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The Exploitation of Nature and the Risk of Environmental Crisis

Philip IGBO, CMF

Introduction

The environment has suffered from various levels of devastation from the dawn of civilization. This situation has witnessed increased and rising tempo especially since the beginning of the Industrial Revolution. Environmental degradation is to a great extent occasioned by human activities like the unconscionable exploitation of nature and its resources. The consequences of this are seen in various forms of environmental crisis.

The most worrisome of the environmental crisis stem from the possible consequences of global warming caused by the atmospheric build-up of carbon dioxide and other green house gases due to human activity.⁴⁸ The increase in the concentration of the Green house gases contributes to climate change and consequently to global warming. Global warming is a consequence of a continuous flow of energy from the sun. This energy arrives mainly in the form of visible light. Much of this energy from the sun passes down through the atmosphere to warm the earth's surface. The earth sends out the excess energy back into space in the form of infrared radiation. But the "greenhouse gases" (GHG) in the atmosphere block the infrared radiation from escaping from the surface into space. This is known as the 'greenhouse effect.'⁴⁹ This contributes to global warming and climate change. Scientists predict that the global average temperature will rise by about 2°C by the year 2100 if current emission trends continue.⁵⁰ This situation could create environmental and social disaster.⁵¹ Apart from global warming,

⁴⁸ H. Brundtland (Ed), *Our Common Future, The World Commission on Environment and Development*, Oxford: Oxford Uni Press, 1987, p294.

⁴⁹ S. Cleary, *Renewing the Earth, Development for a Sustainable Future*, London: CAFOD, 1989, p15.

⁵⁰ Available at lejpt.academicdirect.org: Brundtland (Ed), 1987, p.175

⁵¹ N. G. Wright and D. Kill, *Ecological Healing, A Christian Vision*, New York: Orbis Books, 1993, p24.

greenhouse gases are also responsible for the ozone layer⁵² depletion. It is generally accepted by scientists that the depletion is caused by man-made air pollutants. Scientists generally agree that the depletion of the ozone layers and the consequent global warming increases the risk of skin cancers through exposure to heat and radiation from the sun. The question is: to what extent will humanity be at risk before governments agree to take action to cope with climate change? In his 2009 message on world peace which came, interestingly, at the same time of the global energy summit at Copenhagen, Pope Benedict XVI called for a global solidarity in tackling the problem of climate change, desertification, deforestation, environmental degradation and pollution and the loss of biodiversity.⁵³ Sadly, as reflected in the outcomes of Copenhagen, a global consensus on a united way forward in caring for the earth was not arrived at. But humans cannot afford to be indifferent to the signs of the times such as climate change without risking their survival and wellbeing.

The aim of this paper is to evaluate the impact of the exploitation of nature and its effects on the environment. I shall reflect on this theme in the light of Gen 1:26, 28 which is often cited as the basis of the human dominion of nature and its resources. I shall then study the impact of natural oil exploration on the socio-environment of the oil producing communities of the Niger Delta of Nigeria.

2. Gen 1:26, 28 and the Environment

Let us make humankind in our image, according to our likeness; and let them have dominion ... over all the earth (Gen 1:26)

Be fruitful and multiply, and fill the earth and subdue it (Gen 1:28)

⁵² *The Encarta Dictionary*, 2009 edition, defines the ozone layer as the layer of the upper atmosphere, from 15 to 50 km/10 to 30 mi above the Earth's surface, where most atmospheric ozone collects, absorbing harmful ultraviolet radiation from the Sun.

⁵³ Message of His Holiness, Pope Benedict XVI, for the Celebration of the World Day of Peace, 17 January, 2010, http://www.vatican.va/roman_curia/pontifical_councils/family/doc

The uniqueness of humans is affirmed in the fact that they alone are made in God's image (*selem*) and likeness (*demut*), and in the fact that God gave them power to exercise sovereignty over the earth and all the animals (cf. Gen 1:26-28). This divine mandate appears in v.28 as an explicit command: "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth." The Hebrew word for "rule," *radah*, means "to tread down, subjugate, prevail against." The second word used in verse 28 is "subdue" (*kabash*), which is probably meant as a synonym for "rule." These words express superiority in the strongest terms.⁵⁴

The author of Gen 1:16, 28 tells us that humans are endowed with authority over animals. This is evident in the fact that they are authorized to name the animals (Gen 2:19).⁵⁵ Humans alone, by their position in the ladder of creation, as H. Gross writes, are granted to share in the divine sovereignty (cf. Ps 8:5 ff.; 145:12) which enables them to perform their task of ruling and preservation of the world (Gen 1:18).⁵⁶ As the "Image of God" humans have the capacity to have fellowship with God.⁵⁷ From this fellowship with God comes a deep understanding of the fellowship between humans and their physical world: both were created by God.

The commission "to rule" is not part of the definition of God's image, but rather is its consequence, i.e., humans are capable of ruling the earth because they are the Image of God.⁵⁸ By virtue of this mandate humans are empowered to act as God's viceregents in the world, to maintain order in creation, to be partners with God in the ongoing development of the universe.⁵⁹ The commission

⁵⁴ The Brown-Driver- Biggs, vbk, *Hebrew and English Lexicon*, Massachusetts: Hendrickson, 2003, p461.

⁵⁵ G. J. Wenham., *Word Biblical Commentary, Genesis 1-15*, Texas: Word Books, 1998, p61.

⁵⁶ H. Gross, "Creation", in *Sacramentum Mundi*, 2, Bangalore: Theological Pub, 1978, p30.

⁵⁷ Wenham, *Genesis 1-15*, pp30-31.

⁵⁸ Von Rad, *Genesis*, London: SCM Press, 1972, p59.

⁵⁹ M. Maher, *Genesis*, Wilmington: Michael Glazier, 1982, pp29-30.

comes directly after the statement about the divine image in humans, and must be understood in terms of it. It is only as the Image of God that humans can exercise their divinely legitimated rule.⁶⁰ However, the "image of God" in us does not make us God. It does make us God's agents or stewards with a responsibility to preserve the earth.⁶¹

2.1 *Humans as Stewards of the Earth*

The Yahwistic writer portrays the creator as a divine potter (Gen 2:4b-25). God's shaping skill is seen in shaping (*yasar*) man (*Adam*) "from the dust of the land" (*adamah*) (Gen 2:7). To say that man (*adam*) was formed from the dust of the earth (*adamah*) is to emphasize his relationship to the land.⁶² Adam and Eve were given the task of stewardship and care of the Garden. Our vocation as humans is to be caretakers of creation and stewards of the earth.⁶³ The idea of stewardship is underlined in Gen 2:15 where the man is mandated to "till" (*abad*) the garden and keep (*shamar*) it" (i.e., take care of it.). Even when the man was later expelled from the garden due to his disobedience to the probationary law, the mandate to till the ground and (by implication) to preserve it was not withdrawn. From the Yahwist perspective, stewardship rather than dominion is the guiding principle.

The theme of caring for creation occurs in other parts of the OT. Humans are to care for the land (Lev 25:1-5), to treat domestic animals properly (Deut 24:4) and respect wild life (Deut 22:6). It is in line with this spirit of caring that Scriptures forbid slaughtering an animal with its young (Lev 22:28). Any purposeless destruction of fruit trees even in a besieged city is taken as an example of general wastefulness (Deut 20:19-20) and

⁶⁰ J. Moltmann, *God in Creation: An Ecological Doctrine of Creation*, London: SCM Press, 1985, p225; R. Elsdon, *Bent World: A Christian Response to the Environmental Crisis*, Illinois: InterVarsity Press, 1981, p103.

⁶¹ H. G. Perelmuter, "Do not Destroy" Ecology in the Fabric of Judaism" in R.N. Fragomeni (ed.), *The Ecological Challenge, Ethical, Liturgical, and Spiritual Responses*, Minnesota: Michael Glazier, 1994, p133.

⁶² *Adamah* is grammatically the feminine form of *adam*.

⁶³ Wright and Kill, *Ecological Healing*, p.91.

therefore, forbidden. This prohibition extends to all wanton acts of destruction of the ecosystem. Under this concept of *löl'-tašHīt* (do not destroy), the purposeless destruction of anything at all is taken to be forbidden. This serves as a warning to humans not to misuse the position which God has given them as masters of the world.

2.2 *Human Beings: Stewards not Exploiters of the Earth*

H. G. Perelmuter notes that the position of humans in the order of creation summons them to the task of responsibility and stewardship.⁶⁴ N. Mbogu remarks that "humanity stands as part of God's creation within an orderly created universe, in a network of lives woven from threads of dependence and interdependence." For humans to exercise this task of stewardship responsibly, they have to respect the wisdom and integrity of an earth-ecosystem where humans and other sorts of life flourish.⁶⁵ What is decisive in the mandate given to humans in Gen 1:26, 28 is the task of caring for the earth as God's representatives. Even though Gen 1:28 says that humans are empowered to harness and use the resources of the earth for their legitimate needs, the text does not grant humans any license for an unbridled exploitation of nature,⁶⁶ which has often occurred under modern industrial and agricultural capitalism. Such a heedless plundering of nature is contrary to the order of creation, an order which is characterized by mutual interdependence.⁶⁷ Jurgen Moltmann understands the human lordship over the earth as a "lordship exercised by a tenant" on God's behalf.⁶⁸ It is a caring role modeled on God's ultimate dominion,⁶⁹ a God-like responsibility for the natural world.⁷⁰

⁶⁴ Perelmuter, "Do not Destroy", p132.

⁶⁵ N. Mbogu, *God of our Environment: In Search of Christian Environmental Ethics*, A Paper presented at the Annual Missiological SIST Symposium, March 17-20 2009, Enugu: Snaap Press, 2010, pp6-7.

⁶⁶ G. J. Wenham, 1998, p33; N. Mbogu, *God of Our Environment*.

⁶⁷ John Paul II, 1990 Word Day of Peace, par 8.

⁶⁸ Moltmann, *God in Creation, An Ecological Doctrine of Creation*, London: SCM Press, 1985, p224.

⁶⁹ J. T. Pawlikowski, "Theological Dimensions of an Ecological Ethic," in *The Ecological Challenge, Ethical, Liturgical, and Spiritual Responses*, R. N. Fragomeni (Ed), 1994, pp44-45.

⁷⁰ J. B. Tubbs, Jr., "Humble Dominion," *Theology Today*, L/4 (1994) 549, (pp543-556).

Humans, therefore, would be over stepping their limits were they to exploit the world's resources to the detriment of the land, plants life, animals, rivers and seas.⁷¹ Paul VI insists that any "ill-considered exploitation of nature" by humans puts humans in the risk of destroying nature and becoming in their turn the victim of this degradation.⁷² Material exploitation of nature brings along not only adverse consequences of pollution and illnesses but also creates an environment for tomorrow which may well be intolerable. In his first encyclical *Redemptoris Hominis*, John Paul II remarks that humans are empowered that they should communicate with nature as guardians and stewards, and not as heedless exploiters and destroyers.⁷³

In biblical times the role of a steward was to manage the estate for profit while also ensuring its long-term viability. Short-term desires for profit were tempered by the need for long-term survival. The preservation of what is given "on trust" demands a recognition of the owner's dictates for the resources. If harnessing the treasures of nature is necessary to sustain life, then equity demands that we must leave some equally accessible and beneficial legacy to replace what has been exhausted.⁷⁴ Humans, therefore, have, as J. P. Dobel says, "the obligation not to exhaust non-renewable resources, the imperative to provide accessible replacements, the necessity to improve our heritage modestly and carefully, the greater responsibility of the advantaged to share..., and the obligation to refrain from excessive consumption and waste."⁷⁵ True stewardship requires both respect for the trusteeship and an active effort to improve that which has been entrusted to us. This stewardship is a collective responsibility. We have the responsibility to leave behind for future generations something of the opportunities and heritages we have inherited from the earlier generation. We should not impose on future

⁷¹C. Westermann, *Creation*, London: SPCK, 1971, pp52-53.

⁷²Pope Paul VI, *Octogesima Adveniens*, 1971, par 21.

⁷³John Paul II, *Redemptoris Hominis*, par 15.

⁷⁴J. P. Dobel, *Stewards of the Earth's Resources: A Christian Response to Ecology*, www.christiancentury.org, March 10, 1967.

⁷⁵Dobel, *Stewards of the Earth's Resources*.

generations any responsibilities greater than those which prior generations have left for us.⁷⁶ It follows, therefore, that our actions must be guided, in part, by a concern for future generations.

Today the world faces a dramatic threat of ecological breakdown owing mainly to human activity. Humans need to deepen an attitude of respect towards life and respect for the integrity of the entire ecosystem. Respecting the environment does not mean considering material or animal nature as more important than humans. At the same time humans cannot afford to over exploit nature's deposits without inviting environmental disaster. Our future and the future of the planet, as P. J. Wadell says, hinges on our willingness to change.⁷⁷ There is need therefore for a global solidarity in the fight for an ecologically sound environment for people today as well as for future generations.⁷⁸

3. Natural Resources as an allotted heritage

The Priestly writer conceives of God as the creator, the origin and the lord of all that exists (Gen 1:1- 2:4a).⁷⁹ Even though the creator entrusted the earth to humans, the Creator's sovereignty over the land and its deposits prevails. Humans are no more than resident aliens (*gërîm*), or tenants (*tôšäbîm*) in a land owned by God⁸⁰ (Lev 25:23; cf. Exod 19:5; cf. Ps 104:24). God's dominion over the world and its inhabitants rests on the fact that he created it (Ps. 24:1-2).⁸¹ Humanity's relation to the earth is expressed in the fact that God "entrusted" the earth to humans (Ps. 115:16). This gift does not, however, grant humans sovereign control over the earth and its deposits. Rather the world and its resources are an "allotted heritage" (Ps. 2:7-12). An "earth of abundance" (Judg. 18:10) provides for humanity's needs and survival (Gen. 1:26-28, 9:2-

⁷⁶ Wright and Kill, *Ecological Healing*, p.92

⁷⁷ P. J. Wadell, "Taming an Unruly Family Member: Ethics and Ecological Crisis," in R.N. Fragomeni (ed.), *The Ecological Challenge, Ethical, Liturgical, and Spiritual Responses*, 1994, pp62-63.

⁷⁸ Paul VI, 1977 message for the World Day of the Environment.

⁷⁹ P. Smulders, "Creation", in *Sacramentum Mundi* 2, Bangalore: Theological Pub, 1978, p24; Von Rad, *Genesis*, p49.

⁸⁰ J. E. Hartley, *WBC 4, Leviticus*, Dallas, Texas: Word Books, 1992, p437.

⁸¹ P. C. Craigie, *WBC, vol 19: Psalms 1-50*, Dallas, Texas: Word Books, 1998, CD Rom Edition.

5).⁸² Humans, therefore, have the responsibility to preserve the "land" and respect the ecosystem. Each generation exists only as "sojourner" or "pilgrim." We hold the resources of the earth as a "trust" for future generations. The combined emphases upon God's ownership and our trusteeship call for care on the part of humans in dealing with the world and its resources.⁸³ From the foregoing, we must not fail to ask: what is the implication of the exploitation of nature's treasures on the environment?

4. Mineral Exploration and the risk of Environmental crisis

Environmental crisis is a crisis which human beings have brought on themselves and their natural environment owing to a wanton exploitation of nature's resources.⁸⁴ Today's global economy is dominated by a drive for capital accumulation. This creates ecological problems on a global scale which are threatening to engulf the planet and humanity as a whole. The unbridled exploitation of natural resources with its consequent environmental degradation is a by-product of materialism. Materialism is a result of the insecurity which pervades human existence and which stems from man's estrangement from God. When material prosperity is seen as an end in itself, it helps to blind people to the consequences of environmental degradation which is one side effect of a wanton exploitation of nature. The reason for the exaggerated exploitation of natural resources lies in greed and selfishness. The arrogant sense of independence and the greedy effort to overcome the insecurity of nature's rhythms and seasons move humans to seek to exploit the natural resources with excessive zeal and beyond natural requirements. Greed, as Elsdon puts it, is the expression of the human inordinate ambition to hide his insecurity in nature.⁸⁵ This greedy quest to plunder nature's resources, driven by a short-term gain, cannot go without inviting environmental disaster.⁸⁶ The consequences of this are

⁸² Dobel, *Stewards of the Earth's Resources*.

⁸³ Dobel, *Stewards of the Earth's Resources*.

⁸⁴ Moltmann, *God in Creation*, p23.

⁸⁵ Elsdon, *Bent World*, p113.

⁸⁶ Elsdon, *Bent World*, p99.

manifold: impending exhaustion of physical resources, ecological imbalances and environmental pollution, climate change and global warming.⁸⁷ Let us now narrow our discussion to the environmental impact of oil exploration in the Niger Delta of Nigeria.

4.1 *Oil Pollution and the Environment*

The word "pollution" depicts environmental contamination. The oil industry is a major polluter of the environment. There is no doubt that the oil industry has fashioned a remarkable economic landscape for the country since crude oil exploration began in Nigeria five decades ago. Indeed, it has made an enormous contribution to Nigeria's foreign exchange earnings. However, when considered in respect of the degradation of the socio-economic life and the environment of the immediate oil bearing communities of the Niger Delta of Nigeria, oil exploration has left a balance sheet of ecological and socio-physical disaster.⁸⁸ The oil exploratory activities have over the years had adverse contaminatory effects on the streams, rivers, the soil, the air and the socio-physical environment of the immediate oil producing communities through oil spillage and hydrocarbon emissions. The toxicity of the oil adversely affects soil, plant, animal and water resources. The major constituents of drill cuttings such as barites and bentonite clays when dumped on the ground prevent plant growth until natural processes develop new topsoil. These materials are equally very harmful to marine animals. Atmospheric contaminants from oil exploratory and refinery operations include oxides of nitrogen, carbon and sulphur. Liquid refinery effluents usually contain oil and grease. These compounds, according to W. S. Owabukeruye, contain organic chemicals such as phenol cyanide, sulphide-suspended solids, chromium etc, which pollute the land and water on getting in contact with them.⁸⁹

⁸⁷ Elsdon, *Bent World*, p114.

⁸⁸ W. S. Owabukeruye, "HydroCarbon Exploration, Environmental Degradation and Poverty in the Niger Delta Region of Nigeria," January 2000.

⁸⁹ Owabukeruye, "HydroCarbon Exploration."

4.2 *Impact of Oil Spill in Nigeria's Niger Delta*

Oil spills result from corrosion of oil pipes, poor maintenance of infrastructure, leaks and human error, vandalism, theft of oil and sabotage. The crude oil spills have devastating consequences on the aquatic, aerial and terrestrial environs with adverse chain effects on both bio-diversity and humans.⁹⁰ When oil spills on water, it spreads immediately. The gaseous components evaporate, polluting the air and thus affecting aerial life. Some of the liquid components get dissolved in water and even oxidize, and some undergo bacterial changes and eventually sink to the bottom by gravitational action, affecting aquatic life⁹¹ through direct lethal toxicity. The entry of hydrocarbons into the food web of the aquatic life causes an alteration of biological habitats of the sea animals.⁹² This causes both immediate damage and long-term harm to fish stocks, including the ability of fish to reproduce. The oil spill on the ground contaminates the soil and adversely affects the terrestrial life. This is because these chemicals contain harmful and toxic organic compounds which affect the geo-chemical composition of the soil and the river, thus making the soil to lose its fertility and the water its fecundity; hence the drastic decline in output in both fishing and farming activities.⁹³ All these are part of the burdens which the oil producing communities have been bearing over the decades.

4.3 *Gas Flaring and the Environment*

The flaring of associated gases in the course of the production and processing of oil has over the years left behind a balance sheet of environmental pollution. The flaring process usually takes place very close to the communities and their farmlands. Oil flaring has been implicated in serious environmental degradation of the region. Studies suggest that there are links between gas flaring and health problems in the communities on the one hand and

⁹⁰ E. A. Akpofure et al, "Oil Spillage in Nigeria's Niger Delta", Available at www.waado.org/.../oilspills/OilSpillPage.html

⁹¹ Akpofure et al, "Oil Spillage in Nigeria's Niger Delta.

⁹² Owabukeruyele, "HydroCarbon Exploration.

⁹³ Owabukeruyele, "HydroCarbon Exploration.

between gas flaring and poor agricultural yields on the other.

Nigeria has an estimated 180 billion cubic feet of proven natural gas, making it the ninth largest concentration of natural gas in the world. Due to unsustainable exploratory practices, coupled with the lack of gas utilization infrastructure in Nigeria, a great percentage of gas produced in the country is burned annually. The World Bank estimates that Nigeria loses about 2.5 billion dollars annually to gas flaring.⁹⁴ Apart from such a huge financial loss owing to gas flaring, there are also the attendant environmental and health problems which millions of Nigerians living in oil bearing communities are exposed to. These include exposure to intense heat, chemicals, toxic smoke and roaring noise etc. The inhalation of these gases makes people susceptible to diseases like bronchitis and skin problems. The incineration of the gas produces sulphur oxides which are released into the atmosphere. The end result of these compounds when they combine with other atmospheric components, namely oxygen and water, is what is called acid rain which produces several negative effects on the environment.

Experts suggest that gas flaring leads to the emission of carbon dioxide into the atmosphere. And the venting of the gas without burning releases methane. Carbon dioxide and methane are the main greenhouse gases which contribute to global warming. Gas flaring not only harms the environment, it is also a huge waste of a cleaner source of energy that could be used to generate the much needed electricity in the country. The reduction of gas flaring will substantially reduce atmospheric greenhouse (GHG) emissions thereby securing environmental stability in the Niger Delta. This will also be an additional source of income to the country. The continuous flaring of gas in Nigeria would suggest that the Nigerian government and multinational oil companies are insensitive to the plight of the people of the region. Ironically,

⁹⁴ See. www.compassnews.net/.../index.php?...nigeria...gas-flaring

Nigeria has laws and regulations that require oil companies to comply with internationally recognized standards of "good oil field practice", and laws and regulations to protect the environment. But these laws and regulations are poorly enforced.

Considering the health and environmental implications of gas flaring, the Nigerian government proposed, for the year 2003, the application of zero gas flares policy in Nigeria.⁹⁵ But the oil producing companies in a joint reaction to the policy held that a zero gas flare in 2003 is technically infeasible. They held that accelerating the flare program requires huge investment for the acquisition of the required technology. A lot more pipelines would have to be built to collect all the gas. This certainly would entail huge financial investments from the Government and all the stakeholders. Operators insist that the government is not keeping up to its end of the funding agreement. The question is: how sincere is the Nigerian Government's commitment in reducing gas flaring in the country? Why does the government not get tough with the oil companies? Evidently the government fears that shutting down the oil wells to force oil companies to collect the gas would affect the production of oil. This would mean losing valuable revenue.⁹⁶ Consequently, following the pressure of the oil companies, the government rescinded its initial 2003 deadline and extended it to the year 2008. We are already in 2010 and gas flaring has continued with unabated tempo in Nigeria. Two deadlines have been set and passed without any appreciable reduction of the flames. Ours is a protracted history of shifting goal posts, missing deadline after deadline, shifting commitments, shady deals and ignored legislations. All these mar any target to stop gas flaring in Nigeria. The problem has always been the laxity in policy making and implementation particularly in the energy sector in Nigeria.⁹⁷ There is no gainsaying that minimal gas flaring is possible. What is needed is a political will

⁹⁵ C. Evoh, Gas Flares, Oil Companies and Politics in Nigeria, The Guardian On-Line - <http://nrguardiannews.com>, February 18, 2002.

⁹⁶ See, www.compassnews.net/index.php?nigeria_gas-flaring.

⁹⁷ Evoh, *Gas Flares*, 2002.

and an unflinching commitment on the part of the government, the operators and stakeholders. The government must provide its own required funding, create enabling secure environment to operate, be firm and tough with the operators and agree with the operators and stakeholders on a realistic deadline. This is important in order to save our environment from further degradation occasioned by gas flaring. Oil spills and gas flaring, however, are not the only polluters of the Nigerian environment. On a wider scale, the vehicular emissions are also a major polluter of the Nigerian environment.

4.4 *Vehicular Emissions*

The burning of fossil fuel and vehicular emissions contribute to atmospheric pollution. Today there is an increasing number of second-hand vehicles (Tokumbo) as old as 20 years and a parade of motorcycles (Okada) on the Nigerian roads. Equally, owing to the epileptic supply of electricity in Nigeria, electricity generation sets flood into the country. Vehicles and power plants derive their energies from the combustion of fossil fuel in their internal combustion chambers. The fossil fuel emissions include sulphur dioxide, nitrogen oxides, carbon monoxide, various volatile organic compounds, fly ash and other suspended particles. These are then emitted into the environment as exhaust gases. These gaseous emissions have harmful effects on humans, animals and the environment. Hydrocarbons and nitrogen dioxide⁹⁸ (NO₂) which are emitted principally from automobiles are the major ingredients of photochemical smog.⁹⁹ With the pegging of the allowable age of second-hand cars imported into the country to eight years, there could be a sizeable reduction of emissions of Carbon dioxide (CO₂) and other pollutants into the

⁹⁸ Nitrogen dioxide (NO₂) is a highly poisonous brown gas often present in smog and exhaust from vehicles. Use: manufacture of nitric and sulfuric acids.

⁹⁹ J. J. Enemari, "Vehicular Emission, Environmental and Health Implications, 15th-16th November, 2001, www.airimpacts.org/documents/local/articles; Smog is a type of air pollution. It is a mixture of fog and smoke or other airborne pollutants such as exhaust fumes. Smog usually forms when photons of sunlight hit molecules of different kinds of pollutants in the atmosphere. The photons make chemical reactions happen. The pollution molecules turn into other kinds of nasty chemicals. That mixture of bad chemicals is called photochemical smog. Smog smells bad and makes it hard for people to breath. It can also damage materials. Smog is a very harmful kind of air pollution.

atmosphere.¹⁰⁰

It is true that Carbon dioxide is an essential ingredient in the cycle of life on earth. Plants directly use it in the process of photosynthesis. The environment also absorbs Carbon dioxide from human and natural activities. But Carbon dioxide becomes a problem both to animals and humans if atmospheric concentrations of this gas reach toxic levels. Unfortunately, many of the trees that absorb this gas are being cut down. This increases the risk of atmospheric concentration of Carbon dioxide and thus results in an increase in ambient temperature and consequent climatic changes.

5. Environmental Justice

God the Creator desires *shalom* or justice in and for the created order. The biblical vision of justice includes justice for nature. Environmental injustice is violence against the environment, against the atmosphere, against the ozone layer and against the seas and rivers. Social injustice affects individuals and social groupings directly. Environmental injustice affects them indirectly, but with immediate harmful consequences, since the decline in the quality of their surroundings produces social tensions, disease, malnutrition and even death. It is not only the biosphere that is affected, but the global ecosystem of the planet Earth.¹⁰¹ The earth, as L. Boff notes, is crying out because it is a victim of environmental injustice.¹⁰² The earth can no longer support the mechanisms of destruction and death implanted in it.

The over-exploitation of natural resources, pollution of the natural environment and the growing effects of climate change are changing the face of the earth. We are seeing the death of life in the extinction of species on a scale not previously experienced by humanity. One of the biggest threats to human survival in

¹⁰⁰ Enemari, "Vehicular Emission".

¹⁰¹ L. Boff and V. Elizondo, "Ecology and Poverty: Cry of the Earth, Cry of the Poor, Ecology" in *Ecology and Poverty*, L. Boff (Ed), London: SCM Press, 1995, pp.ix-x

¹⁰² Boff and Elizondo, "Ecology and Poverty", pxi

today's world is the threat of a completely devastated environment. N. Bassey warns that if this situation continues unabated, then humans may soon find themselves at a threshold of environmental disaster."¹⁰³ Humans must wake up to the cost of human activity on the earth. Humans cannot afford to plunder the natural environment at the risk of destroying that which they need to survive.

There is, therefore, an urgent need to respond to environmental challenges of pollution and degradation of the environment. This is necessary in order to save the environment from further degradation. Although the biblical prophets lacked the modern day scientific knowledge, they were highly sensitive to the interactions that knit the human community to the environment.¹⁰⁴ The prophets were also concerned about the damages which human activities can inflict on the landscape (cf. Isa 24:4-6). The Prophets, therefore, called for a reestablishment of a just, respectful relationship with God, the society and nature (Isa 28:14-18, 22-23).¹⁰⁵ Humans must recognize the otherness of nature and respect the intrinsic and autonomous value of every being on the planet. Humans must either change their attitude towards nature or they head straight for greater ecological calamities.

6. Conclusions

Humans exist in the world as part of God's creation within an orderly created universe, in a network of lives woven from threads of dependence and interdependence. Human relationship with nature need not be ruled by attitudes of domination and triumphalism. Humans have the responsibility to care for the earth and respect the integrity of the ecosystem where humans and other sorts of life flourish. The exploitation of the riches of nature must take into account not only the immediate needs of

¹⁰³ N. Bassey, "The Land is Dying: The Environmental Rights Action/Friends of the Earth", Presented by The Environmental Rights Action/Friends of the Earth, at the Nigerian Association of Nigerian Authors (ANA) Annual Convention, Port Harcourt, Nigeria, Nov 2, 2001.

¹⁰⁴ Wright and Kill, *Ecological Healing*, p69.

¹⁰⁵ Wright and Kill, *Ecological Healing*, p70.

people, but also the needs of future generations. The resources of the earth are directed to the good of all humanity. Humans, therefore, must use them wisely as responsible guardians and stewards and not as short-sighted, selfish and greedy exploiters. Any ill-considered exploitation of nature by humans puts them in the risk of destroying nature and becoming in their turn the victim of this degradation. We can no longer fail to concern ourselves with the preservation and betterment of the environment in which we live. There is need, therefore, for a global solidarity in the fight for an ecologically sound environment for people today as well as for future generations. To save our world from further ecological crisis, we have to stand to the challenges of a responsible stewardship of the Earth.