrestrial and celestial domains of the universe. Not only were the two domains composed of different types of materials, they had different motions. The terrestrial environs consisted of earth, air, fire and water, each with rectilinear motion which had a beginning and an end. The heavenly bodies (above the moon) were composed of a more perfect fifth essence with eternal circular motion.95

According to ancient mechanics, motion was maintained only as long as there was a constantly-applied mover. As Butterfield says, “A universe

constructed on the mechanics of Aristotle had the door half-way open for
spirits already . . . Intelligence had to roll the planetary spheres around.”\textsuperscript{96}

Medieval Christians were attracted to this Greek picture of the world. An authority-based hierarchical system with God in his Empyrean above the moon was easy to visualize. The angels mentioned in the Bible could push the planets around in space - not a hard job since celestial bodies were made of the very light fifth essence. And what could promote the dignity of human beings any better than the Greek view of humankind at the center of the universe? This conception suggested that the human race was important in a truly cosmic sense.

Late medieval Christianity supplied just such a transposition of thought through a greater familiarity with Scripture and an emphasis on the doctrine of creation. Through the advent of the printing press, the ideas of Scripture were much more widely disseminated. People could discover for themselves that both the Old and New Testaments regarded the material world as substantial, real and good. A premium was placed on the value and essential trustworthiness of sensory experience, especially in some of the more prominent authority-based passages. For example, after Moses reiterated the Ten Commandments, he reminded the people that he is not the authority. The Commandments on stone only solidified the message all the people heard (Deuteronomy 5:23). The Hebrews had an empirical test for identifying a false prophet (Deuteronomy 18). John introduces his first Epistle with an empirical

emphasis: “We have heard…we have seen…” (John 1:1). Jesus said to the
doubting ones after His Resurrection, “Look at my hands and my feet; see that
it is I myself” (Luke 24:39).

Background: Renaissance Period

For many centuries the Church had openly acknowledged God and His
creation. Yet the medieval view of nature remained essentially Greek. With a
greater appreciation for the value of sensory experience within a created
universe, more and more people began to think through the implications of
belief in creation for their view of nature. Foster asserts that “the modern
investigators of nature were the first to take seriously in their science the
Christian doctrine that nature is created”97

A created world is contingent upon the will of the Creator and need not
necessarily conform to any prior reasoning. Early scientists emphasized
observation, using the five senses and experience in order to gain new
knowledge.

Francis Bacon (1561-1626) maintained that finding new facts required
new methods. He set out to reformulate a scientific method to give the
empirical and inductive processes a more central place. Part of the genius of
empirical science was precisely its use of recurring natural events to provide
observable checks on hypotheses. No more would scientists content
themselves with speculative reason unchecked by sensory experience. He also
maintained that the Greek search for a final cause in nature was inscrutable to

humans. Therefore “inquiry into final causes is barren, and like a virgin consecrated to God produces nothing.” According to Bacon, the Greeks were simply wrong in their approach to nature because they failed to regard it as created. Creation may have been a mere doctrine in earlier centuries, but to many in the late Middle Ages, it supplied the impetus to rethink the ancients’ view of the natural world.

Realizing the implications of a created nature opened the door to emphasizing the importance of sensory experience. Empirical science follows directly from belief in a created and therefore contingent nature. By the end of the 17th century, there would be a new understanding of physical reality. In the meantime, a certain sense of delight and fascination came in exposing cracks in the Aristotelian edifice. By the end of the 17th century, Newton had synthesized the work of Copernicus, Tycho Brahe, Kepler, and Galileo by achieving a unity of heaven and earth with the same substances in the heavens and earth, all equally subject to mathematical analysis. Newton banished the Aristotelian terrestrial/celestial dichotomy that had dominated intellectual thought for nearly two thousand years.

During the medieval period in Europe, the literal biblical picture of creation apparently dominated religious and philosophical thought, and the last great theologian of that period, Aquinas, espoused a strictly literal understanding of the Mosaic creation account. The Protestant Reformation

theologians continued this traditional view, and the early founders of modern science generally believed in creation.

The Modern Era

Nevertheless, in Catholic circles some evolutionary thinking was being published, and even in the 18th century some philosophers and scientists were playing with theories of evolutionary development.

During the 17th and 18th centuries, as sciences such as astronomy, physics, chemistry, geology and biology began to germinate and develop, most scientists were Christian believers, but some started to espouse a Deistic view of the world. According to Deism, God created the world and then walked away to let it run according to built-in laws. This idea of a self-running, evolving, mechanical world gradually took over astronomy and geology. The idea soon appeared in biology. By the mid-19th century some scientists like Erasmus and Darwin were openly anti-biblical and were promoting evolutionary ideas. By the early 19th century, Jean de Lamarck in France, openly anti-biblical in spirit, had proposed a theory of evolutionary progress by the inheritance of acquired characteristics. 99

The Modern Era: The Science Period

Since that time and especially in the Western world during the past four centuries, the scientific enterprise has advanced. Modern science was originally developed primarily by godly men. They started with the philosophical foundation of biblical theism and divine creation. Roughly

during the 18th century Enlightenment, the gradual takeover of science by secular humanists began. They rejected the notion that man needs to learn anything from God. For them, scientific research, motivated by the pride of human intellect, became the only source of true knowledge of nature. Humanity would by itself, without God, understand all reality and use this knowledge to change society and the world. The work of Darwin put this cultural movement into high gear. Today, virtually the entire scientific-educational-intellectual establishment is wholly given over to the vision of an evolving cosmos in which God has no place and no part. For them, evolution is the creative force and the total explanation of all of the complexity and apparent design and purposefulness of the universe. The goal of their scientific research is to complete the evolutionary explanation of everything that is.

The Modern Era: The Role of Christianity

Christianity has played a vital role in fostering the development of modern science (Rejer Hooykaas). Other historians and philosophers of science have recognized that a distinctly Christian worldview inspired early scientific investigation. Hodgson in reviewing Stanley Jaki says:

Although we seldom recognize it, scientific research requires certain basic beliefs about the order and rationality of matter, and its accessibility to the human mind . . . They came to us in their full force through the Judeo-Christian belief in an omnipotent God, creator and sustainer of all things. In such a world view it becomes sensible to try and understand the world, and this is the fundamental reason science developed as it did in the Middle Ages in Christian Europe, culminating in the brilliant achievements of the seventeenth century.

100 Charles Thaxton, Truth Journal (14 July 2002): 113
Whitehead’s position is that there can be no living science unless there is a widespread instinctive conviction in the existence of an ‘order of things.’ and in particular, of an ‘order of nature.’ The understanding here, that faith in the possibility of science, generated antecedently to the development of modern scientific theory, is an unconscious derivative from medieval theology.102

Eisley says that the origin of modern science is the result of the sheer act of faith that the universe possessed order and could be interpreted by rational minds. The experimental philosophy of science started its discoveries and its faith-methodology with the knowledge that it was dealing with a rational universe controlled by a Creator who did not act upon whim nor interfere with the forces He had set in operation. The experimental method succeeded beyond humankind’s wildest imaginations, but the faith that brought it into being owes something to the Christian conception of the nature of God. It is surely one of the greatest curious paradoxes of history that science, which professionally has little to do with faith, owes its origins to an act of faith that the universe can be rationally interpreted and that science today is sustained by that assumption.103

But Christian thought had done much to inspire this new form of inquiry. Weizsacker has come to the conclusion that modern science is a “legacy, a child of Christianity.” 104

The problem of the contemporary view of creation in Nigeria is traceable to four conceptual influences that provided the theoretical and philosophical justification for the subsequent ecological crisis that characterizes many Nigerian communities: industrialization, missionary activities, Western education and the New Age Movement.” 105

The Modern Era: Industrialization

Industrialization is a part of a wider modernization process. This social and economic change is closely intertwined with technological innovation, particularly the development of large-scale energy production and metallurgy. Industrialization is also related to some form of philosophical change to a different attitude in the perception of nature. 106

Hollinger asserts that the modern age was in part ushered in through the Industrial Revolution. With new understanding found through modern science, humans became increasingly capable of subduing nature for their own purposes and ends. New scientific discoveries were applied to the production and distribution of goods and services, and a new world economics began to

take shape. The Industrial Revolution began in Manchester, England during the 18th century and spread throughout many parts of the world.107

Industrialization was introduced in Nigeria during the colonization by the British through mining of tin, building of refineries, introduction of textile industries, etc. which has spawned its own health problems. Modern stressors include noise, air and water pollution, poor nutrition, dangerous machinery, impersonal work, isolation, poverty, homelessness, and substance abuse. Health problems in industrial nations are caused as much by economic, social, political, and cultural factors as by pathogens.108

In Nigeria, pre-industrial economies had standards of living not much above subsistence, meaning that the majority of the population was focused on producing their means of survival. In medieval Nigeria, 80% of the labor force was employed in subsistence agriculture. Farming today is very difficult because the soil has lost its nutrients with the introduction of fertilizer. People have shifted focus from agriculture to work in industries where they can earn bigger salaries. Mining ponds are left uncovered and many children die every year. The refineries have caused environmental disaster especially in Kaduna and Port-Harcourt. The Industrial Age has devastated our values; it is used as a tool of corruption and segregation; people are being used for cheap labor. The contemporary view of creation in the eyes of industries sees God’s creation as the means of human gain: you can make something out of it for self-benefit.

107 Hollinger, 94.
108 Hollinger, 95.
The materialistic view comes from this philosophy. Materialism as an underlying way of life of Western culture says that only the material world is important. It notes that materialism denies the ultimate existence of God, and moral values have no grounding in God’s law which by its definition is seen not to exist. To the extreme materialist, everything is ultimately to be explained in terms of the forces and material conditions that surround it. The craving for things, especially money not God, is derived from the basic meaning of materialism. Geyser adds that this view denies the existence of a creator and the spiritual nature of humanity and it affirms optimism in man’s ability to solve his own problems, especially through technology. He highlights some basic characteristics that most humanists adhere to, and that even many deists and theists subscribe to:

1. Nature – Human science holds that the world of nature is all we can know for certain, and we are free to explore that world of nature, harness it responsibly, and expand its boundaries as far as it will allow us. As long as we do not hurt human beings and destroy the ecosystem, we are free to do whatever nature allows us to do. Human beings cannot be kept from destroying themselves by science’s own creation. This is the ethos of modernity, which has the scientific and philosophical understanding about the world and the human ability to control and shape that world. Secular humanists

110 Atkinson & Field *eds*, 575.
111 Hollinger, 89.
take nature for granted. Since there is no creator to be accountable to, nature can be used any way humankind chooses.

2. Human Technology - The Industrial Revolution emerged as modern science was applied to the development of new tools, machines, and procedures for using them in what is commonly called technology. Technology is not merely the tools we devise but a thinking process that accompanies their development and use. It is not science but rather the utilization of scientific knowledge in the interplay with the material world. Webster’s Ninth Collegiate Dictionary defines technology as, first, technical language; and secondly, applied science - a scientific method of achieving a practical purpose, where the totality of the means are employed to provide objects necessary for human sustenance and comfort.

Technology is typically viewed through one of three lenses: optimistically, pessimistically, or a more central position between the two. The optimistic view embraces technology and sees great hope and promise in it. The pessimistic view rejects technology and brings about a sense of hopeless despair toward it. The central view is somewhere between these views and advocates the proper and cautious use of technology.

Most of the issues that we face today are a result of the technological means of controlling significant portions of life, death, disease, and the genetic structure of human beings. These have effects on God’s creation because we

112 Hollinger, 94.
cannot control what we created, as Jacques Ellul argues, “Technique is not just something we create and control; it is a process that actually comes to control us. It has its own inner logic to which we must conform to use it.” The creational problem we grapple with today is mostly related to our technological sophistication and our capabilities to create and manufacture power without moral sensibilities. The implication for Christian ethics as observed by Bryan Wilson:

Perhaps the most significant aspect of our conception of what it means to be modern is the idea that we can consciously change the character of society and the condition of our lives. Most of our present-day concern in economics, politics, public affairs, education, and even in entertainment is concern with change… We are committed to the idea that we can make the future…. Where once we thought that consequences were God’s will, we now deliberately program, regulate, and organize our own future.

The mastery of the material world gives human beings the false impression that we are in control, and the many choices now created by this mastery only reinforce our sense of sovereignty. Technology has created a psychological disposition within us that says we must no longer resign ourselves to the divine providence or the taken-for-granted of reality. We see creation as our own product and invent things that destroy them.

Before modern technologies and the Industrial Revolution, humans had a much greater sense of dependence on God and divine providence for life in general, including morality.

Humanists such as John Stuart Mill propose public education for humanity as a means of salvation. Humans hold the key to solving their own

114 Hollinger, 95.
115 Hollinger, 96.
problems, and literacy is a key. In this category epistemological traditions took the lead through rationalism and empiricism. Rationalists like Rene Descartes believed that reason alone was sufficient to know all there was to discern about the world and life. This view leads to the devastation of creation because humans use their intelligence to relate with creation and not what the Creator wants. The other school of epistemology was empiricism: the view that all knowledge was (and is) based on experience and senses. One garnered truth not through innate reason but through empirical analysis and examination of the world. People forgot that they were created too and cannot tabulate the world. No amount of knowledge or science can fully uncover the natural world and human world. John Locke and Francis Bacon argue that humans do not come to the world with an ordered, cognitive process; rather, the world itself orders our minds’ cognitive perceptions.

The Nigerian ecological crisis was influenced by these views, especially through mission activities and Western education which ran concurrently in Nigeria.

The Modern Era: Missionary Activities

The coming of the early missionaries contributed to a conceptual shift from the primal worldview of the African relationship with nature to a Theocentric view: the category as taught by many Christian missionary

116 Kashope, 22.
117 Hollinger, 91.
organizations in Nigeria. They repudiated the primal worldview concerning nature and labeled it idolatrous, yet they did not have knowledge of the teaching and caring part of this ethos. They emphasized the Theo-centric conception of humanity’s relationship to nature and condemned the sacredness accorded to trees, rivers and mountains. The people who accepted Christianity are the ones who also went to school for an education. The early missionary is often criticized for contributing to the bastardization of nature.

The Modern Era: Western Education

Western education with its purely scientific approach eliminates the possibility of spirits inhabiting nature and categorizes it as primitive, pre-modern and superstitious. The mal-treatment of creation through the instrumentality of Western education helped to erode the general feeling of mystery, divinity and godhood that was closely associated to nature in the African mind.

The scientific worldview emphasized the anthropocentric idea that humans can reason, investigate nature, and tabulate in empirical fashion some of the culturally perceived mysteries in nature. Thus, instead of the African creation legends, the Western educational curriculum explored the evolution of species in coherent, scientific fashion. Physical features, such as mountains, were explained as the product of volcanic eruption; the elements of the

riverbeds were analyzed; the mystery of thunder was explained by the category of charging electrons and not the fiery anger of the god Sango; metallic iron explained rationally without reference to Ogun, the purported Yoruba god of iron; the causes of famine explained and without the slightest reference to the gods. Good farming tools and techniques were seen as the reason for bumper harvests and not the activities of African gods. The causes of rain, wind and storm were explained in rational categories, and many other aspects of nature were reduced to mere scientific inferences and explanations, such as the formation of the eclipse and rainbow. With such a highly scientific agenda, Western education demystified nature and revealed the deficiencies of the primal worldview.

The Western education’s curriculum nurtured a scientific heritage that clearly articulates the dominance of humans to rule, investigate, control, and/or manipulate nature. In carrying out experimentation and other empirical tasks, this curriculum deprived nature of its once preconceived sacredness as the habitation of spirits and the African gods in the category of primal thinking. However, this scientific thought-pattern received maturation in the Medieval, Renaissance and notably in the Enlightenment periods. In the latter period, a total campaign against the sacredness of nature was launched. It was this disrespect for nature that the Romantic poets of the 18th Century sought to address. Rejecting the traditional Christian affirmation of the sacredness of nature, the Enlightenment period instead propagated a crusade for the maltreatment of nature.
The radical rejection of the traditional stereotyped understanding of nature was beneficial because it brought about scientific progress, the advancement of human civilization, and the explosion of scientific knowledge on nature. However, the cost of such a scientific worldview on nature was enormous, considering the havoc such understanding engendered in the treatment of nature. Scientific theories, such as the theory of evolution by Charles Darwin, displaced God from the realm of creation and nature, thus removing the conceived sacredness of creation. Darwin postulated that nature was basically the product of mere chance since the human race, and other higher organisms in nature, gradually evolved from lower living organisms through many generations of natural biological processes.

With such a rejection of the sacredness of nature and the corresponding replacement with the scientific proposition of chance, nature in Western thinking generally came to mean nothing more than mere physical variables that should be exploited for scientific and humanistic ends. This non-sacred, scientific worldview became dominant and indirectly became the moral justification for the pollution and abuse of the European society as she transposed from an agrarian society into an industrial modern society. 120 Matthew observes that:

The Western world has had a long history of attempts to control nature by first probing its secrets, and then making it serve man’s purposes; since nature is often encountered as being hostile Western man has seen his survival as depending upon nature being brought under man’s control. In our time man’s indifference and downright thoughtlessness has resulted in near-crisis environmental situations, especially in the West: excessive hunting of certain animal species;

the use of defoliating agents; the pollution of rivers, sometimes through the
clandestine disposal of harmful chemical wastes - these and other examples of
the Western attitude to nature have been very much in evidence, and have been
the subject of much discussion in recent years. 121

Even though there are groups in the West now trying to inculcate an
ecological awareness with a view to reversing these destructive trends, it is
nevertheless true that the predominant attitude in the West is one of exploiting
nature.

This paradigm shift from the primal age of Africa to Western
modernization through education that came with colonization and mission
activities has changed the worldview of Nigerians toward caring for creation.
The vacuum created by modernization to some extent has contributed to the
present ecological crisis in Nigeria. Unfortunately, most Nigerians carry within
their psyche a distorted worldview that is neither primal nor scientific nor
Christian. Thus, the confusion has resulted in a distorted view of nature that
accounts for mal-treatment of the flora and fauna of the great country of
Nigeria.

The Western scientific worldview also motivated ecological abuses by
the transnational companies, primarily dominated by scientific attitudes to
nature in the conquest and invasion of traditionally restricted African rivers,
forests, mountains and hills in quest of mineral deposits.

Exacerbating this ecological disaster were the economic factors such as
the unavailability of social amenities in the post-colonial context. Thus,
absence of light or other forms of energy forced many into the indiscriminate

acts of felling trees as an alternative form of energy. Similarly, the lack of clean water forced many Nigerians into the pollution of the few rivers that are near the cities. Also, the absence of sanitary conditions and disposable sewage systems contributed to the degradation of the ecosystem since there are only a few available sanitary facilities to take care of the increasing urban population.

Another ecological disaster in Nigeria is the insensitive disposition of most of our leaders towards the ecological crisis.122 There were times in Nigeria when people talking about ecological disaster were killed by the government because they wanted to dominate the oil industries. The government did not want the masses to know the havoc of what is going on around them. Yet the masses are not benefiting from the wealth of the industries. It is an open secret that these companies often have neither proper sewage disposal nor facilities to dump their toxic wastes. Thus, their indiscriminate activities endanger the health of the people and destroy the environment.123 Nigerian governmental agencies are not conscious of the ecological crisis in the country because they do not have an ecological agenda, a concern for future generation, or a goal that is aimed towards the conservation, preservation and restoration of the destroyed ecosystem.124

The Modern Era: New Age Movement

124 Dyke, Bridging the Gap, 139-172.
The New Age movement also enters the picture. The quest by the New Age movement to propagate the godhood of creation is at best misdirected and absurd, since it is based on the care of creation of nature on the wrong premises. Most importantly, in the light of the Judeo-Christian tradition such a deification of nature is subversion, and sabotages the initial divine intention. Such worship of nature is not just idolatry but the brutal indictment of the dignity and respect accorded to human beings as the image of God and the apex of God’s creation.125

The New Age ecological agenda today represents a cultural and pantheistic unrealistic idealism. Alex Macdonald rightly observes that in the New Age pantheistic idealism with the understanding that “all is one and all is God,” there are two serious theological problems raised by such erroneous thinking pattern, making itself an ineffective model for the solving of the present ecological crisis.126 First, according to Macdonald, such thinking that humankind is indistinguishable from nature as romanticized by New Agers implies that humanity has no moral right to interfere in nature even for good reasons. Second, if the suggestion by the New Age movement in the phrase “all is one” is followed to its logical end, then there is ultimately no basis for distinction between good and evil, and cruel and non-cruel action become one and the same. Without such a distinction, the model lacks the ethical basis by which some actions are determined as ecologically friendly and other actions

126 Alex Macdonald, *Creation in Crisis? Green Concerns and Christianity* (Christian Focus Publications, 1992), 75.
are defined as ecologically harmful. This faulty syllogism of the New Age movement failed in its desire to reconstruct the primal worldview of the traditional African religion in the category of the deification of nature because it ran contrary to reason and is significantly incompatible with the monotheistic nature of the African context, particularly in the light of the Judeo-Christian tradition.

Summary of Chapter Two

Cultural views provide room for the deification of nature as in African pre-colonial times. This is problematic in the present context because it goes contrary to the conception of reason and logic. Deification of nature, according to God’s plan, is wrong because it makes humanity responsible to nature instead to the Creator. Even though such presuppositions as the human supremacy over nature in classical Christian thinking, and the conclusion of scientific evolution theory that humankind is at the top of the evolution scale, this thinking has led to serious abuses of nature. Yet the acceptance of the godhood of nature is not only deceptive but also ridiculous.

The worldview of modernity, namely the scientific mal-treatment of nature, as observed earlier, contributed to the neglect of the proper care of nature because it demystified it and thus exposed it to abuses. This model is significant because it provided the framework for all the scientific advancement and achievements since it neutralized the value of nature, which represses the scientific instincts for research and exploration. However, despite its merits, the scientific worldview with its desecration agenda subjected nature
to the scrutiny of humans, making nature in this context an object which could be manipulated, harnessed and managed for the advantage of humanity to the detriment of the ecosystem. By such thinking, especially as articulated in the evolutionary theory of Darwin and other Enlightenment thinkers, nature seemed to have no higher or no divine purpose other than to fulfill the whims and caprices of humans. Thus, the exploitation of nature became the creed of civilized human society until in recent, modern times when the vividness of the ecological disaster jolted many in the Western world back to nature consciousness. Such frailty in the scientific worldview that encouraged the abuse of nature cannot solve the ecological crisis in Nigeria since the scientific worldview largely contributed towards the problems of the ecological crisis in the first place!

Cultural modernity with its superstitions and intellectual and industrial/technological components created a world of optimism and hope. The common assumption of past centuries was that knowledge and technological sophistication would give satisfaction, progress, and value for humanity. This vision was to be fulfilled to the detriment of the Divine purpose for creation. There was no need for depending on God for anything; humans could get what they wanted through modernity.

Indeed, modernity brought much to the human race. The gifts of medicine, business growth, technical know-how, and political/social movements towards freedom are all welcome. But the kingdom has not come.
True - modernity brought us scientific and technological progress - but it also gave us some harms and the worst evil ever known in human history.

The accounts of the modernity movement vary according to the geographical location, worldviews, beliefs, commitments, and dispositions through which people judge the period. For Nigeria, we are neither cold nor hot (lukewarm). One would wish we were one or the other so that God’s creation can have a place. We are not properly enjoying the benefits of modernity, only the havoc.

Hollinger rightly observes that the problem with modernity is not that it failed us but that it carried within itself seeds of moral and spiritual destruction. This does not mean that the modern age is more evil than others. But the tools of modernity are more powerful as it continues to shape humanity and present significant challenges to the worldview of the church of the Lord Jesus Christ.127

Since culture and modernity cannot solve the ecological crisis in Nigeria, what then is the solution? I propound that only the Word of God has the final say about God’s creation. Culture and modernity are only good if they excel in the standards of the Bible. The next chapter is the biblical view of creation.

127 Hollinger, 147.
Chapter 3: A Biblical Perspective of Creation

Introduction

This research has pointed out some issues affecting creation in Nigeria, e.g., overpopulation, solid waste, global warming, pollution, etc. Modernity, with its pure scientific agenda, has caused greater attention to be paid to materialism because of its premise that the earth is to be subdued, harnessed and exploited for the benefit of human beings.

A common perception among Christians is that the Bible shows little concern for our relationship to nature and perhaps even encourages its exploitation. This perception is often supported by reference to the biblical command to “subdue” the earth and “have dominion” over all living things (Genesis 1:28), which is interpreted to mean that human beings can treat the non-human world in whatever way they please. This interpretation of Genesis 1:28, and the presumption that the Bible has little else to say about our relation to the earth, have led many people to reject the Bible as a resource for developing a sound environmental ethic.128

The intelligent, strong, and wise benefit, while the weak and the poor suffer most. A cultural worldview that works with the same outlook as pantheists and the New Age Movement has its own extremes by proposing the deification of nature, seeing God to be equal.

Modernity, technology, materialism, and African culture have neither power nor a proper view of creation. God is the creator of the earth and the ultimate authority; humans must work and live as He has designed life it to be.

The Bible tells us that “the earth is the Lord’s” (Psalm 24:1) and that “the earth he has given to humankind” (Psalm 115:16). There is no conflict between these statements. The Earth belongs to God by creation and to us by delegation. God has not handed part of his creation over to humans in such a way as to relinquish his ownership, but He has delegated to us the responsibility of looking after it on his behalf. This means that we must avoid both the deification and exploitation of nature. Our calling is to cooperate with God in conserving and developing the environment for the common good.

A Brief Biblical Overview of Creation

A common perception among Christians, and even non-Christians, is that the Bible shows little concern for our relationship to nature and perhaps even encourages its exploitation. This perception is often supported by reference to the biblical command to “subdue” the earth and “have dominion” over all living things (Genesis 1:28), which is interpreted to mean that human beings can treat the non-human world in whatever way they please. The view that the Bible has fostered the exploitation of nature is expressed in an influential and often-cited article by Lynn White entitled, “The Historical Roots of our Ecologic Crisis.”

Although, several scholars like David and Eileen Spring have exposed weaknesses of White’s position, elements of their

argument still prevail in discussions about the Bible and the environment. Alluding to verses in Genesis 1-2, White claims they emphasize that God planned creation “explicitly for human benefit and rule: no item in the physical creation had any purpose save to serve human purposes.” For White, Christianity accepted this biblical view of creation, fostering the attitude that human beings transcend nature and may exploit it. He argues that this attitude has influenced the development of modern Western science and technology which have posed threats to the creation. He concludes that Christianity, therefore, “bears a huge burden of guilt for our ecological crisis.”

Such interpretations of the Bible and the obvious reality of growing environmental problems call for careful analysis of the biblical view of nature. In contrast to common assumptions, the Bible contains insights that can help form the basis of a sound ecological ethic. Although interpretations of particular passages vary, it is clearly seen that the Bible affirms the goodness and intrinsic value of all living things; it points out commonalities between human beings and other living things; and it contains the mandate that the natural should be treated with care and respect. Such insights provide powerful grounds for natural responsibility.

131 White, *Historical Roots*, 1205.
132 White, 1205.
Genesis 1-11 is the foundation of the natural world and the humans in it.133 The opening verses of Genesis clearly state that God is the source of all life and that creation is good. Furthermore, the formation of Adam from “the dust of the ground” (Genesis 2:7) highlights the connection between human beings and the earth because *adam*, the word for “human being,” is a play on *adamah*, the word for “ground” or “earth.” The story of Noah and the flood also illustrates God’s concern for all creatures because it states that God made the covenant not just with human beings but with “every living thing” and that God desires all creatures to “be fruitful and multiply.” The idea that God is the source of all life, that creation is good, that human beings are connected to the earth, and that God is concerned for all creatures strongly suggests that humans are to value and respect the earth and its many forms of life.134

Recent interpretations have shown that Genesis 1:28 and 2:15 call human beings to preserve and protect the earth and its creatures. James Limburg interprets Genesis 1:28 on the basis of a careful study of the Hebrew


word, *radah*, which is usually translated as “to have dominion” or “to rule.” By examining the use of this word in other passages in the Old Testament, he finds it is most often used in political contexts to speak about the rule of a king or a nation. Limburg discovers that when the characteristics of the rule are discussed, the biblical texts emphasize a humane and compassionate rule that displays responsibility for others and that result in peace and prosperity. He therefore concludes that Genesis 1:28 does not advocate tyrannical exploitation of nature but rather responsible care of it.

Many of the Psalms, such as Psalm 8, 104, and 148, reaffirm the goodness of creation and provide additional insights into the human relationship to nature. For example, according to Terence Fretheim, many of the Psalms indicate that God is active in nature and intimately involved in every aspect of the natural order. Furthermore, the Psalms suggest that all creatures, not merely human beings, witness to the glory of God. The language of Psalm 148 even seems to suggest that “it is only as all creatures of God join together in the chorus of praise that the elements of the natural order of human beings witness to God as they ought.” This insight implicitly calls human

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137 Terence Fretheim, 29.
beings “to relate to the natural order in such a way that nature’s praise might show forth with greater clarity.”

Insights relevant to an understanding of human’s relation to the natural world are also found in the Wisdom literature of the Bible. They emphasize the importance of nature as a medium of God’s revelation, for they presuppose that God’s wisdom can be revealed through observation of the natural world. At the same time they point out the vastness, wonderful diversity, and ultimate mystery of God’s creation. Some wisdom texts, such as God’s first speech from the whirlwind in Job 38-39, indicate that God takes great delight in non-human creatures and did not create them for human benefit alone. Such passages also imply that human beings need to respect nature, to recognize the intrinsic value of its many creatures, to learn from it, and to preserve its incredible diversity.

Passages from the letters of Paul, such as Romans 8:18-25, Colossians 1:15-23, 1 Corinthians 15:20-28, and Ephesians 1:10, indicate that Christ’s redemptive power affects the whole creation. The passages from Romans and Colossians reveal that Paul had a universal vision of the liberation of all the creatures of nature, along with human beings through Christ’s death. Colossians 1:15-23 also claims that all things will be reconciled through Christ. Even if readers disagree about the nature of this universal reconciliation, the passages express God’s concern for the whole creation and suggest that humans, in turn, should respect God’s handiwork.

138 Terence Fretheim, 29.
All of the biblical passages that command us to love our neighbor have strong implications for environmental responsibility even if one does not extend the notion of “neighbor” to include non-human creatures. As we better understand the dimensions of our environmental problems, it becomes clear that they are often connected to social injustices. We cannot adequately show love to our neighbors, therefore, without taking into account the environmental problems that affect them.140

The passages outlined above and many others provide very strong grounds for respecting God’s creation and for living in ways that preserve and protect it. Although certainly not all elements of the Bible depict our relation to the natural world in this way, the Scripture clearly contains ample grounds for environmental responsibility. It provides valuable insights for building the foundation of an environmental ethic that, if lived out, can help solve today’s environmental problems.

The Old Testament View of Creation

The Existence of God

This research paper has no intention of making elaborate arguments about the existence of God. There are many debates on how the world started and of the creation account given in the Bible. Brueggemann acknowledges that the earth was created by God. The creation narratives in different modes articulate that the world (heaven and earth) belongs to God, is formed and

willed by God, is blessed by God with abundance, and is to be cared for by the human creatures who are deeply empowered by God but who also are seriously restrained by Him. The creation narratives are an affirmation of the goodness of the world intended by God.141

The Bible declares and gives facts about the existence of God. There are so many witnesses to His existence that the Bible makes no effort to prove it. There is the outer witness in nature. “The heavens are telling the glory of God; and the firmament proclaims his handiwork” (Ps. 19:1). The voice of these witnesses has been heard in every language and in all places of the earth. It is true that in times past God “…suffered all nations to walk in their own ways” (Acts 14:16). “Nevertheless he left not himself without witness, in that he did well, and gave us rain from heaven, and fruitful seasons, filling our hearts with food and gladness” (Acts 14:17). His power and deity are clearly seen in the visible things He has created: “For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead; so that they are without excuse” (Rom. 1:20).

There is also the inner witness of the human conscience. “When Gentiles, who do not possess the law, do instinctively what the law requires, these, though not having the law, are a law to themselves. They show that what the law requires is written on their hearts, to which their own conscience also bears witness; and their conflicting thoughts will accuse or perhaps excuse

them (Rom. 2:14, 15). The voice of nature in creation and in conscience proclaims loudly the existence of the true and living and eternal God. And so, for all practical purposes, there is no necessity for proving the existence of God.

Grudem classifies traditional proofs for the existence of God into four arguments. (1) The *cosmological* argument which appeals to logical reasoning. It asserts that every known thing in the universe has a cause; therefore, the universe itself has a cause, and that cause must be God. (2) The *teleological* argument, a subcategory of the first, argues that the harmony, order and design in the universe are evidences of an intelligent purpose. Since the universe appears to be designed with a purpose, there must be an intelligent and purposeful God who created it to function that way. (3) The *ontological* argument. It hinges on the premise that the idea of God is greater than anything imaginable – existence is greater than non-existence. (4) The *moral* argument. It begins from man’s sense of right and wrong. There must be a God who is the source of this.142 If God is real, and if he is the creator of the world, then it follows that he knows what is best for it.

God is transcendent over nature. He is much greater than his creation, and is independent of it. His transcendence focuses on his separateness from creation. He is distinct, being above and beyond his created physical world.

The Bible and Creation

Some have blamed the Bible for irresponsible treatment of the earth; e.g., Toynbee argues that the Genesis 1:28 command to have dominion and subdue the earth has given license for domination and exploitation of nature. Christianity has by inference contributed to the increase of pollution, extinction, wastefulness, and the poor ecological state of the planet.

White argues that:

Both our present science and our present technology are so tinctured with orthodox Christian arrogance toward nature that no solution for our ecologic crisis can be expected from them alone. Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it or not. We must re-think and re-feel our nature and destiny.

James Watts argues that the Christian view about eschatology also warrants mal-treatment of nature since Jesus will come back and bring a new form of existence.

In Nigeria, Evangelicals and Pentecostals claim to have high expectations of heaven and pay little attention to the natural world. They always use biblical texts such as 2 Peter 3:10 and Matthew 24:36-44 to justify their actions.

An Evaluation of Genesis 1:28

The Bible does not contradict itself, but readers sometimes misinterpret it. Bouma-Prediger rightly asserts that this passage speaks about both who humans are and what humans are to do. Humans are distinguished

143 Bouma-Prediger, 70.
145 Bouma-Prediger, 72.
from non-humans; only man and woman said to be made in the image of God (*imago dei*).\textsuperscript{146} Dominion in that passage is not negative domination, considering the meaning and usage of that word in the Bible. Naming of the other creatures in the passage suggests that humanity has power over creation, but at the same time humans were expected to take care of the other creatures. Bouma-Prediger says, considering the verbs in Genesis 1:26-28, that there is no doubt that humans are called to mastery. “The earth-creature is called to subdue (*kabash*) and to have dominion over (*rada*) other creatures.”\textsuperscript{147} The sense of dominion in the Bible is servanthood as seen in Psalm 72: “For he delivers the needy when they call, the poor and those who have no helper. He has pity on the weak and the needy. From oppression and violence he redeems their life; and precious is their blood in his sight.”

Ezekiel is told to say to the shepherds, the spiritual and political leaders of Israel:

Ah, you shepherds of Israel who have been feeding yourselves! Should not shepherds feed the sheep? You eat the fat, you clothe yourselves with the wool, you slaughter the fatlings; but you do not feed the sheep. You have not strengthened the weak, you have not healed the sick, you have not bound up the injured, you have not brought back the strayed, you have not sought the lost, but with force and harshness you have ruled them (Ezekiel 34:2-4).

This is a metaphor used to speak of leadership; it is a parable about the use of dominion. Shepherding is a very good example of the practice of human dominion over the natural world. We are justified to accept this passage in its

\textsuperscript{146} Bouma-Prediger, 70.  
\textsuperscript{147} Bouma-Prediger, 74.
literal sense, telling us something about the way dominion may properly be exercised over any of the creatures.148

Isaiah 53 also teaches that the divine model for dominion is a radical kind of servitude. Christians have understood this passage to be talking about the supreme demonstration of the character of dominion manifest in Jesus. Whatever meaning we give to this Scripture, it is clearly a pattern of servitude-dominion. Such authority is counter to human expectation which normally equates dominion with ruling, not serving.

God put humans in the Garden of Eden for service. “The Lord God took the man and put him in the Garden of Eden to till (abad), which is often translated as work or service, and keep (shamar) it, often translated as to ‘watch over’ or ‘preserve.’ The significant thing about both words is that they describe actions undertaken, not primarily for the sake of the doer, but for the sake of the object of the action.149 The keeping of the garden is not for the comfort and selfish fulfillment of humans, but for preservation. Both of the verbs severely restrict the way the other two verbs - subdue and rule - are to be practiced. Human ruling, then, in the biblical sense, is service and preservation of the beasts, trees, the earth itself, and also fellow human beings. The scriptures considered here have the concepts of dominion even though they do not speak exclusively of the human relationship to nature. Loren asserts that

dominion in the foregoing discussion points to what is noticed in the Genesis account:

Though the words describing human authority are very strong, that authority over nature is to be applied in the ways indicated by such other-directed verbs as “serve and guards.” Such use of strength goes counter to most of what seems to come naturally to us as humans so much so that many would say it is simply not possible. But Christians say such a transformation of domination is possible because of the sacrifice of Christ, which is both a pattern for action and a power enabling us to carry it out. The whole long lesson of Old Testament history points to this supreme example of God’s use of dominion, which henceforth must be the model for all who would, in the name and service of God, exercise stewardship over all creation.

The dominion mandate makes a clear distinction between humankind and all the rest of creation, for only men and women were created in the image of God (Genesis 2:27) and were given control over all the earth. This dominion, however, was not to be a totalitarian despotism, but a stewardship under God, responsible to God for its care, “for the earth is the Lord’s and the fullness thereof” (Psalm 24:1).

Human Sin and Creation

The tempter’s appeal was to the human desire for illegitimate power to eat of the tree of knowledge, and thus become, in human terms and time, like God. It is the first time in the Bible that humans longed for the power of gods, but certainly not the last. The consequence of their action was alienation between God and humans, between man and woman, and between humanity and nature. There is need for caution not to use that separation to justify the reckless treatment of nature and creation in general.

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150 Loren Wilkinson, ed. 214.
... cursed is the ground because of you; in toil 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 until you return to the ground, for out of it you were taken; you are dust, and to dust you shall return (Genesis 3: 17-19).

Loren observes that the ground is cursed because we are set against it. The word ground is also *adamah* (earth), suggesting that the curse pronounced on Adam is in fact describing a division within himself. That division is his own inability to be in harmony with the earth. The curse describes not a quality in the earth itself but human misuse of his dominion. “The accurate reading of the Hebrew would be, ‘Cursed is the ground to you.’”151

Because of this attitude of enmity between human beings and nature, ‘humans’ have lost the ability to be preserver of the creation in which they were placed. The misunderstanding of dominion on the side of humans makes them unable to guard or preserve the life of the garden, and it is this inability that we still see manifested today.

Human sinfulness, says Schaeffer, has caused multiple divisions on two major levels. The first level is psychological: between humanity and God, and then between humans and humans. The second level is sociological. Humanity is separated from nature, and nature from nature. The result is that both humans and nature ultimately need redemption.152 This indicates that “there is a complex relationship between God, humanity, and the environment. If the relationship between two of them is disturbed in some way, the third is

151 Loren Wilkinson, ed. 212.
automatically implicated.” Since the root of the problem is sin, brought on by human’s disobedience to God, then the solution must focus on reclaiming the goodness of creation by human’s obedience to God. Humanity cannot do this without a proper biblical understanding of God, man, nature, and the accompanying principles laid out by God for proper inter-relationship of all three. Anderson supports Schaeffer’s position that a biblical view of ecology strikes a balance between “naturalistic and pantheistic extremes.”

God created everything that needed to be on this planet; then He created a male and a female and gave them the responsibility of domination (Genesis 1:26). It is widely agreed that Genesis 1:1-2 constitutes a remarkable premise for creation.

Why the Creation?

When God finished the creation, He said it was good. God “commanded man and woman, who were created in His own image,” to take care of other creatures. The image of God is reinforced by the imperatives that follow to “subdue and have dominion” (Gen. 1:27-28). Many have misunderstood these verbs to mean that the man and woman in the image of God were free to use the earth as they wished without restraint. Humans in the community were and are responsible for the care of the earth and its “bountiful God-given fruitfulness” for the benefit of all creatures. Thus, the imperatives do not permit unrestrained, indulgent freedom, but they are a mandate for the

154 Kashope, Toward Biblical View of Environment, 36.
community to take responsibility for the well-being of the earth and the glory of God.155

The New Testament View of Creation

Unlike the Old Testament, there are no stories about God’s creation of the world or accounts that explicitly articulate conceptions of creation and the place of humans in creation in the New Testament. While it is difficult to discern the point of view of the New Testament writers on creational issues, they usually assume fundamental points of continuity with the Old Testament views about creation. Also, the New Testament assigns a role for Christ in creating the world as well as a role in redeeming the (whole) creation. In addition, the New Testament tells many re-creation stories about the restoration of creation and stories of people who recover their proper place in creation. These revelations affirm that the redemption of Christ does not abandon but rather fulfills creation.156

Dennis Hamm says that for the earliest Christians, the Bible was what we call the Old Testament. The authors of the writings that became the Christian Scriptures presumed the biblical vision of the human community in covenant relationship with the rest nature and with God, very much according to the model of biblical ecology.157

Jesus’ Model

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The Gospel of John affirms that all things were made through the Son and that apart from the Son nothing at all in the entire universe came into existence. Our thoughts cannot be communicated to others without words. So the design of the universe was conceived in the mind of God the Father, and it was Jesus who spoke the universe into existence:

He [Christ] is the image of the invisible God, the firstborn [prototokos] of all creation; for in him all things in heaven and on earth were created, things visible and invisible, whether thrones or dominions or rulers or powers—all things have been created through him and for him. He himself is before all things, and in him all things hold together. He is the head of the body, the church; he is the beginning, the firstborn from the dead, so that he might come to have first place in everything. For in him all the fullness of God was pleased to dwell, and through him God was pleased to reconcile to himself all things, whether on earth or in heaven, by making peace through the blood of his cross. Colossians 1:15-20.

This Scripture shows vividly that both things in heaven and things on earth, which include dominions, principalities and authorities, were created by Christ. In this grouping are included all the orders of the angels from least to greatest; all living things, animal and vegetable, and all objects in the material universe, near and far.

Colossians also tells us that Jesus reconciled all things to himself by his death on the cross. This is an awesome and sweeping statement. All human sins were dealt with when Jesus identified with each and every descendant of Adam and Eve---becoming sin for everyone and so dying in our stead. Beyond that, Jesus also resolved the angelic revolt; won back the title deed of the earth lost by Adam’s fall; and unlocked the destructive, disintegrating forces in the universe making possible a whole new creation. A key word in the above passage is the Greek word sunistemi which means “to stand-together” or “to be
compacted together” or “to be constituted with.” This passage can be applied to the structure of the atom, for example. The nucleus of every atom is held together by what physicists call ‘weak’ and ‘strong’ forces. (Physicists today are familiar with four basic forces in the natural world: gravity, electrical forces, a ‘strong’ and a ‘weak’ nuclear force which act at very short ranges. The first two forces [gravity and electrical] decrease in strength inversely with the square of the distance between two objects).158

Christ has redeemed all things by his death on the cross (Col 1:20). Christians often base their teaching about creation-care solely on God’s creative work as described in the early chapters of Genesis. That ignores other significant elements in the Bible. The Christian faith is Trinitarian, not Unitarian. As the Father creates, so the Spirit upholds that which Christ has redeemed.159 Jesus said in Matthew 5:17, “Do not think that I have come to abolish the law or the prophets; I have come not to abolish but to fulfill.” Jesus’ death to redeem humankind is to liberate humans from their wickedness that came through disobedience to God and to enable them to act rightly through the redemption of Christ on the cross.

Van Voorst notes that “central to Paul’s belief is his firm conviction that God saves the world in Jesus Christ.” He further explains how Paul believes that all human beings, Gentiles and Jews, whites and blacks, rich and poor, are under the dominion of sin and thus are alienated from God (Romans

159 Sam R.J. Berry, Biblical Basis for Creation Care (London: University of London, n.d.), 5.
1-3, 7). Paul views sin not just as individual and social wrongdoings but also as a cosmic force that so oppresses humans that they are not to able to do anything good. Sin affected humanity, and the death of Christ gave humanity freedom which can lead human to be responsible and creative with the ability to think and act rightly.160

The Pauline Model

The Pauline theology of nature is that it was regarded as imperfect because of the fall (Romans 8:19-23). Yet Paul elevated nature in his theology to the pedestal of sacredness. Paul revealed that nature is the Scripture for those people, particularly the Gentile world, who do not have the revealed Scriptures. For Paul, nature is Scripture because it revealed to the Gentile world “that which may be known of God” of “His eternal power and divine nature” (Romans 1:19, 20).161 Thus nature with its beauty, charm, designs and other external features, becomes, according to Paul, the verses and chapters that reveal the invisible God, and humanity has no excuse for any form of rebellion against God. This Pauline understanding of nature as Scripture is similar to and an extension of the Old Testament understanding of nature in which it is depicted as showing forth the glory of God (Psalm 19:1).162 Thus, in both Testaments, the sacredness of nature is maintained, making nature the

silent evangelist or the quiet pointer that directs humanity to the existence of a loving and compassionate God.

Bouma-Prediger asserts that some see Christian eschatology as means to treat the earth in any manner since Jesus is coming to take his children to heaven. This world is of no importance, so we need not to worry about taking care of creation. This view is also implied in 2 Peter 3:10 and Matthew 24:36-44 are favorable to this view.163

The Pauline View of Creation/Eschatology

Paul describes the redemption of creation when he writes:

For even the whole creation waits expectantly and longs earnestly for God’s sons (children) to be made known waits for the revealing, the disclosing of their sonship (Romans 8:19).

In this verse, Paul makes the connection between the coming glory, which will renew us and overwhelm any past reality of suffering, with its implications for the rest of the cosmos. He complements this with a wider picture of the renewal of creation which has been subject to “futility” until that time when the children of God” will be revealed in glory. There is a personification of creation in his poetic reference here. This is not unusual in Scripture: trees can rejoice (Ps. 96:12), floods can clap their hands (Ps. 98:8), the wilderness can be glad (Isa.35:1), and the mountains can sing (Isa. 55:12).

Creation is in ἀποκαραδοκία, a noun that combines κάρα (head) and δοκέω (think, imagine), meaning “eager expectation.” The revelation (τὴν ἀποκάλυψιν) is not so much a disclosure of what has always been as it is a

163 Bouma-Prediger, 71.
dynamic process by which our incomplete state of partial sanctification and our mortal, sinful existence will be overturned and taken to its final destiny and made publicly evident. It is not merely that the sons of God will be manifested to the world in the last day but that it shall then be known how desirable and blessed their condition will be when they will have put off incorruption and put on celestial glory. The point here is the certainty of the future salvation for Christians.

In Romans 8:20, Paul states:

For the creation was subjected to vanity, futility, condemned to frustration, not because of some intentional fault on its part, but by the will of Him Who so subjected it [yet] with the hope.

He introduces this explanation with reference to the present condition of creation that causes it to wait eagerly for the fulfillment of God’s plan for his elect. Creation has been subjected to “futility.” The word ματαιότητι is frequently used in the Septuagint (LXX), especially in the Psalms and Ecclesiastes; to translate the Hebrew for “vapor, breath, vanity.” This is its meaning, also, in Eph. 4:17 and 2 Pet. 2:18, the only two instances it is referred to in the New Testament. It can also mean “purposelessness, transitoriness . . . frustration.” This seems the preferable sense in Rom. 8:20, since the main emphasis is that creation is subject to corruption and decay, never achieving its final goal of sustained life in a more absolute sense.

Some scholars like Lawson have argued that the groaning of creation for its deliverance from futility refers to its abuse by humanity. Lawson states in an article that:

We in the modern world ought to be able to sense creation’s pain more intensely than Paul did [because of] the pollution of the air and water, the rape of mineral-rich Mountains and valleys, and the depletion of the ozone layer.166

Since humanity’s fall, nature’s potentialities are curbed, confined, and subject to arrested development and constant decay: though it aspires, it never fully achieves. It is subject to an ineffectiveness that does not attain its goal, unable to properly fulfill the purpose of its existence, God having appointed that without which man should not be made perfect.167 The description of nature is as it should function in a glorified, eternal state where it fulfills its purpose includes the absence of death, the yielding of crops, and harmony and stability (e.g., Isa. 11:6-9; 65ff). The “one who subjected it” (τὸν ὑποτάξαντα) has been identified with (1) Adam, whose sin brought death and decay into the world (cf. Rom 5:12); (2) Satan, whose temptation led to the fall; (3) God, who decreed a curse as the judgment for the sin of Adam and Eve (cf. Gen. 3:17).

Adam, however, although bringing God’s curse on the cosmos, could not be said to be the one who subjected it to futility; neither can this be said of Satan. Therefore, it seems natural to take Paul as referring to God. He alone

had the power and authority to condemn all creation to frustration because of man’s sin.168

Kasemann argues that the word κτίσις does not always mean “nature,” for it can mean any creature or the sum total of creation or even a government or authority system.169 The meaning, obviously, can only be decided by context – and here the context seems to forbid anything other than subhuman creation. When Paul refers to the κτίσις, it cannot include angels, since they were not subject to corruption or decay. It cannot include Satan or the demons because they cannot be described as longing for the manifestation of the sons of God. It cannot include the sons of God, since that would make verse 23 a very odd addition if not meaningless. Finally, it cannot include humankind, since it was certainly subject to futility of its own will which is the very opposite of Paul’s point here. Humankind was subjected to evil because of Adam’s voluntary transgression. Thus, all of rational creation is excluded.170 κτίσις here can only refer to the sum total of subhuman nature, both animate and inanimate.

God cursed the ground because he cursed humans for their disobedience: “Cursed is the ground because of you; in toil you will eat of it; all the days of your life. Both thorns and thistles it shall grow for you; and you will eat the plants of the field; by the sweat of your face you will eat bread, till

168 Moo, 517; cf. Cranfield, 414.
169 Earnest Kasemann, Commentary on Romans (Grand Rapids, MI: W. B. Eerdmans Publishing Co., 1980), 223.
you return to the ground” (Gen 3:17b-19a). The Genesis narrative makes clear that Paul is referring to God when he states that creation was subjected διὰ τὸν ὑποτάξαντα. God subjected it, not because of its own will (οὐχ ἐκοῦσα), because creation was not at fault but because of humanity’s fall. Human breakage of God’s covenant brought the subjection of creation. The redemption of creation is not a result of God’s incomplete work nor is it an intrinsic part of creation which waits to be bestowed. It is a free gift, not a necessary or needed addition or completion. Although this is not explicitly laid out here, Paul’s entire theology is permeated with human failure in Adam’s disobedience to which God provides obedience and redemption in Christ, the second Adam.

In Pauline typological analysis, Van Voorst propounds:

Paul contrasts Christ with the symbol of earthly humanity, Adam: God’s first human creation...Before the coming of Christ, humans lived only in Adam’s perishable image, victim of sin and death (Romans 5:12-22). Believers are now “in Christ,” living with him and by his power. They belong to him, and his life has become theirs by means of the God’s spirit living in them. At the end of time, they will also share in the glorified Christ’s eternal life (1Corinthians 15:12-24, 45-49).171

The subjection of creation came through the sin of Adam; freedom has come through the death and resurrection of Jesus Christ.

The words ἐφ᾽ ἐλπίδι at the end of the verse are best taken in conjunction with ὑπετάγη – i.e., creation was subjected to hope (or put under subjection accompanied by a state of hope) – rather than with ὑποτάξαντα (which would mean that God, in his hope, subjected creation). This hope might

171 Van Voorst, 321.
be a reference to the *protoevangelion* of Gen. 3:15, the promise that the seed of
the woman would bruise the serpent’s head. 172 Creation has had the hope of
being set free from its bondage (τῆς φθορᾶς) to deterioration, corruption, and
decay. Calvin states that “in the sad disorder which followed the fall of Adam,
the whole machinery of the world would have instantly become deranged, and
all its parts would have failed had not some hidden strength supported
them.” 173

Although subhuman creation and humans have been subjected to
futility and decay for different reasons, the former in dependence on the latter,
both will be set free – creation in dependence on the freedom bestowed upon
the saved. The day of freedom, which God will bring, will be the day of
resurrection when the present body of humiliation will be transformed into a
glorified body, like Christ’s and when the whole human personality will finally
experience the benefits of his redemptive work. Scripture states in Romans 8:
21: “…that the creation itself will be set free from its bondage to decay and
will obtain the freedom of the glory of the children of God.”

New Heavens and New Earth

Peter illustrates the coming glory with a description of the renewal of
the cosmos: the present heavens and earth are being reserved for fire (2 Pet.
3:7). On the day of the Lord they will pass away with a roar, the elements will
be destroyed with intense heat, and the earth and its works will be burned up

172 Moo, 516.
173 John Calvin, *Commentaries on the Epistle of Paul the Apostle to the Romans* (Grand Rapids, MI:
Baker Book House, 2003), 304-305.
and the heavens will be destroyed by burning, and the elements will melt with intense heat. But according to His promise we are looking for a new heavens and a new earth.

This section in 2 Peter 3:10-13 appears to be a small chasm, emphasizing holy conduct and godliness in relation to the coming renewal (the “burning up” of vv. 10c and 12b; the intense heat of vv. 10b and 12c; and the renewing of the heavens of vv. 10a and 13). In contrast Romans 8, the emphasis is on present perseverance in relation to the coming glorification. Although Peter uses variations of *luno* several times in his passage, the point is not of annihilation (as is shown by his statement that God “destroyed” the earth though the flood). The fire will not destroy the universe. Bouma-Prediger argues that:

This verse represents perhaps the most egregious mistranslation in the entire New Testament. The Greek verb in question here is *heurethesetai*, from *heureskein*, ‘to find,’ and from which we get English expression ‘eureka.’ In other words, the text states that after a refiner’s fire of purification (v.7), the new earth will be found not burned up. The earth will be discovered, not destroyed.174

“The main emphasis of the text is that everything will be scrutinized or assessed by God, and necessarily destroyed,” states Tom Finger. 175 I quite accept Bouma-Prediger’s view that “creation is not ephemeral and unimportant - some station until the eschaton but rather our home, now and always. Biblical eschatology affirms the redemption and restoration of creation.”176

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174 Bouma-Prediger, 77.
175 Bouma-Prediger, 77.
176 Bouma-Prediger, 77.
The heavens and the earth will be gloriously renewed by God’s ultimate intervention upon the cosmos, and not only will we be going to heaven, but heaven will, as it were, come down to us. The conditions of perfection in heaven will be found throughout God’s gloriously rejuvenated universe. Other parallels are found in Acts 3:21: Jesus is kept in heaven until the Ἄποκαταστάσεως πάντων, “restoration of all things.” Isaiah 55:13 states, “Instead of the thorn shall come up the cypress; instead of the brier shall come up the myrtle; and it shall be to the Lord for a memorial, for an everlasting sign which shall not be cut off.” And in Acts 65:17, 25, the prophet states, “For behold, I create new heavens and a new earth; and the former things shall not be remembered or come into mind. The wolf and the lamb shall feed together, the lion shall eat straw like the ox; and dust shall be the serpent’s food. They shall not hurt or destroy in my entire holy mountain,” says the Lord.” In addition, we have Matt. 19:28 (τῇ παλιγγενεσίᾳ, the regeneration when Jesus will sit on his glorious throne, 25), and Revelation. 21:1 (οὐρανὸν καινὸν καὶ γῆν καινήν).177

Already / Not Yet

Romans 8:22-23 states:

For we know that the whole creation has been groaning together with labor pains until now. And not only that, but we ourselves who have the Spirit as the first fruits— we also groan within ourselves, eagerly waiting for adoption, the redemption of our bodies.

177 Hendriksen, 269.
Verse 21 speaks of the deliverance and freedom coming for both the saved and all of creation; and verses 22 and 23 give more emphasis to this idea by focusing on the present suffering and expectation believers experience. Paul introduces the clause with ὁδὲμεν γὰρ, a formula that denotes common, recognized truth in his readers. All creation as a vast whole groans and suffers the pains of travail. The verb συστεναζεῖ (a variation indicating joint participation) refers to the groaning of creation as a whole, in one accord. It means “to sigh together,” not “to sigh with” – not the common sighing and suffering of creation with the children of God, but a sighing in which all nonhuman creation is at one. 178 Paul uses the concept to refer to the sighing of creation, of believers (v. 23), and of the Spirit (v. 26). The idea is that of a kind of “birth pain” and “the apocalyptic image of the suffering or agony of the messianic time that are signs anticipating the coming new age . . . Paul’s focus here is creation subjected to mortality and therefore looking toward future deliverance.” 179

As creation groans and suffers agony, so do the children of God. Paul explains in Romans, chapter 6, how those who have been crucified with Christ and raised to a new life with him are no longer under sin’s power. In chapter 7, however, Paul tells us that sin does not disappear from the new life. He even testifies to his own struggles with sin. Groaning is not an evidence of lack of

179 W. Bromiley Kittel & G. Friedrich, eds. 601..
faith but the result of living in this new life while our feet are still planted in the old.

Van Voorst propounds that we are living in the present evil age as well as in the age to come, but only the age to come will be perfected - when Jesus returns. We groan (στενάζομεν) with the “groans of eschatological anticipation.” There is an important difference however. The groaning and suffering are accentuated by the fact that we have already received the first fruits of the Spirit (ἀπαρχὴν τοῦ πνεύματος). Thus, it is not just the groaning under the burden of suffering, but groaning for the glory to be revealed. The expression alludes to both the beginning of a process and the unbreakable connection between its beginning and the end. The metaphor refers to the harvest, both of historical Israel (cf. Deut. 26:1-5) and of the first century. The first fruits were a portion of the harvest offered at the Temple and this act consecrated the rest. The reader was also reminded that different sections of the crops ripened at different times, and that the ones that matured first were the 1st installment of the rest which were sure to come. Here, the reference is not of something offered by humans to God, but something given by God to man; it is the gift of a part as a pledge of the fuller gift yet to come. It is a foretaste and guarantee of what the believer still has to hope for.

God’s eschatological redemptive work has already broken in, and the Spirit we have received is the firstfruits. The Spirit is also the promise and

180 Van Voorst, 322.
182 Byrne Bendan, Romans (Collegeville, MN: The Liturgical Press, 1996), 263.
pledge of the work that will be brought to its intended culmination. The idea is that God has given us his Spirit, but his work in us is not yet complete. As children, we realize we live in an already/not yet reality also with respect to the work of the Spirit in our lives which on the one hand causes us to be thankful for the blessings we receive and the sanctification we experience, but on the other hand also causes us to suffer in frustration with the shortcomings of a sinful world and our own sinful selves.183

The Creation Principle of the Kingdom of God

When considering ecology in the New Testament, we need to understand the principle of the Kingdom of God. Wendell Berry writes, “The first principle of the Kingdom of God is that it includes everything; in it, the fall of every sparrow is a significant event… Another principle, both ecological and traditional, is that everything in the Kingdom of God is joined both to it and everything else that is in it.”184 Throughout the Bible, the rule of God includes the notion of ecological balance in all of creation, particularly between humanity and the earth. Earth is humanity’s God-given home, its human’s oikos (from which we derive the term “ecology”) and habitat (from the Latin habitatio, “dwelling”).185 The vision of salvation in the New Testament includes the restorative re-creation of the entire universe both human and non-human, integral to its intended ecological balance. This vision of holistic redemption should motivate Christian ethics and set priorities for

185 Wendell Berry, 44.
Christian action in the world, including stewardship of the natural world as suggested by Gordon Zerbe.\textsuperscript{186} The concept of God’s Kingdom in the New Testament is expressed in creation. Even though creation may not be a common or important theme in the New Testament, it is assumed everywhere. In continuity with the Old Testament, the New Testament emphasizes God’s eternal and universal rule which is expressed most fundamentally in the creation of the universe. Moreover, God’s rule is what maintains order in creation. In both testaments, continuing order in the natural and human worlds is based on God’s rule. Rebellion from God’s rule causes breakdowns in the natural and cosmic order.\textsuperscript{187}

The New Testament affirms with the Old Testament the creation and goodness of the entire universe. Jesus’ statements about God’s care for the birds of the air and the grass of the fields (Matt. 6:26-30; 10:29-31, Luke 12:6-8) illustrate a reverent approach to creation. Moreover, an attitude of stewardship is clearly evident when Paul cites Ps. 24:1: “The earth and its fullness are the Lord’s” (1 Cor. 10:26). The New Testament, however, not only assumes the foundational role of the Creator in establishing God’s reign, but also claims that Christ, the Redeemer, occupies a cosmic role as agent and sustainer of creation, a theme which itself has significant ecological implications.\textsuperscript{188} Prof. Van Voorst notes that eternity is not until we die, but the


\textsuperscript{187} Gordon Zerbe, 2.

moment we receive Christ, eternity has begun. We need to treat creation well, because Christ is in us, living with us, and He will rule us and reveal his glory in and with us forever.

Finally, the coming apocalyptic age focuses not on heaven but on a transformed earth, for the expectation was that Jesus is coming back - a view that supports the vision of the new creation as an affirmation of the world, rather than as a rejection or an abandonment of it.

A Biblical Approach to the Care of Creation

The Principle of Stewardship

A steward from the biblical viewpoint is a servant who was given responsibility to manage his master’s house. He had to order food and clothes, discipline the children, supervise the other servants and generally manage the household. Joseph was the “steward” in charge of Potiphar’s house in Egypt (Genesis 39:4-6).

Luke gives a perfect picture of a steward – one who is entrusted with a great responsibility. He is in charge of the things his master has put into his hands (Luke 12:41-48).

We must know that we are not owners of creation. We are also created and given responsibility to till and keep the earth, to help the poor and the

189 Robert Van Voorst, Class Teaching: Verbal (Western Theological Seminary, 2006).
190 David Rhoads, Reading the New Testament in the Environmental Age (Lutheran School of Theology at Chicago, 2006), 11.
191 Philip Tait, Models of Leadership (Nigeria: JETS, 2003), 11.
DeWitt has proposed three key components that will help us be good stewards of creation: 192

1. Awareness: We need to bring things to our attention. We should consciously make ourselves aware of what is happening in God’s creation. It involves seeing, naming, identifying, locating. I like the questions posed by Bouma-Prediger, “Do you know where you are? Not just your residential address or political zoning, but your ecological environment? Do you know the type of animals that live around? The type of soils and trees you have around your home?” 193

2. Appreciation: This comes as a result of your awareness. You can only appreciate what you are aware of and this brings tolerance and respect. We know that God declares creation to be good, and everything God created was for good a reason. As we become aware of the order of creation, we will find ourselves reflecting God’s values of creatures.

3. Stewardship: Awareness and appreciation will lead us to doing something. We will want to love and care for creation. Stewardship means serving. Our service will include a loving and caring keeping of what has been entrusted to us, providing the creatures their time of Sabbath rests and preserving creation’s fruitfulness.

The Work Principle

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193 Bouma-Prediger, 20.
Genesis 2:15 shows that God directed Adam and Eve to till and keep the garden. The Hebrew word upon which the translation of keep is based is the word ᵒshamar, a loving, caring, sustaining keeping. For us to love and care for creation, we must work. Some people consider work the result of sin, and so they see it as a curse. But Adam and Eve worked to keep what God put around them for their good. Lack of work brings poverty, even as Paul warns the Thessalonians that if anyone is idle, he or she should not eat. If we till and keep the garden, there will be a proper connection among creatures, e.g., with members of the same species and other species with which they interact, also as they interact with the soil, air and water upon which they depend. As God keeps his believing people, so should God’s people keep creation.

The Sabbath Principle

The idea of the Sabbath rest takes its origin from the creation narrative in Genesis. For six days God created, but on the seventh day he rested: “By the seventh day God had finished the work he had been doing; so on the seventh day he rested from all his work. And God blessed the seventh day and made it holy, because on it he rested from all the work of creating that he had done” (Gen.2: 2-3).194 Exodus 20 and Deuteronomy 5 require that one day in seven be set aside as a day of rest for people and for animals.

Exodus records: “But the seventh day is a Sabbath to the Lord your God; you shall not do any work—you, your son or your daughter, your male or female slave, your livestock, or the alien resident in your towns” (Exodus 20:

194 Kashope, Toward Biblical View of Environment, 42
10). The weekly setting aside of the seventh day has spiritual benefits for humans. They can spend the time in worship and reflection, evaluation and recreation. A writer in the *Today* booklet notes that:

Our weekly Sabbath-keeping anticipates what the Bibles call “eternal rest.” Eternal rest is not a matter of perpetual laziness. It’s about being in tune with God and what God has planned for us. As we live out our days on this earth, it means taking deliberate steps to guard one day a week to refocus on what God intends for us and to become realigned with the rhythm of life God created us for.\(^{195}\)

The Principle of the Sabbatical Year

The Sabbath year was given to protect the land from relentless exploitation, to help the land rejuvenate, to help it get things together again. It was a time of rest and restoration. This Sabbath was - and is - not merely a legalistic requirement; rather, it is a profound principle. Thus, in some Christian farming communities, the Sabbath principle is practiced by letting the land rest every second year because that is what the land needs. And of course, it is not therefore restricted to agriculture but applies to all of creation. The Bible warns the Israelites in Leviticus 26 that “... if you will not listen to me and carry out all these commands, and if you reject my decrees and abhor my laws and fail to carry out all my commands and so violate my covenant..., your land will be laid waste, and your cities will lie in ruins...Then the land will enjoy its Sabbath years all the time it lies desolate..., then the land will rest and enjoy its Sabbaths. All the time that it lies desolate, the land will have the rest it did not have during the Sabbaths you lived in it.”\(^{196}\)

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In addition, the end of every seven years was meant for cancellation of debts. The law says:

Every seventh year you shall grant a remission of debts. And this is the manner of the remission: every creditor shall remit the claim that is held against a neighbor, not exacting it from a neighbor who is a member of the community, because the Lord’s remission has been proclaimed (Deut.15:1-2).

The land was not to be exploited for greed or for profit.

The Sabbath year prevented land from being overused. Continuous farming can exhaust soil nutrients and turn fertile land into arid land, destroying not only the land but also the creatures that live off it. The Sabbath year also taught the people dependence on God and reminded them that the land belongs to God. They needed to preserve the natural soil nutrients for their good.

Principles of Harvesting and Tithing

These two principles (harvesting and tithing) take care of social needs, e.g., the needs of the disadvantaged, the poor, the widows, the fatherless, and landless dwellers whether they are indigenes or strangers. God instructed that when the Israelites harvested, they should not gather everything. They should not reap to the edges; they should not pick up the gleanings; they should not strip the vineyards bare, nor gather the fallen grapes. Specifically, these extras were meant for the needy (Lev. 19: 9-10). Likewise, a tenth of all the yield of the land was to be set aside for the Levites and others in need:

At the end of every three years you shall bring forth all the tithe of your produce in the same year, and lay it up within your towns; and the Levite, because he has no portion or inheritance with you, and the sojourner, the fatherless, and the widow, who are within your towns, shall come and eat and be filled; that the Lord your God may bless you in all the work of your hands that you do (Deut. 14:28-29; cf. Lev. 27:30-33; Num.18: 21-32).
Tithing was also a sign of thanksgiving and obedience to which God responded with blessings.

The Principle of Sanitation

God was much concerned about health and hygiene. He set cleansing regulations for food, e.g., the type of food to eat for good health. Humans must take care of themselves in order to live long. This included caring for utensils, infectious skin diseases, and even houses (Lev. 11:13-14). God recommended washing, quarantines, and burning, whichever was appropriate. Even humans had to cover their excrement and bury their rubbish (Deut. 23:13). The Lord reminded them of his holiness, and assigned decency to it. “A common refrain repeated in Leviticus is, “I am the Lord who brought you up to be your God; therefore be holy, because I am holy” (Lev. 11:45). The people were not to forget God’s presence in their midst.”

The Principle of Warfare

God commanded the Israelites to spare nature in war. He warned:

If you besiege a town for a long time, making war against it in order to take it, you must not destroy its trees by wielding an axe against them. Although you may take food from them, you must not cut them down. Are trees in the field human beings that they should come under siege from you? You may destroy only the trees that you know do not produce food; you may cut them down for use in building siege-works against the town that makes war with you, until it falls. (Deut. 20: 19-20).

Even in war, humanitarian principles were to prevail. The Israelites were to seek peace as a first option. War was declared only as a last resort. When they captured a city, women, children and livestock were to be spared, except if otherwise instructed. Utter destruction was not the norm. God was -

197 Kashope, 48.
and is - both concerned about holiness in the land, and about human dignity (Deut. 21: 10-17, 22-23).

The Principle of Animal Rights

Chris Park adds this important insight relevant to the heart of the ecology issue, namely, the principle of animal rights that “governs the human treatment of animals, in essence forbidding inhumane conduct towards animals.” People were not to inflict pain on living things. Animals must be treated humanely and adequately provided for. For instance, when an animal served its master, it deserved to eat (Deut. 25: 4). Muzzling an ox while it is threshing grain indicates that the owner was wicked and greedy. A mother bird must not be taken from the nest with her young (Deut. 22: 6-7). An animal could not be slaughtered for sacrifice along with her young, nor could a young animal be taken from its mother before it was seven days old (Lev. 22: 27-8). An ox and a donkey could not be yoked together for ploughing the fields, because it would strain the weaker animal (Deut. 22: 10).

The Principle of Justice

The law of Jubilee required that every fifty years, regardless of whatever business of buying and selling of the land had taken place, and whatever might be the cause for such transactions, the Israelites had to restore equal justice in land distribution among families.

And you shall hallow the fiftieth year and you shall proclaim liberty throughout the land to all its inhabitants. It shall be a jubilee for you: you shall return, every one of you, to your property and every one of you to your family. That fiftieth year shall be a jubilee for you: you shall not sow, or reap the aftergrowth, or

198 Kashope, 49.
harvest the unpruned vines. For it is a jubilee; it shall be holy to you: you shall eat only what the field itself produces (Leviticus 25:10-12).

The Old Testament laws provided opportunity for basic human needs to affect the distribution of a nation’s wealth and, by extension to today’s interrelated world, the world’s wealth. “The milk and honey is fairly shared only if each person has sufficient opportunity to meet basic needs. Once basic needs are made, the surplus must be distributed according to some other criterion… Biblical justice demands that basic needs be met.” 199 An application of this principle to world governments, church leaders, etc. is necessary because “a nation or a world will have a just economic system only if it provides opportunity for all the people to have sufficient income to draw enough from earth’s resources to meet basic needs.” 200 People must have a balanced diet, clean and available water, a clean environment, education and effective social amenities.

199 Loren, *Christ and Creator and Redeemer*, 244.
200 Loren, 244.
Chapter Three Summarized

The Bible provides a foundational and adequate view of creation. God is the Creator and has established a pattern for human beings to relate with Him and for humans to relate to each other and human to nature. A proper view of and relationship with God gives us a proper view of good stewardship of creation – human and non-human.

The Old Testament has given us the starting point of creation, humanity’s fall and its consequences. The New Testament gives us the picture of salvation and future glory.

The rightful stewardship of creation is seen in the principles of work, Sabbath rest, harvesting and tithing, and justice. God is the author and sustainer of all creation; humans are given responsibility to till and keep the “garden.”
Chapter 4: Conclusions and Recommendations

Creational-care problems in Nigeria include overpopulation that does not only involve giving birth to children but also how to properly take care of and train them to be responsible human beings on this planet.

Pollution of different kinds is another problem in Nigeria that has devastated many people and the land due to oil spills; air, water, and soil contaminations; and noise and visual pollution. These pollutions are not just to be considered in the light of rational decisions about whether to bury, burn, recycle, or produce less or stop using the land. The impact on health, society, and the environment must also be considered. Assessing the benefits and costs of various ecological management policies and projects is complex because it involves numerous interconnected economic, social, and biological components.

Cultural views provide room for deification of nature as in African pre-colonial times. This is problematic in the present context because it goes contrary to the conception of reason and logic. Deification of nature, according to God’s plan, is wrong because it makes humanity responsible to nature instead of to the Creator. Presuppositions of human supremacy over nature in classical Christian thinking and the conclusion of scientific evolution theory that humankind is at the top of the evolutionary scale have led to serious abuses of nature. The acceptance of the godhood of nature is not only deceptive but also ridiculous.
The worldview of modernity and the scientific mal-treatment of nature, as observed in this thesis, contribute to the neglect of the proper care of nature because they demystify it and thus expose nature to abuses. This model is significant because it provides the framework for scientific advancements and achievements since it neutralizes the value of nature and represses the scientific instincts for research and exploration. However, despite its merits, the scientific worldview, with its desecration agenda, subjects nature to the scrutiny of humans, making nature in this context an object which can be manipulated, harnessed, and managed, for the advantage of humanity but to the detriment of the ecosystem. By such thinking, especially as articulated in the evolutionary theory of Darwin and other Enlightenment thinkers, nature seems to have a higher or more divine purpose other than to fulfill the whims and caprices of humans. With such faults in the scientific worldview that encourage the abuse of nature, this view cannot solve the ecological crisis in Nigeria.

Cultural modernity with its superstitions, intellectual, and industrial/technological components created a world of optimism and hope. The common assumption of past centuries was that knowledge and technological sophistication would give human satisfaction, progress, and have value for humanity. This vision was to be fulfilled to the detriment of the Divine purpose for creation. There was no need for depending on God for anything; humans could get what they wanted through modernity.
Indeed, modernity brought much to the human race. The gifts of medicine, business growth, technical know-how, and political/social movements towards freedom are all welcome. But the kingdom has not come. Modernity not only brought us scientific and technological progress, but it also gave us some harms and the worst evil ever known in human history, as rightly observed by Hollinger.201

For Nigeria, we are neither cold nor hot (lukewarm). One would wish that we were one or the other, so that God’s creation can have proper treatment and emphasis. We are not enjoying the benefit of modernity, only the havoc.

Hollinger rightly observes that the problem with modernity is not that it failed us, but it carried within itself seeds of moral and spiritual destruction. This does not mean that the modern age is more evil than others. But the tools of modernity are more powerful as it continues to shape humanity and presents significant challenges to the worldview of the church of the Lord Jesus Christ.202

Since culture and modernity cannot solve the ecological crisis in Nigeria, what then is the solution? I propound that only the Word of God has the final say about God’s creation. Culture and modernity are only good if they are founded on the standards of the Bible.

The Bible provides a foundational and adequate view of creation. God is the Creator and has a pattern for human beings to relate to Him, for humans

201 Hollinger, Choosing Good, 145.
202 Hollinger, 147.
to relate to each other and for humans to relate to nature. A proper view and relationship with God gives us a correct view of good stewardship of creation – human and non-human.

The Old Testament has given us the starting point of creation, and humanity’s fall and its consequences; while the New Testament gives us the picture of salvation and future glory.

The rightful stewardship of creation is seen in the principles of work, Sabbath rest, harvesting, tithing, and justice. God is the author and sustainer of all creation; humans are given the responsibility to till and keep the “garden.”

**Recommendations**

**Government**

The barriers to effective ecological management in Nigeria are not simply a lack of policy. There is also a lack of infrastructure, education, social awareness of both the problems and solutions and a lack of institutions promoting sustainable actions.

1. Facilities for clean water should be made available.

2. Government and private sectors should provide a place where waste can be dumped. North America is a leader and a model in providing comprehensive waste management services. Trucks pick up waste bins and Waste Management provides solid waste collection, recycling, and disposal options to homes, communities, businesses and industry. They provide services from curbside collection to hazardous waste disposal, from municipal recycling
programs to modern landfill operations. The Nigerian government can learn these principles of waste management.

3. There should be alternatives to polythene water sachets. Those producing such items should also consider recycling them after they are used and providing containers where the empty polythene can be disposed of without littering the environment and staying on the land.

4. The Government should help provide cheaper environment-friendly alternatives to firewood and oil. For example, Africa is blessed with plenty of sun. Besides using coal stoves and biogas plants, equipment (e.g. cookers, water pumps, dryers, chick brooders, etc.), the use of solar energy may be better. I think that with thorough research even affordable solar cars are possible. In addition, arid areas could benefit from improved methods and machinery for irrigation. This will check deforestation and over-dependence on petroleum.

5. Nigeria as a country does not have recycling facilities. These should be established either by the government, or by individuals, and the private sector should be given the opportunity to do that.

6. People should be made aware of the importance of a clean environment, trees, fertile land, and the dangers of not taking care of these. Legally, there should be laws guiding people’s behavior in society concerning environmental care, e.g., people would have to pay a fine or get a ticket if they litter the environment.

Housing
1. Every household must have a rest room, not necessarily a water system; it could be a pit toilet.

2. Every household must have waste bins. All businesses should be required to have waste bins as well.

3. There should be a law guiding the care of animals; e.g., people should not chase animals or kill them for food indiscriminately.

4. People should be made to plant trees every year.

5. Industries or any form of business that are hazardous to human health should not be permitted.
Society

Socially, people should live and work according to their status, not violating the law of progress by jumping from one level to another overnight. The dignity of human beings, as well as the integrity of nature, should be considered in our society.

1. People should develop a simple lifestyle: not living in poverty, but having what they need and using it well. People should avoid excessive materialism. Individuals, especially, should be encouraged to think about the future generations instead of now wasting resources due to excessive consumption.

2. Habits and traditions should be changed in terms of the material we use in our society. For example, taking a large, reusable, shopping basket to the market can replace twenty polythene bags that are non-biodegradable.

Economics

Economically, there should be fairness in sharing God’s given resources.

1. Homes should be built to lodge the less privileged and disabled instead of deserting them on the streets.

2. Things that are not useful should not be allowed into the country, e.g., rusted cars, expired products like drugs, food etc.

Church

The churches should be the agents of change in creational care. They should teach people what the Bible says about creation and what God expects from His children in regard to taking care of what He has made.
1. Churches should provide waste management systems that will take care of their environment. Many churches in Nigeria have their own schools, offices, hospitals and businesses. They can start being an example to the rest of the people in society by showing an interest in the environment.

2. Churches should also provide for the needy and not allow people made in the image of God to roam about our streets, hungry and homeless. They can integrate care of creation in the curriculum of their schools and even in Sunday school lessons.

3. They can also teach people the importance of not just having children as culture demands but how to raise the children to walk in the ways of the Lord. Family planning should be taught in the church.

This study has exposed the creational havoc in Nigeria and has tried to create an awareness of the need for good creational management. Overpopulation, different kinds of pollution, culture, modernity, etc. have contributed immensely to the creational crisis in Nigeria. This research has seen the need to reconsider the biblical principles of the care of creation. Issues about creational degradation are many and could not be dealt with exhaustively. The effort and information found in this thesis, if used properly, would provide a change and lead to minimal havoc of God’s creation in Nigeria. Paul says our feet are still planted in the old while we live in the new life. But there will be total transformation when Jesus returns. Everything will be renewed, and there will be a new heavens and a new earth!


Berry, R.J. Sam. *Biblical Basis for Creation Care.* University of London, (1994)


Dyke, Fred Van. “Bridging the Gap: Christian Environmental Stewardship & Public


Eckberg, L. and T. J. Blocker. “Varieties of Religious Involvement and Environmental
Concerns: Testing the Lynn White Thesis.” Journal for the Scientific Study of

York: Garden City, 1961.


Frick, S. Frank. “Ecology, Agriculture and Patterns of Settlement,” The World of

1976.

USA2001

Rapids: InterVarsity Press, 1994

Hendriksen, William, New Testament Commentary – Exposition of Paul’s Epistle to


Hamm, Denis. The Eco-Crisis and the New Testament, Newsletter, Center for the

Hespanhol, P. Helmer (ed). Water Pollution Control: A Guide to the Use of Water


Malchow, Bruce. “*Nature from God’s Perspective*.” *Dialog* 21 Spring, (1982).


Rowthorn, Anne. Caring for Creation, Wilton, Morehouse Publishing USA, 1989


File://A\Land and environmental degradation and desertification in Africa htm, p. 2.


http://www.Economy of nature/the New Economy of Nature: The Quest to Make Conservation Profitable


