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**POST VATICAN II TEACHING ON
ENVIRONMENTAL STEWARDSHIP**

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Praised be You my Lord through our Sister,
Mother Earth
who sustains and governs us,
producing varied fruits with coloured flowers and herbs.

St. Francis of Assisi

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ABBREVIATIONS

Gen	Genesis
Exod	Exodus
Lev	Leviticus
1 Kgs	1 Kings
1 Chr	1 Chronicle
Num	Numbers
Deut	Deuteronomy
Ps	Psalms
Is	Isaiah
Jer	Jeremiah
Hos	Hosea
Am	Amos
Matt	Matthew
Mk	Mark
Lk	Luke
Jn	John
Rom	Romans
Col	Colossians
CCC	<i>Catechism of the Catholic Church</i> (1994)
Cf.	<i>Confer</i> , compare
CBCP	Catholic Bishops' Conference of the Philippines
CSDC	<i>Compendium of the Social Doctrine of the Church</i>
Ed.	Edition, edited by; editor (pl. eds.)
e.g.	<i>exempli gratia</i> , for example
esp.	especially
etc.	<i>et cetera</i> , and other things
FABC	Federation Asian Bishops Conference
FAO	Food and Agriculture Organization

GHG	Greenhouse Gases
Gk	Greek
Ibid.	Ibidem (meaning: in the same place)
Idem	the same (author)
IPCC	Intergovernmental Panel of Climate Change
NT	New Testament
OT	Old Testament
OTC	The Office of Theological Concerns
P	Priestly Account (OT)
ppm	Parts per million
Trans.	Translator; translated by
Vol.	Volume
vs.	Verses
TAC	Theological Advisory Commission (FABC)
WCED	World Commission on Environment and Development
WHO	World Health Organization
UNESCO	The United Nations Education, Scientific and Cultural Organization

TABLE OF CONTENT

ACKNOWLEDGEMENT	ii
ABBREVIATIONS	iii
TABLE OF CONTENT	v
INTRODUCTION	1
CHAPTER I: THE BIBLICAL BASIS FOR ECOLOGICAL STEWARDSHIP	8
1. Care for Creation: An Essential Part of Christian Faith	8
1.1 The First Creation Account (Genesis 1:1-2:4a)	8
1.2 The Second Creation Account (Genesis 2:4b-25)	13
1.3 The Prophets and Psalms on Creation	18
2. The New Creation through Jesus Christ	22
2.1 The Humanity of Jesus Christ	22
2.2 The Ministry of Jesus and the Care for Creation	24
3. The Theology of Creation in St. Paul	28
3.1 The Groaning of Creation: Romans 8:19-23	28
3.2 Christ the First Born of All Creation: Paul to the Colossians 1:15-20	31
CHAPTER II : POST VATICAN II TEACHING ON ENVIRONMENTAL STEWARDSHIP	35
1. From Human Ecology to Environmental Stewardship	35
1.1 John Paul II: Peace with All Creation (1990)	36
1.2 Benedict XVI: If You Want Peace to Cultivate, Protect Creation (2009)	39
1.3 Pope Francis (Jorge Mario Bergoglio) on Ecology	40
2. <i>The Catechism of the Catholic Church</i>	44
2.1 “Thou shall not steal”	44
2.2 Respect for the Integrity of Creation	46
3. <i>Compendium of the Social Doctrine of the Catholic Church</i>	46
3.1 The Crisis in the Relationship between Man and the Environment	47
3.2 A Responsibility for the Common Good	49
CHAPTER III: LOCAL EPISCOPAL CONFERENCES ON ENVIRONMENTAL STEWARDSHIP	52
1. Asian Bishops’ Conferences	52
1.1 The Catholic Bishops’ Conference of the Philippines (CBCP): What is Happening to Our Beautiful Land (1988)	52
1.2 FABC: Federation of Asian Bishops’ Conferences	54

1.3	Global Warming and Climate Change and its Impact on Asia: Challenges and the Response of the Church	58
2.	U.S Conference of Catholic Bishops, <i>Renewing the Earth</i> (1991)	61
2.1	Consumption and Population	64
3.2	New Attitudes	65
2.3	New Actions	66
3.4	Call to Conversion	68
3.	German Bishops: Climate Change (2006) and Committed to God’s Creation (2011)	68
3.1	Challenges of Climate Change	68
2.3	Three Strategies of Sustainable Development: Efficiency, Consistency and Sufficiency	79
2.4	Signposts and Areas for Actions	89
	CONCLUSION.....	96
	BIBLIOGRAPHY	99

INTRODUCTION

There is a gradual awakening among people of the awesome responsibility we all have towards the environment and the cosmos we live in. The environmental crisis is one of the burning issues of our day and world and it is a topic of heated debates among politicians, economists, scientists, secular environmentalists, and religious leaders etc. “Voices are growing louder every day that the planet is facing an environmental crisis.”¹ These voices of concern are getting stronger and have to be taken very serious.

In Myanmar, specifically in the Kayah State, people also talk about the environmental crisis. One does not need to be an expert or a scientist to become aware of this crisis. We all are already experiencing situations of an environmental crisis in general, of global warming in particular, pollution, natural disasters, environmental destabilization, which no past human generation had seen before.

The environmental crisis becomes such a serious matter that all concerned people (ecologists, theologians, scientists, businessmen, policymakers, economists, etc.) should make it an urgent agenda for discussion, planning and action. All people of good will must get actively involved in preventing the ecological damages, which are destroying our lives on mother Earth. The environmental crisis (which takes the forms of climate change, global warming, acid rain, ozone depletion, desertification, deforestation, air, water and soil pollution, and countless other problems) threatens the very existence of all diverse living beings as well as of human life on earth.

¹ Thomas Menampampil, *All Creation Groans with Pain* (Bandra, Mumbai: St. Paul Press Training School, 2012), 6.

These problems cause immense sufferings to human beings, especially the marginalized poor who are the most affected victims of the ecological crisis. Environmental problems affect everyone, rich and poor alike, but the most affected ones are the poor and marginalized. Hence, the environmental crisis is indeed also a global problem of justice and not only of integrity of creation. We cannot have justice, peace and integrity of creation without solidarity with all people.

Scientists discovered that the environmental crisis or climate change began in the early nineteenth century. They argue that human emissions of greenhouse gases cause “very likely” a change of climate. In the 1960s, some scientists were convinced that the warming effect of carbon dioxide gas increased, and scientists pointed out that human activities could be the cause. In 1962, the book *Silent Spring*, written by Rachel Carson, became the first book related directly to environmental destruction. Carson believed that synthetic pesticides seriously affect the environment.

Furthermore, Carson accused the chemical industry of spreading disinformation and of using pesticides indiscriminately. The book documented that synthetic chlorinated hydrocarbon pesticides destroy the environment and threaten everything in the ecological system, particular the birds.² Most parts of this book deal with the effects of spraying chemicals on the environment especially the wildlife. These dangerous problems were widely ignored by then. Carson claimed that local governments kept spraying chemicals even when evidence showed the urgent necessity of being more responsible for the natural environment. Indeed, chemicals are quite dangerous to the environment.

² Rachel Carson, *Silent Spring*, 1962. See, http://library.uniteddiversity.coop/More_Books_and_Reports/Silent_Spring-Rachel_Carson-1962.pdf, accessed, 5, May 2015.

In 1967, Lynn White published an article in the *Science* magazine with the title “The Historical Roots of Our Ecological Crisis.” He accused Christianity in his article for having developed an arrogant attitude towards nature and for seeing in nature the only reason for its existence except to serve mankind. He contended, “Christianity bears a huge burden of guilt for our current ecological crisis.”³ White held the view that Christianity is unfriendly towards the environment, which is a crime against nature. He criticized Christianity to be arrogant towards nature as expressed in Genesis: 1:27-28, “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.” According to him, Christianity and the other monotheistic religions (Judaism and Islam) are anthropocentric and, therefore, unfriendly to the environment. I will deal with these accusations in chapter one of my paper.

Before the Second Vatican Council, most Christian churches had been slow to recognize and respond to the gravity of the ecological crisis. They had not spoken out yet on the global environmental degradation in a direct way. Later, the content and frequency of Church teachings on the environment gradually increased. However, Church leaders had little useful to say on this topic. And their messages did certainly not get through to the wider community. However, after Vatican II, and especially in the last two decades, the Church’s focus on environmental issues increased significantly and is deepening and expanding ever more since then.

The Church cannot be silent about all these problems related to ecology that threaten the survival of the entire human family and other creatures. The Church today is deeply concerned for the ecological catastrophe and its victims. Church documents

³ Lynn White, Jr, “The Historical Roots of Our Ecological Crisis,” *Science*, Vol. 155, No. 3767, 10 March 1967, pp 1203-1207, esp. 1203.

increasingly express strong concern for the well-being of the ecological system. In response to the pressing environmental crisis, Post-Vatican II Papal documents, Episcopal Conferences' pastoral letters and many others related documents have been issued on the topic of ecology.⁴ It is sad to say, however, that these documents are in general not effective in the practical life. They remain documents and, therefore, stay in libraries and archives. But of course it is also up to each one of us to make them known and to apply them in daily life.

Already in 1971, Pope Paul VI, in his *Octogesima Adveniens*, warned, “Man is suddenly becoming aware that by an ill-considered exploitation of nature he risks destroying it and becoming in his turn the victim of this degradation.”⁵ In 1979, John Paul II continued to express his deep concern about the increasing exploitation of the earth together with the development of technology that ignores ecological ethics.⁶ According to him, “the essential meaning of ‘kingship’ and ‘dominion’ of man over the rest of creation, which the Creator himself bestowed on man, consists in the priority of ethics over technology.”⁷ For living a deep concern for and appreciation of the environment, kingship and dominion must be changed into kinship and caring stewardship.

On the occasion of the celebration of the World Day of Peace in 1990, John Paul II wrote the document entitled *The Ecological Crisis: A Common Responsibility*. Here he writes that “Christians, in particular, realize that their responsibility within creation and their duty towards nature and the Creator are an essential part of their faith.

⁴ John McCarthy SJ, “Catholic Teaching and Ecology Fact Sheet”, see http://www.ecojesuit.com/wp-content/uploads/2011/06/CST_ENG.pdf accessed April 7, 2014.

⁵ Paul VI, *Octogesima Adveniens* (1971), no.20.

⁶ John Paul II, *Redemptor Hominis* (1979), no.15.

⁷ John Paul II, *Redemptor Hominis* (1979), no.16.

As a result, they are conscious of a vast field of ecumenical and interreligious cooperation opening up before them.”⁸ Simply put, it means that the care for the environment should be also on the agenda of ecumenical and interfaith dialogue.

In like manner, in his document *Centesimus Annus*, John Paul II remarked: “It is the Creator’s will that humans should treat nature not as a ruthless exploiter, but as an intelligent and responsible administrator.”⁹ Again, this means that human beings must acknowledge that without the environment or created world, they will not survive. Hence, human beings have to care for creation as they care for themselves and their survival.

Likewise, in 1988, the Catholic Bishops’ Conference of the Philippines issued one of the first and very important Pastoral Letter on ecology entitled “*What is Happening to our Beautiful Land.*” In 2000, the bishops of the Boston Province issued their pastoral letter entitled “*And God saw that it was good.*” The whole chapter Ten of the *Compendium of the Social Doctrine of the Church* (2004) is dedicated to *Safeguarding the Environment.*¹⁰ These examples show the vital importance of the creation and the environment for human survival.

In 2009, Pope Benedict XVI referred to human beings as responsible stewards of the earth in his encyclical *Caritas in Veritate* and he stated that “this responsibility [towards the environment] is a global one, for it is concerned not just with energy but with the whole of creation, which must not be bequeathed to future generations depleted

⁸ Pope John Paul II, *Message of His Holiness Pope John Paul II for the Celebration of the World Day of Peace* (1 January 1990), no.15. Earlier in his encyclical *Sollicitudo Rei Socialis*, 1987, John Paul II already manifested his serious concern for the environmental crisis (cf. *SRS*, 34).

⁹ John Paul II, *Centesimus Annus* (1991), no. 37.

¹⁰ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church: (CSDC)*, Chapter Ten.

of its resources. Human beings legitimately exercise a responsible stewardship over nature, in order to protect it, to enjoy its fruits and to cultivate it in new ways...¹¹ Care for the environment, therefore, is for the sake of the coming generations. A healthy environment is one of the best legacies that the present generation can bequeath to the coming generations of human beings and other creatures.

In addition, the current Pontiff (Pope Francis) “has begun to work on a text surrounding the topic of ecology, which will eventually become an encyclical.”¹² Pope Francis expresses quite often his particular concern for the ecology and he intends to make “Human Ecology”¹³ an important theme of his papacy. He speaks of a human ecology closely connected with the environmental ecology. At his election as Pope he took the name of a saint seen as the patron of the animals and the environment, Saint Francis of Assisi. Francis analyses that “Being a protector means protecting all creation, the beauty of the created world; and everything has been entrusted to our protection, and all of us are responsible for it.”¹⁴ Human beings protect the environment and the environment, in turn, protects also human beings. There is a mutual need for care and protection in order to survive and live properly.

¹¹ Benedict XVI, *Caritas in Veritate* (2009), no. 50.

¹² Elise Harris, “Pope Francis’ writings on Ecology could become encyclical,” See <http://www.patheos.com/blogs/catholicnews/2014/01/pope-francis-writings-on-ecology-could-become-encyclical/>, accessed April 7, 2014.

¹³ A phrase “Human Ecology” has been used by Pope Benedict XVII to describe not only how people must defend and respect nature but also how the nature of the person – men and women as created by God – must also be defended.

¹⁴ Donald Dorr, *The Fragile World: Church Teaching on Ecology before and by Pope Francis*, See <http://www.thinkingfaith.org/articles/%E2%80%98fragile-world%E2%80%99-church-teaching-ecology-and-pope-francis>, accessed April 25, 2014. See also <http://www.thinkingfaith.org/articles/%E2%80%98fragile-world%E2%80%99-church-teaching-ecology-and-pope-francis>, accessed January 29, 2015. Three days later, during the Mass to mark his inauguration as Bishop of Rome, he linked protection of people with protection of the environment, pointing out that being a protector ‘means protecting all creation, the beauty of the created world;’ and he added: ‘Everything has been entrusted to our protection, and all of us are responsible for it.’ Francis’ linking of concern for the exploited earth with concern for marginalized and exploited people has been a consistent theme of his papacy thus far.

On 5 June 2013, the UN World Environment Day, Pope Francis addressed in his message in the general audience “Condemning ‘consumerism’ and a ‘culture of waste,’ he called for “a spirit of solidarity grounded in our common responsibility for the earth and for all our brothers and sisters in the human family.”¹⁵ The spirit of solidarity must be promoted over the culture of waste. On Easter Sunday 2013, he said, “let us be...channels through which God can water the earth, protect all creation and make justice and peace flourishes.”¹⁶ Human cooperation for this project of God is significant. In his first Apostolic Exhortation *Evangelii Gaudium* (no. 2/5), Pope Francis writes: “We humans are not only beneficiaries but also the stewards of other creatures.” These few statements show the urgent concern of the Catholic Church for a better care and protection of the nature. Human and ecological flourishing go hand in hand; they are inseparable.

This paper consists of three chapters: in the first chapter, I will deal with the care for creation in the OT, the notion of new creation through Jesus Christ in the NT, and the idea of Paul’s teaching on creation in Romans 8 and Colossians 1. In the second chapter, I will explore the concern of three popes on ecological issues. In the third chapter, I will analyse what the Episcopal Conferences of the FABC (Federation of Asian Bishops’ Conferences), the German Bishops, and the U.S Bishops express regarding environmental issues and stewardship for creation.

¹⁵ Ibid.

¹⁶ See, <http://www.thinkingfaith.org/articles/%E2%80%98fragile-world%E2%80%99-church-teaching-ecology-and-pope-francis> accessed January 29, 2015.

CHAPTER I

THE BIBLICAL BASIS FOR ECOLOGICAL STEWARSHIP

1. Care for Creation: An Essential Part of Christian Faith

1.1 The First Creation Account (Genesis 1:1-2:4a)¹⁷

Care for the earth and for God's creation is rooted in the Sacred Scriptures. The Sacred Scriptures are the primary source for understanding this issue. Both the Old and the New Testament affirm that the whole creation is the manifestation of the goodness, beauty, and omnipotence of God.

Creation in the book of Genesis contains at least two separate accounts that have been assigned to two different sources. One account comes from the Priestly tradition and the other, from the so-called Yahwistic tradition. The Priestly creation account (Genesis 1:1-2:4a) describes the work of God's creative action from the very beginning, starting with the "formless and empty" (vv.2) and extending with God creating the whole universe. For its part, the Yahwist creation account (Genesis 2:4b-25) does not describe the creation of the whole universe; rather it begins with the various forms of life.¹⁸

For Bergant, the P (Priestly) creation account is called a "cosmogony."¹⁹ Israel's tradition of the created cosmos is different from other ancient Near Eastern religious

¹⁷ Note: For this entire paper, I am using the NRSV (The New Revised Standard Version) translation.

¹⁸ Dianne Bergant, CSA, *Biblical Perspectives on the Integrity of Creation*, (Loyola Heights, Quezon City, Manila: Catholic Biblical Association of the Philippines, 2007), 7.

¹⁹ *Ibid.*, 7.

traditions of creation, “for they lack myths describing the origin of the gods.”²⁰ In Israel, God freely create the whole world (Gen 1: 1-2 and 2:4). Only “the God of Israel is uncreated and infinite.”²¹

What does the word “create” mean here? The word for “to create” in Hebrew is בָּרָא “*Bara*”. David W. Cotter argues “ בָּרָא (*Bara*) means to expend no energy, to make something without any effort, without any work involved.”²² The powerful God creates things like the universe without any energy at all. The opening of the Genesis P account states, “God created the heavens and the earth.” God effortlessly created “the heavens and the earth,” “The heavens and the earth” means all of creations.²³

The P creation account teaches a great deal about the person and the nature of God. Only human beings are made “in his image, in the image of God” (1:27). Humans were created differently compared to all other creatures; they were created in the image and likeness of the Creator. The *Catechism of Catholic Church* supports the fact that “Man is the summit of the Creators work, as the inspired account expresses by clearly distinguishing the creation of man from that of the other creatures.”²⁴ Human beings are defined as a part of creation and created unique in God’s image and likeness.

But what does it mean to be created in the image and likeness of God? David Cotter explains that “one thing is clear, our author avoids the term ‘*min*’ (kind, species) in speaking about humanity. While there are many sorts of animals and plants, yet there

²⁰ *Ibid.*, 7.

²¹ *Ibid.*, 7.

²² David W. Cotter, *Genesis, Berit Olem, Studies in Hebrew Narrative & Poetry*, ed. David W. Cotter (Collegeville, MN: The Liturgical Press, 2003), 15.

²³ *Ibid.*, 15.

²⁴ *Catechism of Catholic Church*, 343.

is only one sort of humanity.”²⁵ For him, “if there is only one God, and only one image of God present in all people, there can be only one sort of humanity, not many kinds.”²⁶ Therefore, human beings are made “in the image of God” rather than of a “kind or species” (v.24). They are all from the same substance and there is no difference in their dignity in this regard.

God blesses humans not only to procreate, to “be fruitful and multiply” (Gen v. 28), but he gives them also the responsibility to govern creation, to “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” (vv. 28), and to “subdue” the earth. There are subtle distinctions between these two words “dominion” and “subdue.” In fact, in Hebrew the words to “have dominion” and “subdue” are strong terms and connote a sense of force. Lynn White misunderstood or misinterpreted these Biblical words to “have dominion” and “subdue” as having caused the current environmental situation and crisis.²⁷

²⁵ *Ibid.*, 18.

²⁶ *Ibid.*, 18.

²⁷ Lynn White, “The Historic Roots of Our Ecologic Crisis,” *Science*, Vol. 155, No. 3767, 10 March 1967, pp. 1203-1207. He critiqued that it is the Christian worldview, as it developed in the West to dominate and exploit nature. The basic reason for this is that “especially in its Western form, Christianity is the most anthropocentric religion the world has seen” (p.1205). According to this worldview, White suggests, everything that exists in the natural world was “planned” by God “explicitly for man’s benefit and rule; no item in physical creation had any purpose save to serve man’s purposes” (p.1205). Sweeping aside other ancient mythologies, with their cyclical views of time and their animistic sacralization of nature, Christianity thus “not only established a dualism of man and nature but also insisted that it is God’s will that man exploits nature for his proper ends...Man’s effective monopoly...was confirmed and the old inhibitions to the exploitation of nature crumbled” (p.1205). Thus, “Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects.”(p.1205) He concluded that “since both science and technology are blessed words in our contemporary vocabulary, some may be happy at the notions, first, that viewed historically, modern science is an extrapolation of natural theology and, second, that modern technology is at least partly to be explained as an Occidental, voluntarist realization of the Christian dogma of man’s transcendence of, and rightful master over, nature. But, as we now recognize, somewhat over a century ago science and technology-hitherto quite separate activities joined to give mankind powers which, to judge by many of the ecologic effects, are out of control. If so, Christianity bears a huge burden of guilt” (1206). However, he appeals to St. Francis as a positive model, “a patron saint for ecologists” (p.1207).

The word used for “dominion” in Hebrew is רָדָה “*radah*,” which has various meanings: “to rule,” “to trample,” and “to prevail against.” The word רָדָה “*radah*” is used 27 times in the Hebrew Scriptures; twice, in the P account. Baisas explains that רָדָה “*radah*” has a personal subject (a human agent).²⁸ For instance, the head of the house rules over the household servants (Lev 25:43); Solomon’s officers rule over his recruited labour force (1 Kgs 5:16); the priests rule over the people (Jer 5:31); humankind is commissioned to rule over the earth (Gen 1:26). In all cases, the verb רָדָה “*radah*” indicates power, control, and authority of one individual or a group over another.²⁹ Thus, in Gen 1:26, the verb רָדָה “*radah*” does not have anything to do with humans’ absolute dominion over the earth or exploitation of the environment. Since humans are made as a special kind above all other creatures, they have authority from God to govern responsibly the rest of creation. Humans should not exploit or lord it over the earth, but they are delegated, as representatives or agents of God to rule on his behalf.

The verse “subdue” comes from the Hebrew word שָׁבַד “*kavash*.” The expression שָׁבַד “*kavash*” is even more forceful, stronger than רָדָה (*radah*). Sometimes שָׁבַד “*kavash*” is used in the context of a military conquest and can be employed to depict the occupation of the conquered territory (Num. 33:22, 29), and submission of the inhabitants of the land (Chr 22:18). In this case, the verb *kavash* simply states that a stronger group subdues a weaker one. Thus, the use of the verbs *radah* and *kavash* in Gen 1:26-28, manifest hierarchies, meaning that humans are in fact placed above the

²⁸ Bienvenido Q. Baisas, OFM, *Bible and Ecology* (Loyola Heights, Quezon City, Manila: The Catholic Biblical Association of the Philippines, 2007), 22.

²⁹ Arnold T. Monera, “The Integrity of all Creation: Christian Perspective,” Graduate School of Philosophy and Religion Assumption University – Bangkok, Thailand: Suvanmabhumi Campus, Bang Na, and January 24-25, 2008, 1-14, esp. 3.

rest of all creatures and have the responsible task and authority to care and govern other creatures. These verbs can never be used to justify an abusive and exploitative relation with creation; rather they involve stewardship and responsibility. Horrell argued that

This text cannot be held responsible for legitimating any wide-ranging mandate for human exploitation of the earth, nor for its contemporary manifestations in scientific and technological mastery of nature. Nonetheless, this text proves one of the hardest to defend against the criticism that the Bible may generate a view of human superiority and vocation that insufficiently values the rest of the earth community.³⁰

Thus, human beings are part of creation and the appointed kings and queens of all creatures, and they are granted the power as kings or queens to rule responsibly over the rest of creation.

God's relationship with human beings is unique and is characterized in form of an intimate relationship. Hence, in the first creation account (Gen 1:1-2:4a), humans' dominion over the earth is not absolute, or meant in any violent way to despoil the earth, but it refers to a royal stewardship of creation instituted by God to govern the world. Like other living beings, human beings are earth (are taken and formed from the soil Gen 2:7), and are able to view the rest of the world from a distance. "To be identified as 'image of God' entails both the freedom and the responsibility to act on God's behalf, consistent with that God's will, which will is the good of the creation."³¹

The Boston Bishops' Letter expresses that "To be made in God's image and likeness means, among other things, being called to cooperate with God in the care of his creation."³² Hence, the Hebrew words "*radah* and *kavash*" can never mean

³⁰ David G. Horrell, *The Bible and the Environment: Towards a Critical Ecological Biblical Theology* (Oakville: Equinox publishing, 2010), 27.

³¹ Gene M. Turker, "Rain on a Land Where No One Lives: The Hebrew Bible on the Environment," *Journal of Biblical Literature* 116, no.1 (1997): 3-17.

³² A Pastoral Letter of the Bishops of the Boston Province, *The Forum of Religion and Ecology at Yale: And God Saw that It was Good*, (New Haven: Yale University Press, 2011), See

humanity's absolute ruling over the world; human beings are "commissioned to rule nature as a benevolent king, acting as God's representative over them and hence treating them in the same way as God who created them."³³ In this account we see also that the creative activity of God was completed and that he was very pleased with what he had made. "God saw everything that he had made, and indeed, it was very good" (1:31). In God's sight, everything is viewed as being "very good." Therefore, the earth is given to humans as a good gift from God himself. Since it is a gift for us, we have to deal with it responsibly and share it with other living beings and even non-living creatures, and we have to live up to our specific role of being responsible governors in the world.

1.2 The Second Creation Account (Genesis 2:4b-25)

The second creation account, which begins in Gen 2:4b-25, reflects the origin of humanity and culture and is interestingly quite different from the first account. The first issue described in this account is that "no plant of the field was yet in the earth and no rain, no herb.... but a stream would rise from the earth and water the whole face of the ground...the Lord God formed man from the dust of the ground." Man and woman came from the dust and they were placed in the midst of the garden "to till, to keep it." In this case, humans are deeply reflected and not distinct from other living beings, which derive also from the soil, "the human is an earth creature."³⁴ The human being got the "breath of life" which is the "divine breath of God," that God breathed into him,

<http://fore.research.yale.edu/publications/statements/and-god-saw-that-it-was-good-/>, accessed April 24, 2014.

³³ Monera, "The Integrity of all Creation," 5.

³⁴ Horrell, *The Bible and the Environment*, 25.

so that he became a living being (vv.7). Nonetheless, the other creatures are described as those “in whose nostrils was the breath of life.”

The role of humans in this account is servanthood. The focus seems to be a little bit different compared to the first account with the mandate “to have dominion” and “to subdue.” The emphasis here is to till, to serve and to keep or protect creation. God expects human beings to use the products of nature from the garden for their sustenance, and to be responsible in the use and care for creatures and to preserve creation. This is the first task and mission of human beings. Despite its differences and focus its main message is quite similar to the first creation account: humans are called by God to be responsible carers of all creation.

Horrell comments on Brett’s examination of the second creation account that the second account “compared with that in Genesis 1, as more firmly placing human beings in kinship with all other creatures, rather than in a kingly relationship to them.”³⁵ It is true that humans are higher than any other creature and therefore must be mindful that they are specially gifted with “stewardship.” We come from the same soil as other creatures do; we are dependent, related to nature and part of nature. We are creatures, one of the multitudes of creatures that inhabit the earth.

But it is true that we are also different from other creatures, gifted with reason, abilities, knowledge, powers and will; but we are part of the earth community. We are relating to God when we relate to nature and we need to treat creatures with due respect. The whole creation is in relationship with God; even the mountains, the rivers and trees are praising God. God is very pleased with all species, and he delights in the diversity of all living beings (See Dan 3: 57-88. Let all creatures praise the Lord).

³⁵ *Ibid.*, 28.

The two accounts of creation in Genesis affirm that we are dependent on the natural world, and are living in an interdependence of biodiversity within the natural world.³⁶ God's purpose for the earth is to be a healthy and liveable world for all creatures. The two accounts of creation describe all what humans need for an abundant and peaceful life.³⁷ Furthermore, both creation accounts in Genesis do not only present the unique call and dignity of humans but also the integrity of the whole creation; God grants to humankind governance over all creatures and asks humans to take care, till, and preserve his created world. Hence, God's love and concern for the created world is extended not just to humans, but also to the whole of creation. We are all called by God not only to honour and worship him but also to respect and care properly for his wondrous creatures as He cares for his creation. Benedict XVI asserts, "The creation accounts of all civilizations point to the fact that the universe exists for worship and for the glorification of God."³⁸ Humans have been created and called by God to exercise stewardship over all creation. They have a special responsibility from God: to be his servants. And their destiny is to work as a good steward of God's beautiful earth and its inhabitants.

The pastoral letter from the Bishops of the Episcopal Church states: "We are called to speak and act on behalf of God's good creation."³⁹ "As stewards of all

³⁶ Ignacimuthu, *Environmental Spirituality* (Nagasandra, Bangalore: St. Paul Press Training School, 2010), 51.

³⁷ *Environmental Stewardship: A Pastoral Teaching from the House of the Episcopal Church* (Quito, Ecuador: September 2011), See <http://www.tens.org/resources/free-resources/free-resources-blog/pastoral-teaching-on-the-environment>, accessed April 28, 2014.

³⁸ Benedict XVI, "In the Beginning..." *A Catholic Understanding of the Story of Creation and the Fall*, Trans. by Boniface Ramsey, O.P. (Grand Rapids, Michigan: William B. Eerdmans, 1995), 28.

³⁹ A Pastoral Teaching on the Environment from the House of Bishops of the Episcopal Church, *Environmental Stewardship*, 306.

Creation, we must identify wise, careful actions that will reverse this climate change and avoid its potentially dangerous impact on all life especially human life.”⁴⁰

In Genesis 7 we read about the narrative of the flood that is “coming from the same theological tradition and highlighting much of the same theology as found in Genesis 1.”⁴¹ This narrative mentions that God spoke also to animals to be “fruitful and multiply,” the same as in Genesis (1:22). Humankind was granted the blessing with the commission to rule over the animals. (1:28; 9:1-2). The covenant here is expressed not only to be with Noah but also between God and all living creatures (Gen 9:11), indeed the whole earth. This text illustrates that our place is on this earth and we have to live within the covenant he established with us and with every living creature. In addition, this also implies an interconnectedness of humanity, animals and the entire earth. Here we have to refer to the importance and relevance of biodiversity, which is also threatened today.

The Israelites fervently believed that the land is given to them as God’s gift. The land belongs to God and the land is sacred to the Lord: “The land shall not be sold in perpetuity, for the land is mine” (Lev 25:23). It is important for Israel to observe the Law of Moses, and to care responsibly for the land of promise. Otherwise, they would experience ecological degradation and exile from their land. Similarly important, the land should be left uncultivated in a Sabbath or Jubilee year, and be respected; there is, moreover, a special concern for the poor, and the animals (Lev 25:8-24). Therefore, in order to sustain life, human life and other form of life on this earth, we need to

⁴⁰ Catholic Climate Covenant, *Care for Creation. Care for the Poor: Prudence, Poverty, the Common Good and Solidarity* (U.S., 2004) See <http://catholicclimatecovenant.org/catholic-teachings/>, accessed April 15, 2014.

⁴¹ Bergant, *Biblical Perspectives on the Integrity of Creation*, 8-9.

remember the Sabbath Laws, which allow man, animals and land the rest and to have the time that they need to renew themselves.

Aside from the land, the animals and trees are given special importance in the Bible. God created both wild and domestic animals at the beginning. However, most of the animals in the Bible are domestic animals like sheep, cattle, donkeys, goats and oxen. These animals are genuine helpers of humans for they provide them with clothes, food, and assistance in the cultivation. They are very helpful for humans. Gen 2:18-20 describes that the animals were created as helpers of the first human being who named all of them. Since the animals are humans' helpers they should be treated with respect, mercy, and sympathy.

Before the flood and after the fall, the animals became wild and were killed. The Lord ordered man to have dominion over all living creatures. "The fear and dread of you shall rest on every animal of the earth, and on every bird of the air, on everything that creeps on the ground, and on all the fish of the sea; into your hand they are delivered" (Gen 9:2-4). In the sixteenth century, Calvin commented on Gen 9:2 that God "promises that the same dominion shall continue. We see indeed that wild beasts rush violently upon men, and rend and tear many of them in pieces; and if God did not wonderfully restrain their fierceness, the human race would be utterly destroyed."⁴² Therefore, one has to distinguish between the ancient and the modern context. There is no doubt since the modern time, it is the activity of humans that threatens the existence of animals rather than that animals threaten the existence of humans.

In the same way, during the narrated time in Deuteronomy, people were restricted regarding the use of nature or the environment: "If you come across a bird's

⁴² Horrell, *The Bible and the Environment*, 46.

nest in any tree or on the ground, with young ones or eggs and the mother sitting on the young or on the eggs, you shall not take the mother with the young” (Deut 22:6). No one was allowed to destroy the forest: “you must not destroy the trees” (Deut 20:19), since a tree is the pinnacle plant which is capable of supporting other forms of life such as humans and animals.

1.3 The Prophets and Psalms on Creation

Some Prophets in Israel were highly aware of the relevance of human behaviour regarding the relationship with the land and nature. The Prophet Isaiah denounced those people who lived a luxurious life (Is 5:8-10), who consumed extravagantly, who oppressed the poor and crushed the needy. In particular, the Prophet Amos spoke about injustice in the rural and commercial areas that destroyed the earth (Amos 4:1). Prophet Hosea lamented that the evil done by human beings had caused environmental disasters:

Hear the word of the Lord, O people of Israel; for the Lord has an indictment against the inhabitants of the land. There is no faithfulness or loyalty, and no knowledge of God in the land. Swearing, lying, and murder, and stealing and adultery break out; bloodshed follows bloodshed. Therefore the land mourns, and all who live in it languish; together with the wild animals and the birds of the air, even the fish of the sea are perishing (Hosea 4:1-3).

Prophet Jeremiah calls people to repent for causing an environmental crisis:⁴³ “How long will the land mourn, and the grass of every field withers? For the wickedness of those who live in it, the animals and the birds, are swept away, and because people said, ‘He is blind to our ways’” (Jeremiah 12:4).

The people of Israel praised the Lord when they returned with joy from captivity to their home land: “The Mountains and the hills before you shall burst into song and

⁴³*Environmental Stewardship: A Pastoral Teaching on the environment from the House of the Episcopal Church.*

all the trees of the field shall clap their hands” (Is 55:12). The first book of Chronicle declares that all things on earth and in heaven are made by God and belong to God: “Yours, O Lord, are the greatness, the power, the glory, the victory, and the majesty; for all that is in the heavens and on the earth is yours; yours is the kingdom, O Lord, and you are exalted as head above all” (1 Chronicle 29:11).

Texts from the Psalms (especially Psalm 104) and (Job 38-40) are frequently quoted in ecotheological writings. There are five major types of Psalms to distinguish: (1) hymns (psalms of praise), (2) communal laments, (3) royal psalms, (4) individual laments, and (5) individual thanksgiving psalms. The book of Job, as identified by scholars, belongs to the category of “wisdom literature,” which includes the Proverbs, Ecclesiastes and Job. Scholars consider that these books show concern, as for instance Alastair Hunter suggests, “A universal perspective on life, a humanistic view of the problems addressed, and evidence of curiosity about the natural and everyday world and an intellectual approach to solving them.”⁴⁴

One may see a number of psalms that show the hearer the greatness of all creation as indication of the greatness and praiseworthiness of God. Psalm 19 is a well-known example that opens with the praise of God about his wondrous creation and presents the whole order of creation, and the wonderful works of God and its perfections: “The heavens declare the glory of God, and the sky above proclaims his handiwork” (Ps 19:1).

Some scholars believe that Psalm 104, Psalm 19 and Gen 1 are similar and thus related.⁴⁵ In the same way, Psalm 104 is known as wonderful example of a “Creation psalm,” presenting a poem about creation of the world and speaking “of the

⁴⁴ Horrell, *The Bible and the Environment*, 48.

⁴⁵ Richard J. Clifford, *Psalms 1-72*, Colledgeville Bible Commentary (Bandra, Mumbai: St. Paul Press Training School, 2001), 23.

innumerable creatures sustained by God's wisdom."⁴⁶ There has been a heated debate over Psalm 104 related to aspects of creation. Some argue that this text is referring back to Gen 1, whereas Konrad Schaefer argue that "the scope is similar to Isaiah (cf. Isa 40:12-17) and God's whirlwind speeches in Job 38-41."⁴⁷ However, it is clear that creation is the main theme.

One may note that this text not only focuses on the continuation of God's activities but also on the image of divine provision. God sustains the world so that it benefits humanity (vv13-14); God's generosity and providence extends to all of creation (vv 27-29). Horrell comments that "certainly there is an emphasis on God's provision for all, animals and humans; all creatures depend on God for their food (vv 27-29)."⁴⁸

Konrad Schaefer argues that "God is principally a provider of food... creation is daily dependent on God's sustenance, presence, and breath."⁴⁹ All living creatures are dependent on God. Horrell continues admitting, that "The perspective is not anthropocentric, at least not strongly or primarily anthropocentric, nor even creation-centered, but theocentric—focused and centred on God, creator and sustainer of all things."⁵⁰ It is clear that this psalm represents the image of the whole Cosmos, and God's works in creation and his governance of the world. "This psalm, and others like it, therefore invites ecological reflection, not only because of its portrait of the wonders

⁴⁶ Konrad Schaefer, *Psalms*, Berit Olem: Studies in Hebrew Narrative and Poetry, edited by David W. Cotter (Collegeville, MN: The Liturgical Press, 2001), 256.

⁴⁷ *Ibid.*, 257.

⁴⁸ Horrell, *The Bible and the Environment*, 51.

⁴⁹ Schaefer, *Psalms*, Berit Olem, 258.

⁵⁰ Horrell, *The Bible and the Environment*, 51.

of creation but also because of its setting of humanity firmly among the community of living things on earth”⁵¹

Moreover, the Psalmist depicts the whole creation coming forward to adore and to praise God as their Creator and sustainer of the world and all creation, human, non-human, living and non-living, animate and inanimate things come to praise God (Psalm 148). The whole of creation is called to join the praise of God. This psalm of praise begins and ends with “Praise the Lord.”

Praise the Lord from the heavens; all his angels; praise him, all his host (v 2) sun and moon; all stars (v 3), heavens, and you waters above the heavens (v 3) ... the earth, you sea monsters and all deeps (v 7), fire and hail, snow and frost, stormy wind fulfilling his command (v 8), mountains and all hills, fruit trees and all cedars (v 9) Wild animals and all cattle, creeping things and flying birds (v 10), Kings of the earth and all peoples, princes and all rulers of the earth (v 11), Young men and women alike, old and young together (v 12), ... Praise the Lord! (Ps 148)

It is a call on all the elements of the heavens and the earth to praise Yahweh. Conversely, Horrell suggests, “The images have to be seen as metaphorical and as anthropomorphizing-constructing nature in human terms and images.”⁵² The most extended example of this depiction is found in Ps 98:8: “Let the floods clap their hands and the hills to sing together for joy.” The Psalmist expresses in human language the movements of the natural world and interpreted them as the praise of God of the natural world.

Other Psalms like Psalms 19:1-2, 105, and 147 are examples that clearly show that not only humans express their gratitude towards God for giving them being and life, but also all other creatures sing their own praises to God. Another example is Psalm 8 where God finds praise in the talk of infants. He listens and enjoys the voices of the

⁵¹ *Ibid.*, 51.

⁵² *Ibid.*, 54.

little ones and the weak. These texts also reveal that creation is a witness to God's greatness and glory. These texts and traditions offer a powerful contribution for an ecotheological revision of Christian theology and ethics.

2. The New Creation through Jesus Christ

2.1 The Humanity of Jesus Christ

It is normal that when Christian theologians and ethicists want to argue for a certain model of Christian belief and behaviour, they appeal first and foremost to Jesus Christ. He stands at the Centre of Christian theology. "If Christians wish to discover how God directs us to behave in relation to the rest of creation, our prime example must be Christ himself. The attitude of Christians towards the environment must be based above everything else on the teaching and example of Christ himself."⁵³ Jesus Christ is the model of concern for Christians in their care for God's creation and the environment. Jesus displays his intimacy and familiarity with a variety of God's creatures and the natural world.

Edmund Marshall emphasizes that Jesus Christ, being fully God and fully human came to the world as the serving king of all creation. Christ reasserted human dominion over creation and revealed "perfectly the will of God for all human living, including the relationship between human beings and the rest of creation."⁵⁴ The Philippine Bishops states, "Our faith tells us that Christ is the centre point of human

⁵³ Edmund Marshall, "Jesus and the Environment: How Green is Christianity?" *Modern Churchman* 33, (1992) no. 4:1-5. ATLA Religion Database with ATLA Serials, EBSCO host (accessed may 21, 2015), 2.

⁵⁴ *Ibid.*, 2.

history and creation. All the rich unfolding for the universe and the emergence and flowering of life on Earth are centered on him.”⁵⁵

Christ’s incarnation is at the heart of Christian faith. God reveals his love to the whole creation in Christ the saviour of all. Jesus came to the world not only to declare and reveal the Father to humanity, but also to become an earthly creature himself, and a human being who lives harmoniously with nature. “The Incarnation of Jesus brings to fulfilment the whole plan and process of Creation, revealing how God shares His love with all creatures since all eternity.”⁵⁶ The Gospel of John expresses this reality in the following way:

In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God. All things came into being through him, and without him not one thing came into being...He was in the world, and the world came into being through him; yet the world did not know him...and the Word became flesh and lived among us (cf. John 1:1-14).

The most significant feature of this text is that God becomes flesh (man) and everything comes into being through and in the Word. Jesus breathes the same air as all living creatures on earth, eats the food grown from the field, and drinks water from the well. Jesus feels, tastes and smells the same as all human beings do. Since he is fully a human being, in Jesus, God becomes directly and intimately a part of earth’s biology. All creation manifests God, but through and in Jesus, God’s love and presence is more fully revealed. The Gospel describes Jesus’ role as “the Son of man” Matt. 9:26: “the Son of Man has authority on the earth.” Sean McDonagh comments, “As the Son of

⁵⁵ Catholic Bishops’ Conference of the Philippines (CBCP), *What is Happening to our Beautiful Land: A Pastoral Letter on Ecology*, 1988.

⁵⁶ Denis Edwards, *Ecological Commitment and the Following of Jesus*, 162. See http://www.sedosmission.org/web/en/sedos-bulletin/doc_view/1614-ecological-commitment-and-the-following-of-jesus, accessed 24 April, 2014.

Men, Jesus is central to the earthing of heaven and the heaving of earth.”⁵⁷ Jesus Christ therefore is the bridge between heaven and earth, between the Father and all creatures.

2.2 The Ministry of Jesus and the Care for Creation

Creation and nature played a crucial role in the life of Jesus and his ministry. At his birth, Luke portrays that Jesus was laid into a manger because there was no place for them in the inn (Lk 2:7). Mary, Joseph, and animals on straw surrounded Jesus when he was born. Therefore, already at his birth, we can see that Jesus brings his love, and peace not only to human beings but also to all creatures. From the beginning of his public ministry, Jesus is fully in touch with nature. The *Compendium of the Social Doctrine of the Church* affirms, “In his public ministry, Jesus makes use of natural elements. Not only is he a knowledgeable interpreter of nature, speaking of it in images and parables, but he also dominates it.”⁵⁸

Similarly, Ignacimuthu argues that “Jesus shows an intimacy and familiarity with a variety of God’s creatures and the various processes of the environment. He is not driven by an urge to dominate and control the world of nature. Rather he displays an appreciative, reverential and contemplative attitude towards creation which is rooted in the Father’s love for all that he has created.”⁵⁹ But he has the power to command nature and is beyond nature (stilling of the storm; walking on the sea, etc.).

⁵⁷ Sean McDonagh, *The Greening of the Church* (Maryknoll, NY: Orbis, 1990), 62.

⁵⁸ *Compendium of the Social Doctrine of the Church*: (CSDC), no. 453.

⁵⁹ S. Ignacimuthu SJ, *Environmental Spirituality* (Bangalore: St. Paul Press Training School, 2010), 59.

Many parables of Jesus are centred in nature. For example, Jesus tells the parable of the sower: “A sower went out to sow...some seeds fell on the path...others fell among thorns, and the thorns grew up and choked them. Other seeds fell on good soil and brought forth grain, some a hundredfold, some sixty, some thirty” (Mt 13:4-9). This teachings of Jesus indicates the care of God for his non-human creation and Jesus’ own compassion towards nature. Jesus taught us not to be fretting about continually accumulating more and more goods. The heavenly Father will provide for our needs. “Consider the ravens; they neither sow nor reap, they have neither storehouse nor barn, and yet God feeds them. Of how much more value are you than the birds” (Lk 12:24). There is a power greater than nature and Jesus Christ gives witness to this power and is himself this very power surpassing the natural. The Gospel of Mark begins with the Spirit leading Jesus into the desert, and he was with the wild beasts, and the angels waited on him (Mk 1: 12-13). The most famous of Jesus’ teachings is his “Sermon on the Mount,” which is placed on a mountain.

The Gospels describe several times Jesus praying alone or with his disciples, often withdrawn on a mountain or a hill. Mountains have a significant symbolic value in the Gospels and in the whole Bible. It was on the mountain that Jesus appointed twelve disciples (Mk 3:13); it was on a high mountain that Jesus was transfigured (Mt 17:1-3); and it was on a mountain that Jesus delivered the New Law. Jesus went often to the Mount of Olives where he sat and prayed (Lk 22:39); here too was the Garden of Gethsemane. It was also on a mountain in Galilee that Jesus commissioned the eleven disciples to “go and make disciples of all nations” (Mt 28:16-19).

Jesus is clearly a friend of nature. He started his teaching and began his ministry in the countryside. Jesus’ preaching, teaching, and many of his signs or miracles took place in the countryside. This indicates clearly how the nature was important in Jesus’

ministry. This tells us also that nature is for Jesus a place of the closeness of God and of spiritual revelation. In most of the metaphors he used to refer to nature and the environment. Indeed, “The Lord puts nature at the service of his plan of redemption.”⁶⁰

John baptized Jesus in the Jordan. And as he was coming up out of the water...he saw the Spirit descending like a dove on him (Mk 1:9-11). Many people came to Jesus to experience healing. “He could no longer go into a town openly, but stayed out in the country; and people came to him from every quarter” (Mk 1:45). Jesus uses many of images of natural things in his teachings, for instance in the parable the growing seed, the mustard seed (Mk 4:26, 30), the vineyard (12:1), (Mt 20:1), the fig tree (Mk 13:28), the salt and light (Mt 5:13). “No good tree bears bad fruit, nor again does a bad tree bear good fruit; for each tree is known by its own fruit. Figs are not gathered from thorns, nor are grapes picked from a bramble bush” (Lk 6:43-45). All these examples demonstrate that God’s care for his creations were assured throughout Jesus’ ministry.

Jesus has control over nature, as can be clearly seen in the passage of Jesus’ Calming of the Storm (Mk 4:39), (Mt 8:26). Jesus uses the image of physical bread to speak of spiritual bread: “I am the bread of Life” (Jn 6:35), he is the living water (Jn 4:10-14), and the light, which he has made (Jn 8:12). Jesus said: “I am the bread of Life” (Jn 6:35); “the light of the world” (John 8:12); “the door” (John 10:9); “the good shepherd” (John 10:11); “the resurrection, and the life” (John 11:25); “the way, the truth, and the life” (John 14:6), the son of man (Mk 14:62; Mt 26:24, 30; Lk 7:34, 22:22; Jn 3:13), and the Lamb of God who takes away the sins of the world (Jn 1:29). “He asks

⁶⁰ *Compendium of the Social Doctrine of the Church: (CSDC), no. 453.*

his disciples to look at things, at the seasons and at people with the trust of children who know that they will never be abandoned by a provident Father (cf. Lk 11:11-13).⁶¹

When there was food needed, Jesus always took care of it (Mt 14:13-21; Mk 8:1-10; Lk 9:10-17; Jn 6:1-15). And after the meal he ordered to take care of the leftovers so that there was no waste. This is of special relevance in affluent societies today. Jesus walked on the water (Mt 14:22-33); Jesus was riding on a donkey to go up into the city of Jerusalem (Mt 21:1-5; Jn 12:14). John Jillions writes:

Jesus was immersed in the world. But we should not romanticize this. He also spent much of his time confronting a natural world gone wrong. The first chapter of Mark also shows this darker side of nature. A madman shouting and convulsing in the synagogue (Mk 1:23ff); Peter's mother-in-law lying sick with a fever (Mk 1:30-31); a leper who begs to be healed (Mk 1:40ff); crowds coming to Jesus with their diseased and demented (Mk 1:32-34).⁶²

God not only creates but also suffers in Jesus. We affirm that Jesus Christ is the crucified God who suffered in and with creation. The cross reveals to us the true nature of this God who suffered with His people and with all creation. The Cross is the revelation of who God is and what God is about. "The entrance of Jesus Christ into the history of the world reaches its culmination in the Paschal Mystery, where nature itself takes part in the drama of the rejection of the Son of God and in the victory of his Resurrection (cf. Mt 27:45,51), 28:2)."⁶³

Thomas Menamparampil adds, "The cross was the tree of life for Christians."⁶⁴ Henry Morris admits that "A Tree (Gen 3:6) was the vehicle of man's temptation and

⁶¹ *Ibid.*, no.453.

⁶² John Jillions, *Jesus and Natural World*, See <http://www.incommunion.org/2004/12/11/jesus-and-the-natural-world/>, accessed April 17, 2014.

⁶³ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, no. 454.

⁶⁴ Menamparampil, *All Creation Groans with Pain*, 99.

sin; another Tree (1 Peter 2:24) was the vehicle of man's forgiveness and deliverance."⁶⁵ Christ's Redemption is a cosmic redemption (Rom 8:18-25). "With the blood of His Cross, he would become the great Peace Maker, reconciling all things unto the Maker of those things (Col 1:16, 20)."⁶⁶

Christ's sacrifice is related not only to the Eucharist but also to the natural world as God's creation. For Jesus there is no denying that the natural world is a place of God's revelation. In his earthly life, he was always close to creation, and he loved the people, spent time with them, ate meals with them, taught them, healed them, cared for them and eventually redeemed them. He valued, and respected creation and saved and redeemed also the natural world. His redemption reflects his genuine love relationship with the people and with the entire universe.

3. The Theology of Creation in St. Paul

3.1 The Groaning of Creation: Romans 8:19-23

When discussing the environmental crisis, Rom 8:18-25, and Col 1:15-20 are the most frequently cited texts in the New Testament in eco-theological writings. These two texts offer a broader picture and suggest that Paul has some significant contributions for an ecological theology. It seems to be very clear to Paul that the purpose of God's redemption affects not only humanity, but all creatures and the entire world.

⁶⁵Morris, *Creation and the Cross*, (Institute for Creation Research, 1976), see: <http://www.icr.org/article/creation-cross/> accessed April 17, 2014.

⁶⁶ Morris, *Creation and the Cross*, accessed April 17, 2014.

In the letter to the Romans, Paul focuses on human beings and on the sinful/guilty nature, looking for forgiveness from the righteous one.⁶⁷ Paul concentrates on their salvation of human beings and their hope for the resurrection in a new life after death. Horrell comments that “Christ’s death to sin and resurrection to new life are “events’ in which believers participate: in baptism they too die to sin and begin a new life, a life which is empowered by the Spirit and which anticipates the future resurrection of the body, the completion of the process of salvation.”⁶⁸

Paul refers here to “creation” and therefore to human creatures, and to non-humans, and to the whole universe. Paul refers back to the book of Genesis 3:17, that writes, “Cursed is the ground.” The natural world itself has been affected by the human fall into sin, and is waiting for the liberation from death and decay.⁶⁹ Paul clearly sees that death has “entered” the world as the consequence of Adam’s sin, which affected the whole universe, and brought decay and death to the whole of creation.⁷⁰ The spread of death and corruption is what is meant by the bondage of decay. Then, God promises redemption and restoration. As sin has affected the whole creation, also salvation is not only meant for human beings alone but also for the whole creation.

Paul depicts the whole creation as groaning, expecting its liberation from the bondage of decay. He insists that the present age is in suffering or groaning and is waiting for the glory to come, the restoration of the “Son of God.” For Jewish thought, time is divided into two modes: the present time and the age to come.⁷¹ The renewal of

⁶⁷ William Barclay, *The New Daily Study Bible: The Letter to the Romans*, General Foreword by John Drane (Bangalore: Theological Publications in India, 2010), 128.

⁶⁸ Horrell, *The Bible and the Environment*, 75.

⁶⁹ Barclay, *The New Daily Study Bible: The Letter to the Romans*, 128.

⁷⁰ *Ibid.*, 128.

⁷¹ *Ibid.*, 128.

the world is one of the great Jewish expectations. The Pauline letters were written at the time when the Jews were persecuted, enslaved and oppressed by the Roman Empire.⁷² The Jews dreamed and expected that the earth will be renewed; then the day of the Lord will come, and the new earth will be restored in the glory of God. Paul knew very well about this expectation of the Jews of a renewed world and the manifestation of the glory of God in it. Paul did not explicitly say that humans have a role to play in helping to “liberate” creation.

The main idea of the texts here is that Paul “encouraged a suffering, vulnerable minority group to endure their suffering, with a sure hope that God will bring final deliverance.”⁷³ For Paul, the present is a time of suffering and groaning; and the suffering Christians of Rome must look forward, will be free from oppression, death and decay. Paul writes:

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. We know that the whole creation has been groaning in labour pains until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies. (Rom. 8:21-23)

Due to the invasive acts of human domination, exploitation, and human greed, the integrity of creation has been violated today and the assets of nature have been spoiled. Roman 8 is a profoundly eschatological text. The present age of creation “groans,” and all mankind “groans.” Both humankind and creation are waiting for the final redemption of a “new creation.”

As believers, we long for holiness, and the whole of creation awaits its redemption from the bondage of sin and decay. “All creation is groaning as it waits for

⁷² *Ibid.*, 1.

⁷³ Bergant, *Biblical Perspectives on the Integrity of Creation*, 79.

the final removal of chaos and the restoration to wholeness and integrity. We believers are also awaiting the final and definitive redemption of our whole selves in confident hope with patient endurance.”⁷⁴ God wills not only to bring his blessings to his people but to the whole physical cosmos itself. According to Paul, God wishes to reconcile humanity and nature, through Christ by the shedding of his blood: “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” (Col 1:20).

Both creation and redemption were accomplished through and in Jesus Christ. “Redemption from this fallen condition could not be made by mankind itself, but only by God Himself in a ‘new creation’ through the Incarnation and redemptive sacrifice of Jesus Christ.”⁷⁵ He is the new Adam, who brings reconciliation, righteousness, and grace (cf. Rom. 5:10–21). God’s new creation in Jesus Christ involves the entire natural order and the whole cosmos. It is therefore quite fitting when the world has great expectations in the coming Papal Encyclical on Ecological Responsibility.⁷⁶

3.2 Christ the First Born of All Creation: Paul to the Colossians 1:15-20

Colossians 1:15-20 is another Pauline text and famous hymn that offers a biblical contribution in support for a reconciliation of all creation with its Creator and thus also for ecological concerns:

He [Jesus Christ] is the image of the invisible God, the first-born of all creation; for in him all things were created, in heaven and on earth, visible and invisible ...all things were created through him and for him. He is before all things, and in him all things hold together. He is the head of the body, the Church; he is

⁷⁴ John J. Pilch, *Galatians and Romans: Collegetown Bible Commentary* (Mumbai: St. Paul Press Training School, 2001) 50.

⁷⁵ Russell Sparkes, *Global Warming: How should we respond? Catholic Teaching on the Environment* (London: The Catholic Truth Society, 2009), 40.

⁷⁶ Cf. Christian Z. Peppard, “A Planetary Pope:” When Francis speaks on the environment, *America*, May 25 – June 1, 2015, 19-22.

the beginning, the first born from the dead, that in everything he might be preeminent. For in him the fullness of God was pleased to dwell, and through him to reconcile to himself all things, whether on earth or in heaven making peace by the blood of his cross (Col. 1:15-20).⁷⁷

The text depicts clearly Christ as the image of God, the firstborn of all creation, the one in whom the fullness of God dwells. However, most relevant for an ecotheology is the illustration of Christ as the one, in, through, and for whom all things were created, the one who has already reconciled all things in himself. It is widely agreed that this passage indicates the goal of God's redemption for the whole creation.

Paul asserts that Christ exists before the world was created. He insists that Christ is the instrument of God the Father in the creation of the universe. Creation happens through Christ and in Christ. Christ is not only an agent of God in creation; in him the universe is created. By him, all things were created v.16. In him, all things are held together v. 17. Christ is the core and the goal of all creation. Therefore, Paul portrays Jesus Christ as the centre of all creation. He goes further to stress that the Word (*Logos*) reconciled all creation through his saving work – his passion, death and resurrection by his obedience and redemptive act. Christ brings all creation back into harmony with God. Horrell comments that “the text not only looks back to Christ's role in creation at the beginning (cf. Gen. 1:1-3), but also depicts Christ's saving work on the cross as affecting the whole creation, bringing about its reconciliation and peace. In the Colossian hymn this reconciliation is depicted as having already been achieved (v. 20), though there remains a future dimension in this process, and the whole creation looks forward to the day when God's saving work will truly be complete.”⁷⁸

⁷⁷ The letter to the Colossians is an antilegomena; meaning it is not a genuine Pauline Letter. The text is written unlike to Paul's usual language, and although it does not disrupt the context, v. 21 follows directly from v. 14, suggesting that the author here quotes an early Christian hymn.

⁷⁸ Horrell, *The Bible and the Environment*, 82.

We all are a part of creation. Once we became alienated from God by our sins of disobedience, but Christ reunited us again with God through his redemption. However, some argue that this hymn is not only about the idea of creation but also about its restoration. “[T]he bringing into being of the whole creation for the Messiah (v. 16) first comes to fulfilment in the reconciliation of all things to Jesus (v. 20).”⁷⁹

Paul also focuses his attention on Jesus as the real man. “He [Jesus] is the heir of the firstborn blessing of a new creation, the founder of a true humanity. We are meant to see nothing less than Jesus as Lord of New Creation.”⁸⁰ Similarly, the *Compendium of the Social Doctrine of the Church* assures that “Jesus inaugurates a new world in which everything is subjected to him (cf. 1 Cor 15-28) and he creates anew those relationships of order and harmony that sin had destroyed.”⁸¹

The whole universe is the body of Jesus Christ. Paul teaches us that we can become only through and in Christ a new creation. Hence, Rom. 8:19-23 and Col. 1:15-20 tells us in different ways of God’s saving purpose that includes the whole creation. These Pauline texts continue to have a strong impact on the Christian response to contemporary issues of ecology and the environment. For Christians, “the peace-making through Jesus’ blood on the Cross is a dynamic process...it enables us to move towards a bio-centric cosmology, learning and relearning respect for the impulse towards life in all creation.”⁸²

⁷⁹ *Ibid.*, 82.

⁸⁰ Jonathan K. Dodson, *Lord of New Creation: The Fall Doesn’t Stand Alone* (Austin City, USA: 2008), also see, https://www.movingworks.org/wp-content/uploads/2013/08/1.19-20_Lord-of-New-Creation.pdf, accessed April 21, 2014.

⁸¹ *Compendium of the Social Doctrine of the Church*, no. 454.

⁸² Vicky, Balabanski, “Critiquing Anthropocentric Cosmology: Retrieving a Stoic ‘Permeation Cosmology’ in Colossians 1:15-20”, in Norman C. Habel and Peter Trudinger (eds.), *Exploring Ecological Hermeneutics* (SBL Symposium Series 46; Atlanta, GA: Society of Biblical Literature, 2008), 159.

The theological and ethical messages of Paul are obvious in that way that he focused on inter-human relationship, and specifically on the relationships among the members of the churches to which he writes. But everything relates to Christ and to God. These relationships can be analogically extended and applied to broader ecological concerns. Rom 8:19-23 and Col 1:15-20 are important texts from Paul for ecotheologians to reflect and appeal to. Though both texts approach the issues in different ways, both indicate that God's saving purpose does encompass the whole of creation.

CHAPTER II

POST VATICAN II TEACHING ON ENVIRONMENTAL STEWARDSHIP

1. From Human Ecology to Environmental Stewardship

The Magisterium of the Church shows a growing concern about ecological issues after Vatican II. Especially, the three Popes John Paul II, Benedict XVI and Francis raised their voices in deep concern for the destruction of creation and appealed to develop an increased awareness for responsibility towards nature and its protection. They made various serious calls for a deeper commitment to care for creation, as well as respect for human ecology and all forms of life. John Paul II spoke out on the environmental crisis especially the issues of pollution and global warming and Benedict XVI went further in promoting environmental stewardship as a crucial moral or ethical topic. In his encyclical, *Caritas in Veritate*, Benedict XVI urges to protect the natural environment for the sake of future generations and for itself. Pope Francis is from his very start linked with creation by choosing the name Francis of Assisi, because “he is the man of poverty, the man of peace, the man who loves and protects creation.”⁸³ The ecotheological outlook of the current papacy will probably get even stronger in the future.

Firstly, I will give a brief sketch of key elements of the teaching of John Paul II on the environment. Secondly, I will present some important accounts of reflections of Benedict XVI related creation. Then thirdly, I shall deal with Pope Francis’s deep

⁸³ Eddie Aquillina, Saint Francis and Pope Francis, see; <http://www.timesofmalta.com/articles/view/20131004/opinion/Saint-Francis-and-Pope-Francis.488880>, accessed, May 1, 2015.

concern for ecology today and the prospect of his encyclical on ecology, which he is in the process of writing.

1.1 John Paul II: Peace with All Creation (1990)

John Paul II made a very valuable contribution to Catholic Social Teaching by putting a strong emphasis on ecological issues. In his papacy, the message of environment was vastly developed and *Sollicitudo Rei Socialis* 1987 was the first encyclical that deals explicitly with environmental concerns. This document examines the link between “ecology with human dignity and environmental protection with personal morality.”⁸⁴ Three concepts are mentioned here, namely: ecology, human dignity, and environmental protection. They are integral related towards each other. Neglect of one means neglect of the other.

John Paul II condemned the arbitrary use of plants and animals for economical purpose in his encyclical *Sollicitudo Rei Socialis*. He warned about “the limits of available resources and of the need to respect the integrity and the cycles of nature.”⁸⁵ He reflected not only on the relationship between humans and the environment (the rest of nature) but that human activities increasingly threaten the natural environment. Everything in this world has limits and man has to learn to live in limits. This is why, human beings should always think of the coming generations.

Sollicitudo Rei Socialis identifies three moral guidelines with respect to the environmental dimensions of development. These concepts are (1) respect for the environment (relevance of biodiversity), (2) preservation of natural resources especially

⁸⁴ Woodeene Koenig-Bricker, *Ten Commandments for the Environment: Pope Benedict XVI Speaks out of Creation and Justice* (Huntington, Indiana: Ave Maria Press, 2009), 16.

⁸⁵ John Paul II, *Sollicitudo Rei Socialis* (1987), no.26.

non-renewable resources, and (3) restraint of pollution. This document is significant for the development of environmental principles because it affirms the independent moral rank of other creatures, and the need to think and act in terms of the whole environment and ecological systems. Hence, holistic ecological thinking is important today.

Later, John Paul II kept reminding the Catholic Church and the whole world to give urgent attention to the environment. In his message for the World Day of Peace 1990, "Peace with All Creation," he insists that environmental issues and its degradation must be a concern both at the level of individual States and the international community. John Paul writes:

There is a growing awareness that the world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life...faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past.⁸⁶

John Paul II spoke of the increasing devastation of nature, the depletion of the ozone layer, industrial waste, acid rain, the greenhouse gas effect, soil erosion, unrestricted deforestation, and the destruction of resources.⁸⁷ "All of these are known to harm and damage the atmosphere and environment."⁸⁸ All of these destroy human and ecological life.

For finding a solution for the ecological problems, his message continues to insist on "the need for a more internationally coordinated approach to the management of the earth's goods."⁸⁹ He emphasizes that there is an urgent need to promote a new

⁸⁶ John Paul II, Message for the World Day of Peace (January 1, 1990), 1.

⁸⁷ John Paul II, Message for the World Day of Peace (January 1, 1990), 6.

⁸⁸ John Paul II, Message for the World Day of Peace (January 1, 1990), 6.

⁸⁹ John Paul II, Message for the World Day of Peace (January 1, 1990), 9.

solidarity among the nations especially between developing countries and highly industrial countries. He warns against any form of war because “even local or regional wars, however limited, not only destroy human life and social structures, but also damage the land, ruining crops and vegetation, as well as poisoning the soil and water.”⁹⁰ And he was already convinced that the ecological problems could not be solved if modern society does not “take a serious look at its life style.”⁹¹ Therefore, he urged “Churches and religious bodies, non-governmental and governmental organizations, indeed all members of society, have a precise role to play in education in ecological responsibility”⁹² and the practice of it.

In 1991, John Paul II’s in his encyclical *Centesimus Annus*, which reviews the first hundred years of the Church’s social teaching since the appearance of *Rerum Novarum* in 1891, he writes: “The earth, by reason of its fruitfulness and its capacity to satisfy human needs, is God’s first gift for the sustenance of human life. But the earth does not yield its fruits without a particular human response to God’s gift, that is to say, without work. It is through work that man, using his intelligence and exercising his freedom, succeeds in dominating the earth and making it a fitting home.”⁹³

The environmental question is a great problem affecting societies and is deeply related to the problem of consumerism. The Encyclical *Centesimus Annus*, emphasizes that “in his desire to have and to enjoy rather than to be and to grow, man consumes the resources of the earth and his own life in an excessive and disordered way.”⁹⁴ This

⁹⁰ John Paul II, Message for the World Day of Peace (January 1, 1990), 11.

⁹¹ John Paul II, Message for the World Day of Peace (January 1, 1990), 13.

⁹² John Paul II, Message for the World Day of Peace (January 1, 1990), 13.

⁹³ Cf. John Paul II, Encyclical Letter *Centesimus Annus*, (1991) no. 31.

⁹⁴ Cf. John Paul II, Encyclical Letter *Centesimus Annus*, (1991) no. 37.

statement refers to the root of the destruction of the natural environment due to human activities. On that occasion, he wrote that “humans cannot make arbitrary use of the earth, subjecting it without restraint to his will, as though it did not have its own requisites and a prior God-given purpose, which man can indeed develop but must not betray.”⁹⁵ Therefore, humans must be specifically responsible towards the environment in which they live, and towards creation not only in view of the present but also of future generations.

1.2 Benedict XVI: If You Want Peace to Cultivate, Protect Creation (2009)

In his encyclical, *Caritas in Veritate* (2009), Benedict XVI continues to teach that “the environment is God’s gift to everyone and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole...and we must respect it and we may use it responsibly to satisfy our legitimate needs. But he warned that it is a danger to see nature as more important than humans, which this position leads to attitudes of neopaganism or a new pantheism.”⁹⁶ Biocentrism is not an answer to solve the environmental crisis. The bottom line is that creation or the natural world is God’s gift to humanity.

He also addresses the energy problem and that “the international community has the urgent duty to find institutional means of regulative the exploitation of non-renewable resources, involving poor countries in the process, in order to plan together for the future.”⁹⁷ He insistently called for “a responsible stewardship over nature, in

⁹⁵ Cf. John Paul II, Encyclical Letter *Centesimus Annus*, (1991) no. 37.

⁹⁶ Benedict XVI, *Caritas Veritatae* (2009), no. 48.

⁹⁷ Benedict XVI, *Caritas Veritatae* (2009), no. 49.

order to protect it, to enjoy its fruits and to cultivate it in new ways.”⁹⁸ Proper human responsibility is key to the care of the environment. Most importantly he called the attention to “the need of an effective shift in mentality which can lead to the adoption of new life-styles.”⁹⁹ Human beings can live ecologically when they live simple lives. But the question of a change in life-style is very difficult to solve. Here further research is necessary but first of all a conversion of hearts and minds, which leads to more just and respectful life-styles.

1.3 Pope Francis (Jorge Mario Bergoglio) on Ecology

Pope Francis points to the fact that the poorest people in the world are the worst affected by the environmental degradation like, global warming (climate change), desertification, pollution, drought, and water shortages. He connects the protection of people with the protection of the environment when he states: “Let us protect Christ in our lives, so that we can protect others, so that we can protect creation...it means respecting each of God’s creatures and respecting the environment in which we live...everything has been entrusted to our protection, and all of us are responsible for it.”¹⁰⁰ He also links his concern for the exploited earth and environment with the concern for the poor and marginalized people, which is a consistent theme of his papacy. The degradation or destruction of the environment and the marginalization of the poor are the main concerns of the Pope, and should be our concerns as well.

⁹⁸ Benedict XVI, *Caritas Veritatae* (2009), no. 50.

⁹⁹ Benedict XVI, *Caritas Veritatae* (2009), no. 51.

¹⁰⁰ National Catholic Reporter, The Independent News Source, See

On the occasion of the UN World Environment Day, on 5 June 2013, Francis focused his General Audience message on the topic of ‘consumerism’ and ‘culture of waste.’ Francis called on to “reflect on our responsibility to cultivate and care for the earth in accordance with God’s command (cf. *Gen 2:15*). We are called not only to respect the natural environment, but also to show respect for, and solidarity with, all the members of our human family.”¹⁰¹ Most people and societies today consume resources recklessly and without regard for the consequences to other people, creatures, and the planet. Indeed consumerism and its culture of waste are the ‘evils’ of life today.

Today’s forms of consumption and the ‘culture of waste’ lead to the waste of precious resources and to a harmful disrespect not only of the earth’s resources but also of human life. In terms of waste of food, Pope Francis denounced the throwing away of food which is “like stealing the food from the tables of the poor, the hungry,”¹⁰² by way of a systematic marginalization which leads to a throwing away of their lives. St. Thomas Aquinas insists, “Humans should not use earthly creatures immoderately or extravagantly but instead ‘only for as much as the need of this life requires’ (ST II-II: q.141, a.6).”¹⁰³ Pope Francis wants people to become aware of their own actions and to become inspired with a spirit of solidarity for sharing food and other resources for the needs of the poor. Solidarity is best exemplified and shown by sharing.

¹⁰¹ National Post, Religion, see http://en.radiovaticana.va/storico/2013/06/05/pope_%20at_audience_counter_a_culture_of_waste_with_solidarity/en1-698604 accessed on April 20, 2015.

¹⁰² Vatican Radio, the Voice of the Pope and the Church in dialogue with world, Pope at audience: counter a culture of waste with solidarity, see: http://en.radiovaticana.va/storico/2013/06/05/pope_%20at_audience_counter_a_culture_of_waste_with_solidarity/en1-698604, accessed, April 20, 2015.

¹⁰³ Daniel P Schied, “Saint Thomas Aquinas, the Thomistic Tradition, and the Cosmic Common Good,” Tobias Winright (ed.), *Green Discipleship: Catholic Theological Ethics and the Environment*, (New York: Oxford University Press, 2005, 129-147, 131.

In July 2013 Pope Francis met during his visit to Brazil politicians and members of the business and cultural elite. He urged them to treat the rainforest as a garden.¹⁰⁴ Particularly, he addressed the bishops and called for “respect and protection of the entire creation which God has entrusted to humanity, not so that it be indiscriminately exploited but rather made into a garden.”¹⁰⁵ It was a surprise that he dedicated a little section in his *Evangelii Gaudium* to the subject of ecology. “Whatever is fragile, like the environment, is defenseless before the interests of a deified market, which become the only rule.”¹⁰⁶ The defenseless should be protected. Then he says,

There are other weak and defenseless beings who are frequently at the mercy of economic interests or indiscriminate exploitation. I am speaking of creation as a whole; we human beings are not only the beneficiaries but also the stewards of other creatures. Thanks to our bodies, God has joined us so closely to the world around us that we can feel the desertification of soil almost as a physical ailment, and the extinction of a species as a painful disfigurement. Let us not leave in our wake a swath of destruction and death, which will affect our own lives, and those of future generations.¹⁰⁷

Then he continues to say, “Small yet strong in the love of God, like Saint Francis of Assisi, all of us, as Christians, are called to watch over and protect the fragile world in which we live, and all its peoples.”¹⁰⁸ Life indeed is short. It is also fragile. Hence, it must be protected so human beings and other forms of life can celebrate life.

In his “Message for the World Day of Peace” in 2014, he continues to write about “the devastation of natural resources and ongoing pollution, and the tragedy of

¹⁰⁴ National Post, Religion, See; <http://news.nationalpost.com/holy-post/pope-francis-calls-for-respect-and-protection-of-environment-end-to-exploitation-of-amazon-rainforest#federated=1>, accessed, April 20, 2015.

¹⁰⁵ Ibid.,

¹⁰⁶ Pope Francis, *Evangelii Gaudium*, (2013), no. 56.

¹⁰⁷ Pope Francis, *Evangelii Gaudium*, (2013), no. 215.

¹⁰⁸ Pope Francis, *Evangelii Gaudium*, (2013), no. 216.

the exploitation of labor.”¹⁰⁹ The way the created world is treated by human beings is very tragic. Then, he continues to focus on the concept of nature of Benedict XVI seen as a gift in the encyclical *Caritas in Veritate*. Stating:

The human family has received from the Creator a common gift: nature. The Christian view of creation includes a positive judgment about the legitimacy of interventions on nature if these are meant to be beneficial and are performed responsibly, that is to say, by acknowledging the “grammar” inscribed in nature and by wisely using resources for the benefit of all, with respect for the beauty, finality and usefulness of every living being and its place in the ecosystem. Nature, in a word, is at our disposition and we are called to exercise a responsible stewardship over it.¹¹⁰

He points out the human failure in the task of stewardship for creation when he writes: “We are driven by greed and by the arrogance of dominion, possession, manipulation and exploitation; we do not preserve nature; nor do we respect it or consider it a gracious gift which we must care for and set at the service of our brothers and sisters, including future generations.”¹¹¹ All these attitudes are unchristian. Hence, they must be changed and life-giving attitudes have to be promoted.

To sum up, Pope Francis has frequently shown that he is very much concerned about ecology. He insistently called to safeguard creation and respect the interdependency of humans and of nature. In addition, he called everyone to be a responsible guardian of nature as creation and protectors of one another as of the whole environment. He also linked human ecology with environmental ecology and that we need to reflect and rethink the culture of broken relationships and waste and to oppose our crude style of consumerism and move towards responsible forms of ethical consumption. He conveys that the Church needs to find a proper way to respond to this

¹⁰⁹ Pope Francis, Message for the World Day of Peace, (2014), no. 8.

¹¹⁰ Pope Francis, Message for the World Day of Peace, (2014), no. 9.

¹¹¹ Pope Francis, Message of the World Day of Peace, (2014), no. 9.

crisis, by facilitating the best of science and of the goodwill of all people. The key to the preservation of life – human and ecological – is inter-connectedness and inter-relatedness and active personal responsibility. We belong to each other and we are related to each other, and depend on each other.

2. The Catechism of the Catholic Church

The *Catechism of the Catholic Church* also contributes a significant element to environmental concerns; especially the numbers 2401 to 2418 bring an essential moral and religious dimension to the issue of ecology and responsibility for creation.

2.1 “Thou shall not steal”

The Seventh Commandment says, “Thou shall not steal.” It is understandable that this commandment prohibits taking other’s property and goods and commands respect for the earthly goods. The destination of the earth’s goods is for the whole of humanity and even other creatures that “have to be used wisely by all. They must be shared equitably, in accordance with justice and charity.”¹¹² This commandment also promotes “the practice of justice and charity in the administration of earthly goods and the fruits of men’s labour.”¹¹³

Benedict XVI reflected on how the environment relates to this commandment as “the concept of ‘the universal destination of goods,’ which means the world and all its bounty has been created for the good of all human beings.”¹¹⁴ He emphasizes “when

¹¹² *Compendium of the Social Doctrine of the Church*, no. 481.

¹¹³ *Catechism of the Catholic Church (CCC)*, (1994), 2451.

¹¹⁴ Woodeene Koenig-Bricker, *Ten Commandments for the Environment: Pope Benedict XVI Speaks out for Creation and Justice* (Notre Dame, Indiana: Ave Maria Press, 2009), 104.

individuals or nations take more than their share and prevent others from having access to these material commodities, the ‘universal destination of Goods’ is thwarted.”¹¹⁵ He points also out that “the greed and selfishness that result in some having more than they can possibly use while others do not have enough to survive underlies the poverty and plagues so much of the world.”¹¹⁶ Indeed greed and selfishness must be guarded against us, because these destructive attitudes are at the basis of most of the problems today.

People consume from the natural resources more than what they need and should and what the earth can sustain because of human selfishness and greed that leads to the overexploitation of the earth’s resources and the degradation of nature. When the current rate of resource consumption continues, these resources will run out soon and even some ecosystems will collapse before these resources are completely gone. In acting like this our generation steals actually the property of future generations. Therefore, the seventh commandment entails today, “for the sake of common good, respect for the universal destination of goods and respect for the right to private property,”¹¹⁷ and its existence¹¹⁸ as the property of future generations.

It has been mentioned earlier that Pope Francis emphasized the issue of food waste and that the throwing away of food is “like stealing the food from the tables of the poor.”¹¹⁹ At this point, we have to ask ourselves what are our habits and practices in this regard and how can we be more responsible in the field of food waste prevention.

¹¹⁵ *Ibid.*, 104.

¹¹⁶ *Ibid.*, 105.

¹¹⁷ *Catechism of the Catholic Church*, 2401.

¹¹⁸ *Catechism of the Catholic Church*, 2403.

¹¹⁹ Vatican Radio, the Voice of the Pope and the Church in dialogue with world, Pope at audience: counter a culture of waste with solidarity, see: http://en.radiovaticana.va/storico/2013/06/05/pope_%20at_audience_counter_a_culture_of_waste_with_solidarity/en1-698604, accessed, April 20, 2015.

Here everybody can reflect and surely needs conversion and can promote a more just and sustainable life style.

2.2 Respect for the Integrity of Creation

The *Catechism of the Catholic Church* in the context of the seventh commandment, especially in the numbers 2415-18, discusses the value of respect for the integrity of the whole creation, not only animals and plants, but also all inanimate beings.¹²⁰ In terms of using the mineral, vegetarian and animal resources, humans should be careful and prudent in order not to damage the environment. Humans are granted the gift and power to care and guard the inanimate nature and all other living beings.¹²¹

In other words, the destiny of humans is to serve as good stewards of God's creation, having a unique position in relation to the rest of creation. In case of the relation to the animals, there is the instruction given that animals can be used for food and clothing but they must never be abused and treated cruelly. Moreover, they should be treated with respect, mercy, and sympathy, because they are man's helpmates.

3. *Compendium of the Social Doctrine of the Catholic Church*

From the previous chapter we already saw that the teaching of the Church on ecological issues is outlined clearly in the *Compendium of the Social Doctrine of the Catholic Church*. The entire chapter ten is entitled with 'Safeguarding the

¹²⁰ *Catechism of the Catholic Church*, 2415.

¹²¹ *Catechism of the Catholic Church*, 2415.

Environment,' and is wholly dedicated to concerns with ecological matters. This chapter is divided into four parts. The first part introduces the biblical background (nos. 451-455), especially the faith of the chosen people in God as creator and the process of creation that creation is “a gift of God.” Afterwards, the Biblical teaching on the human relationship with nature is presented, “man and the universe of created things,” (nos. 456-60). The next section highlights “the crisis in the relationship between man and the environment” (nos. 461-65). Then the chapter continues to describe the correct response to the environmental crisis with the focus on the “common good” (nos. 466-71). The text goes on to elaborate the use of biotechnologies (nos. 472-80), and reflects also on the modern economic crisis linked with the environmental crisis (nos. 481-85). The final conclusion states that it requires a change of heart and “new lifestyles” (nos. 486-87) to meet the many challenges ahead. For this reason, the following section of my study is limited to two major points: the problem of the relationship between man and the environment and some features of our common human responsibility.

3.1 The Crisis in the Relationship between Man and the Environment

This section is about “the crisis in the relationship between Man and the Environment” (nos. 461-465). It highlights that the root of the crisis are human activities of unlimited dominion over the earth, rather than to exercise responsibility towards it. The *Compendium* shows how John Paul II strongly criticized the sinful activity of mankind threatening the earth’s climate. It regards the problem of the exploitation of the natural world as not being new, but rather as “the result of a long

historical and cultural process.”¹²² It notes, “The modern era has witnessed man’s growing capacity for transformative intervention. The aspect of the conquest and exploitation of resources has become predominant and invasive, and today it has even reached the point of threatening the environment’s hospitable aspect: the environment as ‘resource’ risks threatening the environment as ‘home’.”¹²³

The third chapter of the *Compendium* already notes that humans’ relationship with the environment cannot be in the form of “a freedom of arbitrary and selfish exploitation,” rather it requires the exercise of true responsibility.¹²⁴ The contemporary situation seems to be getting worse compared with the past, because human activities emerge to be threatening even the earth’s entire climate. The *Compendium* condemns a conception of reductionism that sees the natural world as nothing more than an object to be controlled in terms of exploitation and consumerism. But it also reminds the so-called deep ecologists “not to absolutize nature and place it above the dignity of the human person himself.”¹²⁵ Deep ecology serves its purpose only if it is used as a form of spirituality that makes us appreciate better the natural world created by God and puts man in the correct relationship with God and the entire creation.

There is the danger in some thoughts of deep ecology that “man’s superior responsibility can be eliminated in favour of an egalitarian consideration of the ‘dignity’ of all living beings,”¹²⁶ eliminating the unique role of man. This can even hurt the environment and society if the unique human responsibility is diminished and not seen

¹²² *Compendium of the Social Doctrine of the Church*, no. 461.

¹²³ *Compendium of the Social Doctrine of the Church*, no. 461.

¹²⁴ *Compendium of the Social Doctrine of the Church*, no. 113.

¹²⁵ *Compendium of the Social Doctrine of the Church*, no. 463.

¹²⁶ *Compendium of the Social Doctrine of the Church*, no. 463.

and recognized properly. Only when man is seen at his proper place can the challenges be faced and answers given.

3.2 A Responsibility for the Common Good

This section of the *Compendium* (nos. 466-471) correctly responds to the environmental degradation with the teaching of John Paul II, who strongly conveyed the need to protect the biodiversity, which embodies “an extraordinary richness for all of humanity.”¹²⁷ The *Compendium* indicates the need of the responsibility to preserve the biodiversity and natural sources for the future generations, which must be of serious concern for “individual States and the international community.”¹²⁸

The responsibility for the environment “should also find adequate expression on a juridical level.”¹²⁹ The *Compendium* emphasizes more sustainability, because the natural resources are limited and some are not renewable. Therefore, every country, and in particular the developed countries “must be aware of the urgent obligation to reconsider the way the natural goods are being used.”¹³⁰ To reach this target all actors of economic activities have “to respect the environment and be concerned with the safeguarding of the environment and should foresee the costs involved.”¹³¹ The *Compendium* approves and supports the “precautionary principle” as guiding concept:

Relations between human activity and climate change which, given their extreme complexity, must be opportunely and constantly monitored at the scientific political, and juridical, national and international level. The

¹²⁷ *Compendium of the Social Doctrine of the Church*, no. 466.

¹²⁸ *Compendium of the Social Doctrine of the Church*, no. 467.

¹²⁹ *Compendium of the Social Doctrine of the Church*, no. 468.

¹³⁰ *Compendium of the Social Doctrine of the Church*, no. 470.

¹³¹ *Compendium of the Social Doctrine of the Church*, no. 470.

climate is a good that must be protected and reminds consumers and those engaged in industrial activity to develop a greater sense of responsibility for their behaviour.¹³²

The concept of the common good entails for instance that the earth's goods are meant for all humans, including the future generations, to be used wisely and just. The environment is such a common good, which needs proper care and adequate protection by governments and people. In particular, the non-renewable resources must be conserved for future generation. This requires a higher level for "political responsibility of States, the international community and economic actors."¹³³

The *Compendium* draws also the attention to the situation of indigenous peoples who are the most affected by the ecological crisis. The poorest people in the poorest countries are indeed suffering the most by the negative impact of climate change and environmental degradation. The Church is not only worried about climate change and biodiversity; it is also seriously concerned about issues of global poverty. For the Church "the environmental crisis and poverty are connected by a complex and dramatic set of causes that can be resolved by the principle of the universal destination of goods, which offers a fundamental moral and cultural orientation."¹³⁴

Therefore, indigenous people must enjoy a special form of protection above anything else. In short, the *Compendium* demands for solving the serious ecological problems a change of heart leading to new lifestyles that favour the common good and sustainability.¹³⁵ The *Compendium* calls for an attitude of reverence, temperance and

¹³² *Compendium of the Social Doctrine of the Church*, no. 470.

¹³³ *Compendium of the Social Doctrine of the Church*, no. 470.

¹³⁴ *Compendium of the Social Doctrine of the Church*, no. 482.

¹³⁵ Cf. *Compendium of the Social Doctrine of the Church*, no. 486.

self-discipline at both the individual and social levels in order to protect creation properly.¹³⁶

¹³⁶ Cf. *Compendium of the Social Doctrine of the Church*, no. 486.

CHAPTER III

LOCAL EPISCOPAL CONFERENCES ON ENVIRONMENTAL STEWARDSHIP

1. Asian Bishops' Conferences

1.1 The Catholic Bishops' Conference of the Philippines (CBCP): What is Happening to Our Beautiful Land (1988)

In 1988, the CBCP published the Pastoral Letter: “*What is happening to our beautiful land,*” which is the first explicit official statement on ecology in the Philippines. The seriousness of the threat to the environment has led the Catholic Bishops of the Philippines to call for the preservation of the Earth, its resources and its natural diversity.¹³⁷ The main thrust of this letter is directed to address the problems of political instability, economic decline, and a growth in armed conflicts in the Philippines¹³⁸ that emerged in this context with devastating consequences to people and the environment.

This document is significantly concerned with the beauty of the land that has been vastly destroyed, and the human activities that led to the risk of destroying the natural world and caused the disappearing of species, so that even human beings themselves become victims of this degradation.¹³⁹ There are some issues that we have to recognize in this document, which go beyond the destruction of the environment,

¹³⁷ Cf. The Catholic Bishops' Conference of the Philippines (CBCP) *What is Happening to Our Beautiful Land: A Pastoral Letter on Ecology* (Tagaytay City, Philippines: January 29, 1988), 1.

¹³⁸ *Ibid.*, 1.

¹³⁹ *Ibid.*, 1.

like the suggestion to share responsibility among individuals, and the churches, and government departments to do something about it. Furthermore, there are few concrete suggestions, e.g. that everyone should get involved in form of concrete actions and show a clear responsible attitude to improve the environmental situation.¹⁴⁰

The ecological crisis is a real issue of humanity. With many natural disasters and calamities in Asia happening in the past decade, today the Churches are strongly concerned about it. All bishops of the Philippine Bishops Conference are convinced that “this assault on creation is sinful and contrary to the teaching of our faith.”¹⁴¹ Therefore, the vision of their letter is grounded in the faith that God has commissioned all humans to protect and govern his creation as responsible stewards.

The pastoral letter urges and calls on all people of the Philippines to respect and protect the earth. While facing these challenges, Christian men and women are called to take a stand on the side of life.¹⁴² In addition, the letter encourages urgently “all peoples of good will in the country to reflect on the beauty of the Philippine land and seas which nourish and sustain their lives.”¹⁴³ For the lands and seas are vital to human life and survival.

The bishops called the attention of all people to recognize the horrendous consequences for the land and the environment and to respond to it, stating, “We must care for the land, watch over it, protect it and love it.”¹⁴⁴ The document closes with some suggestions for individuals, the churches and the government to raise awareness of the situation of environmental degradation, and to establish concrete organizations

¹⁴⁰ *Ibid.*, 1.

¹⁴¹ *Ibid.*, 1.

¹⁴² *Ibid.*, 1.

¹⁴³ *Ibid.*, 1.

¹⁴⁴ *Ibid.*, 4.

to care better for the Earth. “They [bishops] suggest that the Government groups together into an independent Department all the agencies which deal at present with ecological issues. This department should promote an awareness of the fragility and limited carrying capacity of the islands’ ecosystems and advocate measures designed to support on ecologically sustainable form of development.”¹⁴⁵

1.2 FABC: Federation of Asian Bishops’ Conferences

Since the *Federation of Asian Bishops Conferences* (FABC) was initiated in 1970, it has released many documents concerning burning issues in today’s world, especially in Asia. The FABC focuses on important themes like globalization, culture, poverty, migrants and refugees, indigenous peoples, population, religious freedom, threats to life, social communication, ecology, laity, women, youth, Pentecostalism and vocations of the Churches in Asia.¹⁴⁶ The emerging ecological crisis is also reflected and discussed in FABC documents.

In 1996, the document by the Theological Advisory Commission (TAC) of the FABC ‘*Asian Christian Perspectives on Harmony*,’ pointed to the ecological issues that are relevant for Asia, noting:

Many of the issues raised on the global level and in the “South” are particularly relevant for Asia, namely, sustainable agriculture, deforestation, pollution, protection of oceans and coastal areas, population control, and environmentally sound management of biotechnology and hazardous wastes. It is only the most shocking examples of environmental breakdown, which fully engage the public. Full-blown disasters, such as the poisoning of slum-dwellers at Bhopal in India, or the fatal spills of toxic gases and wastes in South Korea or Thailand generally elicit an immediate government response. There are,

¹⁴⁵ *Ibid.*, 6.

¹⁴⁶ FABC, “Responding to the Challenges of Asia,” *FABC Papers* no. 138 (10-16 December, 2012, Xuan Loc and Ho Chi Minh City, Vietnam), nos.17-33.

however, other kinds of ecological problems less well known to people. These include soil erosion, the despoiling of watershed areas, wetlands and fishing zones, loss or ruin of farmland due to industrial expansion, and increased disease and morbidity caused by air pollution.¹⁴⁷

Then, the document continues describing the most serious issues in Asia today - that is, the harmful use of pesticides, insecticides and fertilizers. These chemicals harm not only the environment but also human life. These chemicals are fatal and, therefore, must not be used. And another major problem is the pollution of the atmosphere due to the increased concentration of greenhouse gases (GHG), and the increased depletion of marine resources and the use of coastal waters as a dumping ground for waste.¹⁴⁸

In 1971, in his Apostolic Letter *Octogesima Adveniens*, Pope Paul VI already warned that the human activity is destroying the nature: “Man is suddenly becoming aware that by an ill-considered exploitation of nature he risks destroying it and becoming in his turn the victim of this degradation.”¹⁴⁹ He encourages Catholics to take on responsibility and to become responsible stewards of God’s creation stating “the Christian must turn to these new perceptions in order to take on responsibility, together with the rest of men, for a destiny which from now on is shared by all.”¹⁵⁰

The FABC also expressed the view, which all the inhabitants of the world, need to take on responsibility for the environmental issues especially the rich nations. They have to take on the main responsibility for the current state of affairs regarding the environment.

¹⁴⁷ TAC (Theological Advisory Commission) of the FABC, “Asian Christian Perspectives on Harmony,” no. 1.3, *FABC Papers*, 1996, no.75.

¹⁴⁸ *Ibid.*, no.75.

¹⁴⁹ Paul VI, *Octogesima Adveniens* (1971), no 21.

¹⁵⁰ Paul VI, *Octogesima Adveniens* (1971), no 21.

Regarding to responsible stewardship, the FABC expressed in the TAC document “Asian Theological Perspectives on the Church and Politics,”

There is now a fast-growing awareness of the need for preserving and restoring the integrity of creation. God has made the cosmos as an integrated whole. The human being was made the crown of creation, which he/she must use and care for in a spirit of reverence and respect for its proper nature within the overall design of God.¹⁵¹

The FABC teaching on the ecological issues calls humans to be responsible stewards of God’s creation. The FABC teaching is somewhat different than the universal magisterial teachings on ecological issues because they are enriched in their insights by the Asian context, which makes them more relevant and practical for Asians.

For example, when it deals with the ecological care or question, the document, “Asian Christian Perspectives on Harmony” of the FABC writes:

The problem of environmental protection is this: how to induce members of human societies to opt for a state of sustainable equilibrium, instead of continuing environment-damaging trends in ecosystem exploitation. Asian societies, due to their cultural and religious heritage of communion with nature and love for “mother earth,” are better equipped than Western societies to cope with this problem.¹⁵²

But is the environment in Asia really better off than in Western countries? The recycling rate seems to be higher in Western countries than in Asian countries. It means that in Western countries the level of Environmental protection is higher. In addition, the harmony with nature and creation in human relationships is a fundamental aspect for the FABC’s teachings. The TAC document writes the following to this point:

Harmony with nature requires humans to reject an anthropo-centric view of the universe, and to respect all of creation as the *vestigial Dei*. This respect generates a harmony, which reflects God’s providential love for his creatures. Humanity is called to discover in the universe God’s very presence (Ps 104, 109), and to co-create with him making the earth more fruitful.¹⁵³

¹⁵¹ TAC (Theological Advisory Commission), “Asian Theological Perspectives on the Church and Politics,” no.1.7, 6. As *FABC Papers* no. 63.

¹⁵² *Ibid.*, 22.

¹⁵³ *Ibid.*, 56.

But harmony with nature and actual protection of the environment are different issues. They can fall together but this must not necessarily be the case. However, one needs to note carefully that many Asian cultures and religions consider creation or nature not merely as an ‘object,’ but also as a ‘subject’ in which nature should never be abused. The OTC document on “Respect for life in Primal religions,” explains this point in the following:

Respect for nature is manifested in the way the people address other creatures and even inanimate objects. Human beings are regarded to be composed of three or four of the following elements—earth, water, fire and wind. Sometimes, other elements come also into the picture. When a person dies, his or her body returns to the elements and thereby nourishes the earth. This is a cycle of taking and giving. It is considered a great sin to abuse the balance of nature.¹⁵⁴

Similarly, the TAC document on “Harmony” points out the same idea expressing, “Harmony and peace call for respect for the earth. She is the mother of whose dust we are made and to whose womb our earthly remains shall all return. The usurpation of the fruits of the earth by some and deprivation of others results in the rupture of harmony among peoples.”¹⁵⁵

¹⁵⁴ OTC (The Office of Theological Concerns), “Respect for Life in the Context of Asia,” no. 2.6, 397.

¹⁵⁵ TAC, “Asian Christian Perspectives on Harmony,” no. 4.9, 51.

1.3 Global Warming and Climate Change and its Impact on Asia: Challenges and the Response of the Church

In 2011, the very significant seminar of Asian Bishops in Bangkok published the statement entitled “Church Response to the Challenge of Climate Change in Asia; Towards a New Creation.” The blame for the bad situation of the climate and the environmental degradation is put firmly on the industrial countries which “have substantively contributed ...to global warming and climate change...they pillage Asia’s virgin forests and operate destructive extractive industries such as various forms of large-scale mining for the sake of short term economic gains while sacrificing the common good of all.”¹⁵⁶

In 1971, the World Synod of Catholic Bishops’ meeting in Rome also called the intention of the richer nations that they “are bound to accept a less material way of life, with less waste, in order to avoid the destruction of the heritage which they are obliged by absolute justice to share with all other members of the human race.”¹⁵⁷ In like manner, the TAC document “Asian Perspectives on the Church and Politics” expressed the same idea as above that the rich nations came to exploit the natural resources in Asia,

Disrespect for the sanctity and order of creation and increasing misuse of the natural resources of Mother Earth, often determined by foreign investors and local capitalists, are threatening the life of masses. While the poor masses are struggling to survive amidst adverse economic conditions and with a lack of minimum sanitary facilities, the rich and the powerful are bulldozing through their multinational projects which not only rape and consume the natural resources, but rob the land of its natural beauty. These are clear instances of how the unlimited greed of the rich can be a direct threat of the survival of the poor.¹⁵⁸

¹⁵⁶ Federation of Asian Bishops’ Conference (*FABC*) and *MISEREOR*, Final Statement of the Climate Change Seminar entitled “Church Response to the Challenge of Climate Change in Asia; Towards a New Creation,” held at the Assumption University in Bangkok, on 18-19 October (2011), 2.

¹⁵⁷ *Justitia in Mundo*, 70.

¹⁵⁸ TAC, “Asian Perspectives on the Church and Politics,” no.2.6.

The continent of Asia is extremely rich not only in people, in ancient, cultures, religious and philosophical traditions,¹⁵⁹ but also in natural resources. However, it is tragic that Asia became “a continent of massive poverty, where the few enjoy great progress and prosperity while the many suffer in abject deprivation. It is the poor and the needy who suffer most from the consequences of climate change.”¹⁶⁰ Regarding this situation, the conference demands “Just human living conditions for all peoples of Asia and for the survival of species. This includes also the demand for justice for generations not yet born. “This requires the living of solidarity and a fundamental orientation to the common good.”¹⁶¹

The concepts of “responsible stewardship” sums up ethically that human beings are the guardians of the rest of the natural order. They are not given a title to exploit indiscriminately, but to preserve and respect God’s good creation as it is. The pastoral imperatives of the FABC in favour of the common good urges “all the peoples of Asia, regardless of culture, religious or philosophical belief and economic status have the mission to defend and promote the integrity of creation.”¹⁶² Although only three per cent of Asians are Catholics, the Bishops of the FABC convincingly addressed all the churches in Asia and peoples of good will that “they have to stand for global climate justice today and for future generations with preferential option for the poor.”¹⁶³ It is

¹⁵⁹ See Final Statement of FABC – MISEREOR Seminar, “Church Response to the Challenge of Climate Change in Asia; Towards a New Creation,” Bangkok, 18-19 October (2011), 1.

¹⁶⁰ Ibid., 1.

¹⁶¹ Ibid., 2.

¹⁶² Ibid., 3.

¹⁶³ Ibid., 3.

the vocation of Christians and their responsibility to convey the message of the gospel, and the message of caring for each other and to bring about a better world.

The Catholic responses to the environmental issues are centred on the concepts of biblical stewardship to be responsible for the earth's resources and preserving them for future generations. The FABC is also deeply concerned about human life and the right of future generations. The Report "Theological Concerns and Ecology" by Clarence Devadass says:

The responsibility towards future generations is a significant ethical issue.... The continuity of the human race is best served by respecting the inalienable rights of future generations. The Christian faith must promote a theology of responsible stewardship in which men and women are co-creators with God in the continuing work of creation. It is in this context that the Bible recognizes the intrinsic right of all living beings to be fruitful and continue to enjoy the fullness of God's created beauty. This central Christian insight finds resonance with religious traditions with particular regard to Asia.¹⁶⁴

In the first seminar of the FABC on climate change, as one important point it was mentioned that 55 participants in the conference collectively appeal to the FABC to establish an agency on climate protection whose tasks are:

(1) Doing theological reflection on the mystery and truth of God's creation, on their moral and ethical responsibility with regard to the environment; (2) promoting initiatives at the FABC level and assisting the initiatives of local churches for climate protection; (3) establishing practical and effective linkage with SECAM, FCBCO, the US and Canadian Bishops' Conferences, and the CCEE as well as with UN conferences in order to address the global challenge of climate change.¹⁶⁵

Though the teaching of the FABC is not much different from the universal magisterial teaching on environmental issues, the FABC attempts to

¹⁶⁴ FABC Central Secretariat, "Climate Change, Asian Impacts and Response" II FABC Climate Change Seminar 23-24 October 2013, Assumption University, Bangkok, Thailand.

¹⁶⁵ Federation of Asian Bishops' Conferences (FABC) and Misereor, "Church Response to the Challenge of Climate Change in Asia; Towards a New Creation," on 18-19 October (2011), 4.

contextualize those teachings to fit into the Asian thinking and context when confronting the ecological issues.

2. U.S Conference of Catholic Bishops, *Renewing the Earth* (1991)

The teaching of the U.S Bishops on the environment is somehow very concrete and expands to the level of protection towards the environment. I will focus here only on three main ethical challenges, presented in their statement *Renewing the Earth* from 1991. The first article is the challenge of consumption and population, which is considered to be one of the most important one confronting the Church. The second issue is related to new attitudes, which involve also faith and behaviours that help us to judge problems correctly and shape constructive solutions. The third area is related to innovative behaviour and actions, which are only a first step in shaping an on-going response to this challenge. The last part is called conversion of all people of good will as individuals or as institutions to save the planet earth.

In 1991, the U.S. Catholic Bishops approved their statement on the environment entitled *Renewing the Earth: an Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*. In this first statement on environmental issues, the US Bishops clearly highlight the ethical challenge of ecology; they also “analyse the connection between ecology and poverty and the implications of environmental degradation for human life and dignity.”¹⁶⁶

The scientist, Dr. Thomas F. Malone, claims, “Environmental issues are also linked with other basic problems.”¹⁶⁷ These problems are connected to each other.

¹⁶⁶ United States Conference of Catholic Bishops (USCCB), *Environment*, See, <http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/>

Malone warns: “Humanity faces problems in five interrelated fields, namely: (a) environment, (b) energy, (c) economics, (d) equity, and € ethics.”¹⁶⁸ Dialogues on ecological issues today are already underway in some nations and in the Church as well. In their pastoral statement, the US Bishops attempt to engage in a dialogue especially with the scientific community, opening their thoughts towards global challenges so that people become more aware of the underlying moral crisis and understand the problem even as religious crisis as well.¹⁶⁹

They present six goals following their reflections on the basic problems. “(1) To highlight the ethical dimensions of the environmental crisis, (2) to link questions of ecology and poverty, environment and development; (3) to stand with working men and women and poor and disadvantaged persons, whose lives are often impaired by ecological degradation and abuse and tradeoffs between environment and development; (4) to promote a vision of a just and sustainable world community; (5) to invite the Catholic community and men and women of good will to reflect more deeply on the religious dimensions of this topic; and (6) to begin a broader conversation on the potential contribution of the Church to environmental questions.”¹⁷⁰

Above all, the Bishops “seek to explore the links between the concern for the human person and for the earth, between social or human ecology and natural ecology. Our mistreatment of the natural world diminishes our own human dignity and sacredness, not only because we are destroying resources that future generations of

¹⁶⁷ United States Conference of Catholic Bishops (USCCB), *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching* (Washington, D.C.: United States Conference of Catholic Bishops, 1992).

¹⁶⁸ Ibid., I.

¹⁶⁹ Ibid., I, A.

¹⁷⁰ Ibid., I, A.

humans need, but because we are engaging in actions that contradict what it means to be human.”¹⁷¹

Paul VI emphasizes that authentic development is not merely unrestrained economic growth; it is much more than economic progress. Human beings are at the center of all concerns for development. He announces, “We cannot allow economics to be separated from human realities, nor development from the civilization in which it takes place.”¹⁷²

The Bishops also assert that “Catholic social teaching has never accepted material growth as a model of development.”¹⁷³ John Paul II also reminds that human desire is “to have and to enjoy rather than to be and to grow,” humanity consumes the resources of the earth, subjecting it without restraint...as if it did not have its own requisites and God-given purpose.”¹⁷⁴ The U.S. Bishops speak about authentic human development presenting a balanced view of human progress, which includes the respect for nature and social well-being.¹⁷⁵

The issue of authentic human development calls the attention of richer nations to find ways to reduce and restructure their overconsumption of natural resources. Lastly, “authentic development also entails encouraging the proper use of both agricultural and industrial technologies, so that development does not merely mean

¹⁷¹ Ibid., I, A.

¹⁷² *Populorum Progressio*, 1967, no. 14.

¹⁷³ United States Conference of Catholic Bishops, *Renewing the Earth*, III, G.

¹⁷⁴ Ibid., III, G.

¹⁷⁵ Ibid., III, G.

technological advancement of its own sake but rather that technology benefits people and enhances the land.”¹⁷⁶

2.1 Consumption and Population

Most of the environmental destruction we see today can be related to consumption. The world’s dramatically growing consumption of natural resources is causing severe damage. If the world continues on its current route, the earth’s natural system simply cannot support such wasteful lifestyles and the natural resources are in danger of being completely depleted and nothing is left for future generations. The U.S. Bishops encourage the affluent nations and advanced societies to “make efforts at reducing their consumption of resources and the enormous waste and pollution that result from it.”¹⁷⁷ In order to survive on this planet, we need to change our lifestyles, so that we are able to protect our natural resource base and the fragile eco-systems on our planet for our children and the future generations.

The U.S. Bishops debate also about the issue of population growth not just to put blame on the rapidly growing populations of poor nations. “The affluent nations have to acknowledge the impact of voracious consumerism instead of simply calling for population and emissions controls from people in poorer nations.”¹⁷⁸ A more responsible approach to population issues is the promotion of “authentic development.”

The Bishops instruct that “respect for nature ought to encourage policies that promote natural family planning and true responsible parenthood rather than coercive

¹⁷⁶ Ibid., III, G.

¹⁷⁷ Ibid., III, H.

¹⁷⁸ Ibid., III, H.

population control programs or incentives for birth control that violate cultural and religious norms and Catholic teaching.”¹⁷⁹ Humans are responsible to care for all God’s creatures, in particular the most vulnerable. “The care of the earth will not be advanced by the destruction of human life at any stage of development.”¹⁸⁰ Pope John Paul II declares, “Protecting the environment is first of all the right to live and the protection of life.”¹⁸¹

3.2 New Attitudes

For a believer, faith means also essentially to care and have sincere concerns for creation. We have to focus on new attitudes that help to save our environment. “The virtues of prudence, humility and temperance are indispensable elements of a new environmental ethics. Recognition of the reality of sin and failure as well as the opportunity for forgiveness and reconciliation can help us face up to our environmental responsibilities.”¹⁸²

People need to be convinced about qualitative growth and sufficiency in life rather than mere quantitative growth and increase consumption levels. “What is now needed is the will to make the changes in public policy, as well as in life-style, that will be needed to arrest, reverse, and prevent environmental decay and to pursue the goal of sustainable, equitable development for all...but the new order can only be achieved

¹⁷⁹ Ibid., III, H.

¹⁸⁰ Ibid., III, H.

¹⁸¹ Homily at Quiaba, Mato Grosso, Brazil, 1991, October 16.

¹⁸² United States Conference of Catholic Bishops, *Renewing the Earth*, IV, A.

through the persevering exercise of moral responsibility on the part of individuals, voluntary organizations, governments, and transnational agencies.”¹⁸³

2.3 New Actions

The Bishops invite the Catholic community to join them in the good will in making efforts to act accordingly to the moral and ethical dimensions of the environmental crisis. Scientists, environmentalists, economists, and other experts ought to support people to increase their awareness and understanding about the problems involved so that people can respond adequately to these issues and act in a better and more suitable way.¹⁸⁴ The role of experts in addressing the world’s environmental problems cannot be ignored. This also means that we have to learn together to solve the challenges.

Teachers and educators are invited to “emphasize, in their classrooms and curricula, a love for God’s creation, a respect for nature, and a commitment to practices and behavior that bring these attitudes into the daily lives of their students and themselves,”¹⁸⁵ especially parents, who are the foremost teachers of children, have to educate their children to love creation and delight in nature. Teachers, educators, and parents have an indispensable role in addressing ecological issues. A sound and responsible ecological education today is very important.

Theologians, scripture scholars, and ethicists are called to “help explore, deepen, and advance the insights of our Catholic tradition and its relation to the

¹⁸³ Ibid., IV, A.

¹⁸⁴ Ibid., III, H.

¹⁸⁵ Ibid., III, H.

environment and other religious perspectives on these matters. Especially Catholic scholars are called to explore the relationship between this tradition's emphasis upon the dignity of the human person and our responsibility to care for all of God's creation."¹⁸⁶ Eco-theology and eco-spirituality must be developed. For this to happen, theologians, biblical scholars, and ethicists have to work together.

Last but not the least, the US Bishops also ask "business leaders and representatives of workers to make the protection of the environment a central concern in their activities and to collaborate for the common good and the protection of the earth."¹⁸⁷ Like the other sectors of the society that are being asked to get engaged in solving environmental problems, business people and laborers must also be part in saving the world. This is also in line with the principle of shared responsibility.

Furthermore, policy makers and public officials are urged to focus more directly on the ethical dimensions of environmental policy and on its relation to development, to seek the common good, and to resist short-term pressures in order to meet our long-term responsibility in view of future generations.¹⁸⁸ As the citizens of the earth, each and every one of us "need to use our voices and votes to shape a nation more committed to the universal common good and an ethic of environmental solidarity."¹⁸⁹ This holds true not only for the US but also for all countries.

¹⁸⁶ Ibid., IV, B.

¹⁸⁷ Ibid., IV, B

¹⁸⁸ Cf. Ibid., IV, B.

¹⁸⁹ Ibid., IV, B.

3.4 Call to Conversion

Everyone is called to change both in thinking and behavior. In term of thinking, we should not do to the nature and environment just as we please because the nature is precious and “a gift of God,” and it connects us with one another and even with future generations. The earth is created for us to care for it responsibly, for the sake of all people and other creatures, especially the poor and future generations. In terms of behaviors, we ought to act in solidarity with creation and with the poor who are often first and mostly affected by an environmental crisis.

The Bishops urge that “as individuals, as institutions, as a people, we need a change of heart to save the planet for our children and generations yet unborn...only when believers look to values of the Scriptures, honestly admit their limitations and failings, and commit their selves to common action on behalf of the land and the wretched of earth will we be ready to participate fully in resolving this crisis.”¹⁹⁰

3. German Bishops: Climate Change (2006) and Committed to God’s Creation (2011)

3.1 Challenges of Climate Change

The German Bishops Conference is the Episcopal Conference of all bishops of the Roman Catholic dioceses in Germany that was set up in 1966. Members include diocesan bishops, coadjutors, diocesan administrators, and auxiliary bishops.¹⁹¹ The purposes of the German Bishop’s Conference are (1) to explore and promote common

¹⁹⁰ Ibid., V, C.

¹⁹¹ Catholic Online, the German Bishop’s Conference Visits the Catholic TV Network, <http://www.catholic.org/prwire/headline.php?ID=10230>, accessed February 25, 2015.

pastoral objectives, (2) mutual consultation, (3) necessary coordination of Church activities, (4) to take common decisions, (5) and to cultivate relations with other Bishops' Conferences.¹⁹²

The overarching body of the German Bishops' Conference is the Plenary Assembly of all bishops, at which the bishops meet regularly in spring and autumn in Fulda for several days, in numerous working meetings, and the bishops coordinate functions and arrangements, and take decisions for the Church in Germany as well. There is also ecumenical cooperation with Lutheran and Protestant Churches in Germany. In 1997 they published the common statement *For a Future Founded on Solidarity and Justice*, a statement of the evangelical Church in Germany and the German Bishop's Conference on the Economic and Social Situation in Germany. The German bishops are serious concerned about issues affecting the lives of people and the environment.

They are concerned about the ecological problems such as “global climate change, the increasing frequency of major natural catastrophes and the consequences of the clearing or overexploitation of land areas, together with the associated implications for biological diversity and a sustainable approach to energy and resources.”¹⁹³ The Catholic Church in Germany becomes increasingly aware and deeply concerned about these problems and advocates to bear responsibility and care especially for the victims of climate change and to protect creation. Climate change is a real problem and its reality can no longer be denied. Global warming and climate change is threatening the human existence and it certainly affects our environment, natural

¹⁹² Deutsche Bischofskonferenz, <http://www.dbk.de/en/ueber-uns/> accessed February 24, 2015.

¹⁹³ Secretariat of the German Bishops' Conference, *Committed to God's Creation: Suggestions for a Sustainable Approach to Energy*. An expert report on the ethical foundations of a sustainable energy supply, (Working Papers No 254en), Bonn, 2011, 5.

resources and economy and impacts our ways of life/societies. Scientists believe that climate change causes an increase of more frequent and intensive extreme weather events, such as heat waves, droughts, and floods, can increase losses of property, causes costly disruptions in societies, and reduces the availability and affordability of insurance.¹⁹⁴

The poor and the needy will suffer most from the consequences of climate change. Today, hundreds of thousands are already considered ecological refugees searching for a safer place away from the danger of floods and rising sea levels. When we take a look at the past years, in the year of 2000 alone, 150,000 lives of people were affected by climate change through droughts, flooding, heat stress, and the spreading of diseases.¹⁹⁵ Climate change affects also indirectly and directly human health in an invisible ways. “700 natural disasters were registered worldwide affecting more than 450 million people. Damages have risen from an estimated US\$20 billion on average per year in the 1990s to about US \$100 billion per year during 2000-10.”¹⁹⁶ It is recorded that the decade 2000-10 was the warmest period in recorded human history.

Water shortage is another serious problem that many countries, including Myanmar, is facing today. A combination of climate change and poor resource management is leading to water shortage, even in the most developed countries. Today, there are some 500 million people who encounter already a shortage of drinking water.

¹⁹⁴ EPA (United States Environmental Protection Agency), see, <http://www.epa.gov/climatechange/science/overview.html>, accessed February 25, 2015.

¹⁹⁵ *Climate Change: A Focal Point of Global, Intergenerational and Ecological Justice*, an expert report on the Challenge of Global Climate Change, 2nd ed., Bonn: Secretariat of the German Bishops' Conference. 2007, 12.

¹⁹⁶Nicole Laframboise and Boileau Loko, *Natural Disaster: Mitigating Impact, Managing Risks* (Washington: International Monetary Fund, 20012), 4. <http://www.imf.org/external/pubs/ft/wp/2012/wp12245.pdf> accessed, February 27, 2015.

This number could increase up to three billion by 2025 in the future.¹⁹⁷ “Health, prosperity, and security cannot be guaranteed in the long term without drastic, globally coordinated climate protection measures,”¹⁹⁸ because climate change is a long-term effect.

The most affected by climate change are the poor in developing countries although they have the least contributed to the past emissions of greenhouse gases. On the contrary, the industrial nations have contributed most and are still contributing primarily to the causes; consequently they are to be held most responsible for the emissions and consequences of climate-damaging greenhouse gases. “This great inequality between polluters and victims makes anthropogenic climate change into a fundamental problem of global justice.”¹⁹⁹

It is time to discern carefully about this injustice. If there is a failure in the protection of climate today, for sure this will affect the future generations negatively. Apart from the poor and the next generations, climate change affects not only the habitats of fauna and flora but has also an effect on the relationship between humans and their fellow creatures.²⁰⁰ “Therefore, anthropogenic climate change is a question of justice at three levels: global, intergenerational and ecological.”²⁰¹ In the following some consequences of the changing climate are described in short.

Global warming: The earth’s climate is rapidly warming up. The scientific consensus is that this happens as a result of the addition of heat-trapping greenhouse

¹⁹⁷ *Climate Change: A Focal Point of Global, Intergenerational and Ecological Justice*, 12.

¹⁹⁸ *Ibid.*, 12.

¹⁹⁹ *Ibid.*, 12.

²⁰⁰ *Ibid.*, 12-13.

²⁰¹ *Ibid.*, 12-13.

gases which are increasing dramatically in the atmosphere and which is “very likely” the result of human activities.²⁰² Many agree that global warming is probably the most worrying threat to our planet at the present time. Experts and scientists believe that the production of carbon dioxide and other greenhouse gases is heating up the atmosphere and this is very dangerous for all life. With global warming on the increase and species and the habitats diminishing, the chances for the ecosystem to adapt naturally are decreasing.

There are many causes of global warming like the increase of pollution and the increase of harmful gases on the earth. The land, the oceans and atmosphere are warming up because of the greenhouse effect. Ignacimuthu admits, “The earth’s atmospheric temperature has been rising because the amount of carbon dioxide and other deleterious gases have been increasing and deforestations.”²⁰³ Then, “As oceans become warmer, they release more CO₂. After that, higher CO₂ values in the atmosphere lead to further warming.”²⁰⁴ This is a vicious circle with grave and long-term consequences.

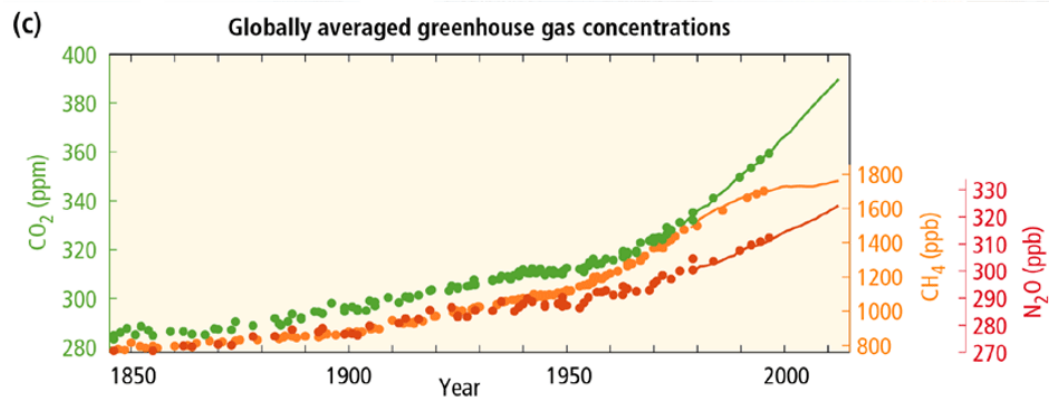
The primary cause of global warming is man’s burning of fossil fuels (coal, oil and natural gas) in housing, transport and in the industry, but also deforestations and land use change. Humans are adding more greenhouse gases increasing the amounts of extra carbon dioxide into the atmosphere. Then, this increases the amount of carbon in the atmosphere, and causes climate change. The level of concentration measured in ppm (parts per million molecules) rose from 280 ppm (1850) to 400 ppm in 2015.

²⁰² “Very likely” means 90 to 95% probability of occurrence; cf. Climate Change, p. 19, note 6.

²⁰³ Ignacimuthu, SJ, *Environmental Spirituality*, l.e., 25.

²⁰⁴ *Climate Change: A Focal Point of Global, Intergenerational and Ecological Justice*, 23.

Globally averaged greenhouse gas concentrations²⁰⁵



Rising sea Levels: the effects of global warming have therefore affected the sea levels. Warmer temperatures cause a rise of the sea level due to the expansion of the ocean water with the temperature and also due to melting of mountain glaciers, as well as by parts of the Greenland ice shield. It is believed that “the sea level is expected to rise by 18 cm to 59 cm from 1980 to 2100 (depending on the scenario); accelerated ice flow from land ice may lead to a further increase by 10 cm, 20 cm or even more.”²⁰⁶

If people keep adding greenhouse gases to the atmosphere, the average sea level around the world by the end of this century (the year 2099) could be anywhere from 7 to 40 inches higher than it was in 2000. In a lot of places this will be a grave danger and threat for people who live near the ocean. Some low-lying areas will have more frequent flooding, and very low-lying land could be submerged wholly. Also Hong Kong is affected by this change.

More extreme weather events: scientists believe that the warming of the atmosphere will lead to the occurrence of more extreme weather patterns such as

²⁰⁵<http://www.bing.com/images/search?q=globally+averaged+greenhouse+gas+concentrations&view=detailv2&&id=2F9E3905F98F88FC1C88687962769F66AD4752A6&selectedIndex=1&ccid=UTL8A1Sj&simid=608042171414677399&thid=JN.JTJX0ui26YcrpDIP5%2bAv8Q&ajaxhist=0>

²⁰⁶ Ibid., 25.

droughts, storms, floods, and hurricanes. When the global temperatures continue to warm due to climate change, the number and the intensities of the extreme weather events or situations might increase. When we look back into the last two decades, the ferocity of the events is striking; for instance, “the heavy precipitations in the winters of 1993/4 and 1994/5 that led to floods of the century in the Rhine region plus the extreme summer rainfalls in 2002 and 2005 that triggered catastrophic floods in the Elbe region (2002) and the northern Alps (2005), or the heat wave of the summer of 2003 in large parts of Europe with the resulting deaths, droughts and forest fires.”²⁰⁷ Climate experts warn that global warming may spawn more storms, droughts and floods.

More floods: the risk of flooding will increase as the result of rising sea level from global warming and an increasing of strong precipitation. Floods are often deadly, damaging and devastating. They disrupt many people’s lives each year and cause personal tragedies due to flooding. In addition, they damage houses and crops and cause intensive destruction. In the future, they will lead to a “massive increase in the number of environmental refugees from near-coast areas.”²⁰⁸

Loss of biodiversity: the rapid change of climate has already affected ecosystems and species. Climate change has an impact on biodiversity and it is shown to become a progressively more significant threat in the coming decades. Ecosystems are already showing signs of negative impacts under the current level of climate change. Human activity has already caused a massive extinction of species. Climate change leads to the extinction of many species and causes a massive depletion of the fauna and flora that will also affect negatively the production of food.

²⁰⁷ Ibid., 27.

²⁰⁸ Ibid., 27-28.

Food security at risk and more diseases: food security remains an issue of primary importance especially for Africa and Asia. Agriculture and food production have a huge impact on the environment. “FAO estimates that each year, approximately one-third of all food produced for human consumption in the world is lost and wasted. This food wastage represents a missed opportunity to improve global food security, but also to mitigate environmental impacts and resources use from food chains.”²⁰⁹ “The global volume of food wastage is estimated to be 1.6 Gtonnes of “primary product equivalents”, while the total wastage for the edible part of food is 1.3 Gtonnes. This amount can be weighed against total agricultural production (for food and non-food uses), which is about 6 Gtonnes. Without accounting for GHG emissions from land use change, the carbon footprint of food produced and to eaten is estimated to 3.3 Gtonnes of CO₂ equivalent: as such, food wastage ranks as the third top emitter after USA and China.”²¹⁰ It is widely recognized that the poorer nations suffer the worst from climate change because of possibly geographical reasons and having less resources available to cope with a problem. Farmers loose extensively harvests due to droughts, storms and floods. Agriculture and fisheries are highly dependent on good climate conditions.

Climate change makes it more difficult to grow crops, raise animals and catch fish. “Overcoming climate-induced harvest losses and adapting animal husbandry would involve costs that not all countries or farms can afford.”²¹¹ Extreme weather events such as storms could increase the risk of dangerous flooding that could enhance the spread of some diseases. “The IPCC and WHO predict that a growing number of people will be exposed to vector-transmitted diseases (e.g. malaria, dengue fever,

²⁰⁹ FAO, *Food Wastage Footprint Impacts on Natural Resources*, Rome: FAO, 2013, 6.

²¹⁰ Ibid.

²¹¹ Ibid., 29.

yellow fever and various kinds of meningitis) and water dependent diseases (e.g. cholera), and that deaths from heat stress will also increase.”²¹²

Climate change will increase the occurrence of several serious diseases, which will appear more often and will spread faster. Nevertheless, the greatest impact of climate change on human health could be the collapse of the ecosystems. Shortage of water is expected to become an ever-increasing problem in the future. As the earth’s temperature continues to rise, evaporation increases, it significantly affects also the fresh water situation. In the future, this will cause conflicts not because of oil, but because of water.

2.2 Resources and Energy

Resources and energy are one of the most urgent issues that humans are facing in the twenty-first century. Humans consume more and more natural resources. As the global human population continues to grow up to over 9 billion in 2050, the rates of consumption and waste are increasing dramatically. Since populations and consumption level grow more rapidly, more people are to compete for resources.

The resources such as forest, water, especially fresh water, soil, plants, (mineral oil, coal, natural gas, and uranium are exhaustible resources), are rapidly depleted and these valuable natural resources are in danger of vanishing from the planet. The developed countries consume fossil fuels increasingly which is resulting in climate change that threaten the whole humanity.

The earth and the goods of the earth have been created and designed for the use of all people, also future generations. Thus, the responsibility is laid upon humans to

²¹² Ibid., 29.

care for it properly and to resolve the problems associated with resources and energy.²¹³ One of the reasons why we are facing an energy problem today is the result of unjust power structures and economic practices that do not support solidarity.²¹⁴ The message of Benedict XVI on the occasion of the World Day of Peace states that “technologically advanced societies can and must lower their domestic energy consumption and improving its efficiency.”²¹⁵ This means that the consumption of energy should be reduced through higher efficiency, conservation, but also consistency and sufficiency.

“Energy is a precious and indispensable human good.”²¹⁶ Economic and social progress practically depends on the supply of energy. Coal, natural gas, uranium, hydropower, geothermal energy, bioenergy, wind and solar power are considered as the primary energy media and electricity, fuel, and heat as secondary forms of energy. They must be used in a very careful way based on the criteria of global, intergenerational and ecological justice, because there are limited reserves of fossil and nuclear combustibles (mineral oil, coal, natural gas and uranium).²¹⁷ The German bishops write:

The consumption of fossil energy media also leads to the emission of climatically damaging greenhouse gases, which are partly responsible for the acidification of the oceans and global climate change. The latter will have an effect worldwide on present and future living conditions, with particularly severe implications for the developing countries leading to a rise in the sea level and widespread flooding, increasingly frequent and destructive hurricanes, changes in the distribution of global precipitation and an increase in infection and disease.²¹⁸

²¹³ *Committed to God's Creation*, 11.

²¹⁴ *Committed to God's Creation*, 11.

²¹⁵ Message of the Holy Father for the Celebration of World Day of Peace, 1 January 2010, no. 9.

²¹⁶ *Committed to God's Creation*, 11.

²¹⁷ *Ibid.*, 14.

²¹⁸ *Ibid.*, 14.

This is a global task, especially the industrial countries have to reduce the emissions of greenhouse gases as a crucial prerequisite for justice, responsibility towards creation and this makes also economically good sense. By the year 2050, the global emissions of carbon dioxide must be reduced by at least 60%. The industrial countries try to reduce at least 80 % as compared with the amount in 1990.²¹⁹

Today's energy and resource policy is largely responsible for the living conditions of future generations because some countries especially southern countries are already affected and threatened by the consequences of emissions of climatically damaging gases.²²⁰ The energy issue is a question of justice in three respects, globally, ecologically and intergenerationally.²²¹ “[T]he crucial social issue of the twenty-first century is a closely linked with the global socialization of the consequential ecological costs resulting from the use of fossil and nuclear fuel.”²²²

Public goods and the common good: the climate is a very important common good. Also a secure energy supply is a highly important common good for a society and for humanity.²²³ But there are always problems associated with public goods, for instance, when seas are overfished or soils contaminated with toxic materials.²²⁴

“The energy supply is of existential importance for the common good,”²²⁵ and its function as common good has to be maintained. “An adequate supply of safe energy

²¹⁹ Ibid., 15.

²²⁰ Ibid., 15.

²²¹ Ibid., 15.

²²² Ibid., 15.

²²³ Ibid., 17.

²²⁴ Ibid., 18.

²²⁵ Ibid., 19.

is of fundamental importance for ensuring the basic conditions of human life and development.”²²⁶ Thus, energy is a matter for public responsibility and energy questions have to be seen in the global dimension.

The use of energy resources should be based on equity rather than national interest alone, because “energy resources are an object of collective ownership which must be used in the interest of the common good, on a global and intergenerational scale, and in such a way that the creation be not impaired. Property rights are legitimate when they promote a responsible, efficient and peaceful approach to energy and do not violate the common good.”²²⁷

2.3 Three Strategies of Sustainable Development: Efficiency, Consistency and Sufficiency

Global inequality in consumption today is still high while diminishing. Today consumption of goods and services is rising phenomenally in industrial and developing nations. The inequality gap in consumption between the world’s richest and poorest people is getting wider. On the one hand, many poor countries, in South Asia and Africa, with fast-growing populations, are depleting the natural resources. On the other hand, while richer nations are reducing their population growth, they consume more natural goods and services. This inequality in consumption patterns is really damaging the environment and it is also harmful for societies and the ecosystem. Therefore, we need to change our life styles, which have to become sustainable and just. We need to adopt sustainable consumption, especially industrial countries, need to develop more

²²⁶ Ibid., 19.

²²⁷ Ibid., 20 - 21.

sustainable consumption patterns, by using goods and services that correspond first to basic needs and account for a better quality of life for all. The resource consumption of the richer and industrial nations is generally not on any justified level. In dealing with the limited resources, the concepts of fairness and justice are significant factors that justice is grounded here at the global, international, national, and individual level. The issue of energy is also related to justice and peace and has grave and long-term political implications. Moreover, justice is related to our relationships with all creatures including all people and future generations. There is a need for all people to equally share resources within ecological limits.

We are still left in uncertainty, since we cannot predict exactly how quickly and strongly climate change will proceed over the coming years and decades, and what its regional impact will be like.²²⁸ Therefore, the precautionary principle has to be applied as one key principle in environmental legislation.

The aims of the precautionary principle is “to reduce the risks and to conserve the national resources and bases of life, above all under consideration of coming generations.”²²⁹ “To implement this precautionary principle, the actions are oriented in line with the capacity of ecological systems and with the natural regenerative and assimilation capacity, and with the requirements of thrift and efficiency, sufficiency and voluntary moderation as a path to greater quality of life plus damage reduction and reversibility.”²³⁰ The precautionary principle is a necessary principle to prevent, mitigate, and turn away the threats, lessen the dangers and to protect the environment for the sake of humankind and creation.

²²⁸ Cf. Secretariat of the German Bishops Conference (ed.): *Climate Change*, 43.

²²⁹ *Ibid.*, 43.

²³⁰ *Ibid.*, 43.

When we look at the way we produce and consume goods and services in modern economies, we have to admit that this is today unbalanced and not sustainable. We overuse natural resources, ignore the social and ecological cost of abusing nature's services. In dealing with this issue, the German Bishops emphasize three main strategies for Sustainable Development (SD), necessary to achieve true sustainability. These strategies are generally important principles that should be well understood and widely implemented: (a) Efficiency, (b) Consistency and (c) Sufficiency (Moderation).

Efficiency Strategy: in order to meet the demanding requirements of a sustainable energy and resource supply, efficiency is the first important sustainability strategy, but the principle of efficiency alone cannot reach a sustainable path. Consistency and sufficiency have to be added in order to reach sustainability. Efficiency is more or less a technological strategy that primarily requires innovative change in production and consumption. Resources and energy have to be used prudently and efficiently, "the strategy of relying on technical and organizational innovations to heighten the efficiency of the energy that is used (an *efficiency strategy*)."²³¹ This strategy is important "for all areas of energy supply (heat, mobility, electricity)."²³² To improve the efficient use of natural resources, energy and ecosystem services, is strategically very important.

The German bishop's document reports "heating is a field where the biggest efficiency gains can be achieved at present without undue expense. The heating market accounts for something like 40% of total energy end use in Germany, making it a clear candidate for priority treatment. Moreover around 30% of this energy is used to heat

²³¹ *Committed to God's Creation*, 33.

²³² *Ibid.*, 36.

buildings.”²³³ Efficient and Sustainable mobility and transportation systems ought to help to meet the mobility needs of the present without compromising the ability of future generations to meet their needs.²³⁴

Therefore, “Greater efficiency makes a positive impact on all dimensions of sustainable development – economic, ecological, social and ethical – simultaneously...heightened efficiency is thus one of the options whereby the desired goal can be achieved with a minimum of cost and risk overall. In the energy policy of the Federal Republic of Germany, the improvement of energy efficiency has been a top priority ever since the first oil crisis in 1973. At the same time, most efficiency gains hitherto have been swallowed up by the corresponding increase in consumption (what is known as the boomerang effect).”²³⁵ In order to bring societies to a real sustainable path, the other principles have to be included. The principle of consistency and the principle of sufficiency are important to reach the path of sustainability. “In a comprehensive and sustainable view of the matter, efficiency is closely linked to sufficiency. The discovery of workable solutions in the efficiency area is dependent on a combination of technical, entrepreneurial and social innovation with changes in the habits of users.”²³⁶ The following table shows the consequences of the so called Rebound Effect (Boomerang effect) of human consumption patterns and why efficiency of not enough to reach a sustainable path.

²³³ Ibid., 37.

²³⁴ European Energy Review, See, <http://www.europeanenergyreview.eu/site/pagina.php?id=1188>, accessed on 23 March 2015.

²³⁵ *Committed to God's Creation*, 33.

²³⁶ Ibid., 36.

Table 2: Rebound Effect²³⁷

	Improved Efficiency	Rise in Consumption
Energy	Energy consumption per dollar of GDP fell by almost 50% since 1975	Energy demand increased by more than 40% since 1975
Vehicles	Average MPG has improved by 30% since 1980	Fuel consumption per vehicle remained constant since 1980 due to more driving and more (and larger) vehicles
Aviation	Fuel efficiency per mile has risen by 40% since 1975	Overall fuel consumption increased by 150% since 1975
Refrigerators	Energy efficiency improved by 10% since 1990	Overall number of refrigerators increased by 20% since 1990
Air-conditioning	Energy efficiency improved by 17% since 1990	Overall number of units has increased by 30% since 1990

The common problems we have here is the enormous growth of air travel. The vast amounts of energy used, affects the climate. In freight transport, however, “the current trends point in the opposite direction: freight transport on the roads goes on increasing, while rail transport continues to be reduced and cut back.”²³⁸ “Effective municipal development and town planning could develop infrastructures which make it easy for people to save energy.”²³⁹ More people need to be motivated to use public transport. The German bishops insist that in this part, local council, societies and the national government need to set up more projects and the right incentives.

Consistency Strategy: Because of the Rebound-effect (Boomerang effect) we need in addition to efficiency two other principles to reach a sustainable path. The

²³⁷ Juliet B. Schor, *True Wealth*, (New York: Penguin Books, 2011), 90.

²³⁸ *Committed to God’s Creation*, 39.

²³⁹ *Committed to God’s Creation*, 39.

second crucial strategy on the path toward sustainability is called consistency. “Consistency means that sustainable development needs consistent structural and institutional settings, such as the implementation of the ‘polluter pays’ principle, the true-cost-principle (*Kostenwahrheit*), by internalizing external costs (*Einpreisung*), the phasing out of end-of-pipe-solution, the creation of circular economy, the implementation of transparency and accountability, resource responsibility, and waste prevention.”²⁴⁰ That means that there should be no waste, nor end of pipe solutions, but a consistent and smart circular economy. Only in a circular economy, resources and energy are used in a responsible and sustainable way. Goods have to be produced to minimize the need for waste disposal. This means that products have to be either completely recyclable or their design enables putting them back to the resource system where they can be for instance properly recycled. “The circular economy is a redesign of the future, where industrial systems are restorative and regenerative by intention and design.”²⁴¹ A model of industrial production, which involves sustainable designing of products, which can be repaired or upgraded, so they can be reused, and resold. “The consistency strategy refers also to the “replacing energy derived from fossil and nuclear sources with renewable forms of energy (*a substitution strategy*).”²⁴² Renewable forms of energy (water, wind, solar, etc.,) are more consistent with nature and the ecosystem, and thus more sustainable. To build up a consistent circular economy is one of the main challenges of the twenty-first century.

²⁴⁰ Franz Gassner, “Sufficient and Sustainable Lifestyles: Challenges for Global Consumer Cultures,” Lazar Thanuzraj Stanislaus and Martin Uffing (eds.), *Intercultural Mission: Looking Forward*, (New Delhi: ISPCN Publishing, 2015 (in print), 5.

²⁴¹ *World Economic Forum*, See, <http://www.weforum.org/projects/circular-economy>, accessed on March 23, 2015.

²⁴² *Committed to God’s Creation*, 33.

Today we experience a huge amount of waste increasing globally so that we must become aware of its consequences and must do something about it. The principle of consistency is highly relevant in this field. The best solution of this issue is to “prevent the production of such waste, reintroducing it into the product cycle by recycling its components where there are ecologically and economically viable methods of doing so.”²⁴³ The first target of a consistent waste policy is “to minimize the negative effects of the generation and management of waste on human health and the environment. Waste policy should also aim at reducing the use of resources, and favor the practical application of the waste hierarchy.”²⁴⁴ “In order to clarify key concepts such as the definitions of waste, recovery and disposal, to strengthen the measures that must be taken in regard to waste prevention, to introduce an approach that takes into account the whole life-cycle of products and materials and not only the waste phase, and to focus on reducing the environmental impacts of waste generation and waste management, thereby strengthening the economic value of waste. Furthermore, the recovery of waste and the use of recovered materials should be encouraged in order to conserve natural resources.”²⁴⁵ There are five steps in the waste hierarchy that should be followed in order to prevent waste and deal properly with resources. They have to become implemented in legislation, waste policies and municipal management: (1) prevention; (2) preparing for re-use; (3) recycling; (4) other recovery, e.g. energy

²⁴³ http://europa.eu/legislation_summaries/environment/waste_management/index_en.htm (access: June 2, 2015).

²⁴⁴ EU-Parliament and EU-Council, *Directives – Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008, on waste and repealing certain Directives* (Text with EEA relevance), 2008, no. 6; online: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098> (accessed: June 2, 2015).

²⁴⁵ *Ibid.*, no. 8.

recovery: and (5) disposal.²⁴⁶ This policy ought to be followed in every country, government and economic institutions to reach a sustainable path of development.

Sufficiency (Moderation) Strategy: Besides efficiency and consistency, a third principle is necessary to reach a sustainable path: the principle of sufficiency. This strategy is more on the level of individual virtues, habits and values. It requires the fundamental change of people the way they live and a change that must come from inside as change in values and attitude. It is an attitude that is very uncommon in the modern society – the ability of moderation and to restrain from excessive consumption. This means that we have to think twice before buying or using something and control what we want. We have to be clear and able to distinguish what we want and what our real needs are. Its aim is to restrict and reduce the unnecessary and even harmful level of consumption of energy and resources so as to reduce the unnecessary energy consumption, but also to improve the quality of life according to the principle “less is more.”

Sufficiency is not an easy strategy. However, this sufficiency is beneficial for all of us, not only in terms of its positive long-term environmental impacts, but also in terms of a truly fulfilling life-style. This strategy favors “less means more – less in terms of the quantity of goods and experiences consumed may be more in terms of contentment, and can also be good for a person’s physical and emotional health.”²⁴⁷ Thus, it is required by the consumers to change their thinking and lifestyles. Limits of energy consumption must be set in every organization so that an organization or individual strives to achieve their goals.

²⁴⁶ Ibid., Article 1-43, esp. 4.

²⁴⁷ *Committed to God’s Creation*, 35.

The principle of consistency also means, that sustainable patterns of consumption require not only individual responsibility but also collective tasks and coordination, meaning that sustainability can only succeed when as many social forces as possible play their part in a synergetic and innovative way. Promoting this culture of sustainability and sufficiency, one can begin with his/her personal freedom, setting limit of his/her using energy, practicing temperance and change a life-style of sustainability. The strategy of sufficiency is challenging because it requires “not only an economic and technological shift or transition, but also and more importantly a cultural shift and a change of value systems,”²⁴⁸ since a culture comprises all “the beliefs, values, and lifestyles of ordinary people in their everyday existence.”²⁴⁹

In a Christian perspective, fasting is a form of such a self-limitation and lived sufficiency. One should practice fasting regularly and avoid food waste. Here lies also a potential of interreligious dialogue for sustainable life-styles. Food waste is a huge waste of energy, resources water and packaging used in its production, transportation and storage. It has very harmful effects on the global environment and also social systems. The amount of food we throw away is a waste of energy and resources. Therefore, we need to change our mindset and life-styles.

Pope Francis has equated food waste with “stealing from the table of the poor and the hungry.”²⁵⁰ Jesus is the perfect example for us in this regard. In the Catholic liturgy, Jesus gives himself as food for others. He becomes food for us, we also should

²⁴⁸ Dirk Geldof, “overconsumption”, in Luk Bouckaert, Hendrik Opdebeeck, and Laszlo Zsolnai, eds., *Frugality: Rebalancing Material and Spiritual Values in Economic Life* (Frontiers of Business Ethics 4), Bern, 2008, 132.

²⁴⁹ Peter I. Berger, “Introduction: The Cultural Dynamics of Globalization”, in Peter L. Berger and Samuel P. Huntington, *Many Globalizations. Cultural Diversity in the Contemporary World*, Oxford University Press, 2002, 2.

²⁵⁰ *The Telegraph*, See, <http://www.telegraph.co.uk/news/worldnews/the-pope/10101375/Pope-Francis-says-wasting-food-is-like-stealing-from-the-poor.html>, accessed, 3/22/2015.

become food for others as well, especially for the poor. One ought to strive to focus on a meaningful and spiritual life. And after his multiplying of food, there were no leftovers, because they had been carefully collected and saved upon the word of the Lord. “Gather up the pieces left over, that nothing may be lost” (John 6:12).

Sufficiency is also important because of the Rebound Effect of resources consumption patterns. This means that savings of energy, resources and emissions through higher resource and energy efficiency are swallowed up by increased consumption of more, other, or new goods and services. Efficiency is important but not enough to reach a sustainable path also changes on the individual level have to be added to reach a sustainable path.

In conclusion, Sufficiency, consistency and efficiency are main strategies on the way to sustainability. Since efficiency is usually associated with technological improvements, sufficiency is more connected with a reduction in production and consumption and limit of daily choice and lifestyles, and consistency is related mainly to the systemic, synergetic and socially innovative dimension of sustainability. All three strategies have deep ethical, social, and ecological dimensions and implications. Both sufficiency and consistency are highly important in its own right, not only better efficiency, to reach a sustainable path for the good of humanity and creation.

The Earth Hour: this is also an example for sufficiency. It is an important occasion and moment that reminds us what we should reduce our energy use daily. Its aim is mainly to more sufficient by encouraging or inspiring households and business to turn off unnecessary lights and electrical appliances for an hour. By continuously practicing this, all communities might become aware of the effect of energy use on climate change and their own practices. This is the summary of the three basic pathways to focus on a sustainable approach to energy and a transformation of the energy supply.

The first involves economies, and to reduce energy consumption. A careful approach to energy calls for a new sense of responsibility in consumers and a change of lifestyle. Secondly, traditional forms of energy must be used in a more efficient way. This gain of efficiency is closely connected with a strategy of economy in the fields of domestic heating, mobility and power consumption, for example and with technical innovations that will increase capacity utilization in energy use. Thirdly, a turnaround connection with the more efficient use of energy, not only academic research is required –there is also an important role to be played by energy supply companies and companies with high rate of energy use. In addition, the energy turnaround will be impossible without the help of subsidies that are not tied to specific forms of technology, and the development (frequently a controversial matter) of the required infrastructure.²⁵¹

2.4 Signposts and Areas for Actions

As mentioned above climate change has a long-term impact and the problem is complex and cannot be solved that quickly. But, to protect the climate effectively is absolutely crucial, though it can only be achieved in a long process. Environmental education should be promoted in all schools so that it may raise people’s awareness, informs them well, and motivate them to act properly according to the principle of shared responsibility. “The environmental policy practiced to date must step out of its pigeonhole and shadowy existence. It must be integrated into a policy of sustainability that embodies all areas of politics.”²⁵²

a) Mitigation and Adaption

There are two keywords for international climate management which convey “*mitigating* greenhouse gas emission and *adapting* to the consequences: preventing the worst and adapting as well as possible to the circumstances.”²⁵³ The global average

²⁵¹ *Committed to God’s Creation*, 58.

²⁵² Cf. Secretariat of the German Bishops Conference (ed.): *Climate Change*, paras. 49.

²⁵³ Cf. *Ibid.*, 51.

temperature increased by more than 1.4°F over the last century. The global surface temperature has to be kept under the 2°F ceiling. The developing countries, in particular, have to adapt to climate change even if the global surface temperature is warming over 1.4°F.²⁵⁴

The industrial countries and emerging nations should mainly take responsibility to reduce their greenhouse gas emissions and to stabilize the concentration levels.²⁵⁵ It has to be remembered that the costs of mitigation are much lower than the costs of damages and adaptation measures.²⁵⁶ Countries, which have emitted or are emitting a huge amount of greenhouse gases, must primarily take responsibility to reduce them.

Reducing deforestation is an urgent need and decreasing deforestation does not only preserve the biodiversity and defend the livelihoods and the rights of forest communities, but it is also one of the most effective ways of preventing future global warming. The international community must search for solutions about incentives to slow down the process of deforestation, and to manage forest areas and natural resources to meet social goals on a more equitable and sustainable basis.

Sustainable traffic and settlement policies: In order to contribute to climate-compatible mobility and settlement patterns, the state can and must increase its efforts to provide financial and infrastructural support to encourage non-motorized traffic, a climate-friendly public transport system, and car sharing as well as urban planning designed to bring place of residence and workplace closer together.²⁵⁷

The national and the international community, all governments, have to support the poor and the main victims of climate change and natural disasters significantly. This

²⁵⁴ Cf. *Ibid.*, 52.

²⁵⁵ Cf. *Ibid.*, 58-64.

²⁵⁶ Cf. *Ibid.*, 53.

²⁵⁷ Cf. Secretariat of the German Bishops Conference (ed.): *Climate Change*, paras. 54.

is not a question of pity or mercy, but first of justice, which must be uphold and achieved. The industrial countries, in particular the rich nations that primarily caused pollution and climate change, must face up to their moral and political responsibility.

b) The Catholic Church in Germany as a Witness of Hope

Generally, the production of goods and the consumption of natural resources and services and the use of energy is immense. People overuse natural resources and overburden the natural system. Therefore, the church argues and encourages to use energy with justice, equality and more efficient, by using less energy and switching to the use of renewable energy resources. In doing so the Church expresses her concrete concern and care for creation, which is also a part of her mission.

The Catholic Church in Germany is committed to sustainable development and gives witness through her concrete actions in its own institutions, and organizations, as well as in the life style and business practice of Christians.²⁵⁸ Many churches in Germany, specifically monasteries, convents and educational institutions are leading in the witness of using renewable energies.²⁵⁹ They put into daily practices already a more responsible way to use heat and electricity. “The churches in German constitute the biggest group among all organizations that operate an environmental management system that is audited in accordance with EU guidelines.”²⁶⁰

The church discovers itself involved in an extensive learning process;²⁶¹ however, she may fail sometimes to succeed in reducing their energy consumption

²⁵⁸ *Committed to God's Creation*, 51.

²⁵⁹ Cf. Secretariat of the German Bishops Conference (ed.): *Climate Change*, paras. 58-64.

²⁶⁰ *Committed to God's Creation*, 52.

²⁶¹ *Ibid.*, 52.

levels.²⁶² The diocesan authorities have to be clear that they can “formulate and reiterate both internally and in relation to the general public and that effective measures be adopted with a view to the achievement of this goal.”²⁶³

“However, diocesan objectives can be reached through the cooperation of the parishes and other institutions, which should be supported on the basis of appropriate incentive systems and with the intensive support of properly trained environmental and climate protection officers, inclusion both full-time professionals and voluntary helpers.”²⁶⁴

In order to succeed in this field, reliance on the support and advice of diocesan environmental officers and qualified church environmental auditors is necessary.²⁶⁵ Public understanding and awareness of sustainability has to be improved on all levels on the national, international, and global level. The church, based on her understanding of her own role, acts itself responsibly to adopt a responsible position in the discussions of energy issues and the climate. “Led by the goal of global, intergenerational and ecological justice, we need an intensive engagement with the issues of sustainable consumption and sustainable energy use.”²⁶⁶ The Catholic Church in Germany is thus committed to sustainability “The earthly creation, the human family worldwide and the foundations of an ecologically acceptable and decent life all call for a sustainable form of energy management.”²⁶⁷ To develop and live a sustainable form of energy management is an urgent task at all levels for politicians, institutions and individuals.

²⁶² *Ibid.*, 52.

²⁶³ *Ibid.*, 52.

²⁶⁴ *Ibid.*, 52.

²⁶⁵ *Ibid.*, 52.

²⁶⁶ *Ibid.*, 54.

In summary, the responsible use of energy and resources is a global issue that attracts increased attention of many people and is one of the biggest issues for the development of the human civilization, which must be a sustainable development. Natural resources and services have been quickly used up especially the limited amount of fossil fuel. The depletion of resources is not only a threat for the present age, but also for next generations and therefore a huge issue of ecological and intergenerational justice.

In the case of the use of nuclear energy, which is a matter of extremely serious public controversy, the German Bishops argue that the use of nuclear energy is unacceptable today on ethical grounds, because there is no responsible solution to the nuclear waste problem, and there are also safety risks, as the disaster in Fukushima clearly showed. The reasonable solution is to halt the expansion of nuclear power, to close down the nuclear industry and to stop creating new risks and waste as burden for future generations. The evaluation of nuclear energy of the expert report of the German Bishops conference, states clearly:

Intermediate and final storage of waste, the report pointed out, is attended with severe risks and unresolved consequential problems, which in the interest of intergenerational justice should not just be offloaded onto future generations. Nuclear energy thus violates the fundamental principles of providence and proportionality. In view of the unresolved problems of disposal, the possibility of catastrophes on a large scale and its vulnerability to terrorist attack, the use of nuclear energy is just unacceptable today on ethical grounds. The objective must be to speed up the transition to the age of renewable energy, and phase out the use of nuclear energy at the earliest opportunity.²⁶⁸

The Church always presents itself as an advocate for creation to counter the problems of energy issue. A triangle of objectives helps in making decision in the field of energy policy, first comes with climate protection and environmental conservation,

²⁶⁷ *Ibid.*, 55.

²⁶⁸ *Ibid.*, 47.

second is the security of supply and third is the economic viability and competitiveness.²⁶⁹ These three targets are interconnected with one another.²⁷⁰

A sound environmental education and awareness raising should be offered in every school, university, colleges, conference, and seminar and other settings. There are five major goals for environmental education: raising awareness, knowledge transfer, change of attitude, training habits and skills, and individual participations. Raising awareness helps people to become conscience and more sensible for the environment and its challenges. Knowledge helps people to acquire basic insights about how the environment functions, and how people and society interact with the environment, and how issues are interrelated with the environment and how they can best be resolved. People should get familiar with values and become concerned with the environment so that they may become motivated and committed to participate in the improvement of environmental integrity. In addition, they may acquire experience in using their knowledge and skills in taking care and implement positive actions towards solving environmental issues and problems.

Scientists, technologists, and other professionals, who deal directly with environmental problems, but also politicians and governmental officials, business leaders, members of the media and even religious leaders are the main people who should convey clear messages about the responsibility for the environment. For reaching a sustainable path of development, sufficiency is important, not only efficiency and consistency. For a moderate and sufficient life-style, spirituality,

²⁶⁹ Ibid., 57.

²⁷⁰ Ibid., 55.

meaning, and religious values are important. For this, more research is necessary regarding the relationship of sufficiency and spirituality (religion).

CONCLUSION

A truly Christian approach to the current environmental crisis needs to take into account the teachings of the Bible in the Christian tradition, the main source of theology. The Scriptures provides us a valuable and crucial guidance for more appropriate ways of understanding the meaning of stewardship towards God's creation and the way to live responsibly today in accordance with the promise of a life in fullness in God's new creation. They convey to us the meaning and main concerns and aims of creation. And they provide a vision that can shape and guide human actions for the promotion of justice, peace, and integrity of the whole creation.

The role of humans is to be responsible caretakers for all creatures. Humans are created and called by God to be stewards and his servants for all creation. All living beings, including humans, are dependent on God. And the whole creation is called to join and praise him.

Jesus is the centre of all and everything and the best example for us for how to live with creation and how to treat nature responsibly. He came to the world as the king of all creation and the saviour of all. He brought his love and peace to humanity and to the whole cosmos. Jesus Christ is the sacrificed God who suffered with his people and with all creation. The cross manifests the true nature of the loving and redeeming God, and it became the tree of life for all humankind.

Furthermore, Christ's redemption is a cosmic redemption. We must seek better ways to love God by keeping his commandment and loving God and our neighbours as ourselves. Loving neighbours can be analogically extended to loving the whole creation (St. Francis of Assisi) and care and preserve the world of creation. God's saving purpose involves the whole creation.

John Paul II and Benedict XVI are deeply concerned for the integrity of creation and the protection and care of the environment. They stressed their sincere concern for the poor and future generations. They emphasized three principles, which are the principle of the common good, the principle of subsidiarity, and the principle of solidarity. They stress the unique role of humans as the proper carers for creation.

They also instruct that the principle of subsidiary is to show respect for human dignity related with the environment. Then the principle of solidarity encourages us to love our neighbour, especially the poor, and the “preferential option for the poor” extends to the created world, because humans and the environmental ecology are closely linked. In the same manner, Pope Francis emphasizes the connection between the protection of people and the protection of the environment. He is deeply concerned about the exploited earth and about marginalized people who suffer the most from the impact of climate change and the degradation of the environment. One of his greatest concerns is to call people to respect and protect the natural environment and to live in solidarity with all the members of the human family.

The teaching of FABC also provide concrete suggestions get involved to protect and show proper care for the natural environment and share responsibility as individuals, social group, as church, and as government. In addition, the harmony of nature and harmony with creation are of fundamental concern for the FABC. Nature should be treated with respect and never abused.

The German Bishops focus on three strategies of Sustainable Development, which are sufficiency, consistency and efficiency. The purpose of these three strategies is to achieve sustainability in economic, societal and environmental level. Equally important, the US bishops focus on the new attitudes that help to save our environment.

“The virtues of prudence, humility and temperance are important elements of a new environmental ethics.”²⁷¹

Our values, virtues should guide and inform our everyday decisions and behaviour, so that we show and live proper respect towards the natural environment and help all human beings and other creatures. As Christians, we must dedicate ourselves fully to preserve and save our environment in service for the life of others. I hope I have been able to explore correctly some important aspects of the social teachings of the Church on environmental issues and ecological responsibility.

²⁷¹ United States Conference of Catholic Bishops, *Renewing the Earth*, IV, A.

BIBLIOGRAPHY

1. Bible

New Revised Standard Version.

2. Church Documents

Benedict XVI. *Caritas in Veritate*. 2009.

Benedict XVI. Message of the Holy Father for the Celebration of World Day of Peace. 2010.

Catechism of the Catholic Church. New Delhi: Theological Publications in India for the Catholic hierarchy of India. 2012.

Catholic Bishops' Conference of the Philippines (CBCP). A Pastoral Letter on Ecology *What is Happening to our Beautiful Land*, 1988.

Federation of Asian Bishops' Conference (FABC) and MISEREOR, Final Statement of the Climate Change Seminar. *Church Response to the Challenge of Climate Change in Asia; Towards a New Creation*. Assumption University in Bangkok, on 18-19 October, 2011.

FABC Central Secretariat. *Climate Change, Asian Impacts and Response*. II FABC Climate Change Seminar 23-24 October 2013, Assumption University, Bangkok, Thailand.

Francis. *Evangelii Gaudium*. 2013.

Francis. Message for the World Day of Peace. 2014.

John Paul II. *Centesimus Annus*. 1991.

John Paul II. *Redemptor Hominis*. 1979.

John Paul II. *Sollicitudo Rei Socialis*. 1979.

John Paul II. *Message of His Holiness Pope John Paul II for the Celebration of the World Day of Peace* 1 January 1990.

Paul VI. *Octogesima Adveniens*. 1971.

Pontifical Council for Justice and Peace. *Compendium of the Social Doctrine of the Church*. Washington, D.C.: United States Conference of Catholic Bishops, 2004.

Synod of Bishops. *Justitia in Mundo* (Justice in the World). 1971.

TAC (Theological Advisory Commission) of the FABC. *Asian Christian Perspectives on Harmony*. 1996.

TAC (Theological Advisory Commission) of the FABC. *Asian Theological Perspectives on the Church and Politics*. 1996.

OTC (The Office of Theological Concerns) of the FABC. *Respect for Life in the Context of Asia*. 2007.

United States Conference of Catholic Bishops. *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*. Washington, D.C.: United States Conference of Catholic Bishops, 1992.

3. Books

Baisas, OFM, Q. Bienvenido. *Bible and Ecology*. Loyola Heights, Quezon City, Manila: The Catholic Biblical Association of the Philippines, 2007.

Balabanski, Vicky. "Critiquing Anthropocentric Cosmology: Retrieving a Stoic 'Permeation Cosmology' in Colossians 1:15-20," in Norman C. Habel and Peter Trudinger (eds.), *Exploring Ecological Hermeneutics*. SBL Symposium Series 46. Atlanta, GA: Society of Biblical Literature, 2008.

Barclay, William. *The New Daily Study Bible: The Letter to the Romans*, General Foreword by John Drane. Bangalore: Theological Publications in India, 2010.

Bergant, CSA, Dianne. *Biblical Perspectives on the Integrity of Creation*. Loyola Heights, Quezon City, Manila: Catholic Biblical Association of the Philippines, 2007.

Berger, Peter I. "Introduction: The Cultural Dynamics of Globalization." In Peter L. Berger and Samuel P. Huntington. *Many Globalizations. Cultural Diversity in the Contemporary World*. Oxford: University Press, 2002.

Clifford, Richard J. *Psalms 1-72*. Collegeville Bible Commentary. Bandra: Mumbai, 2001.

FAO. *Food Wastage Footprint Impacts on Natural Resources*. Rome: FAO, 2013.

Geldof, Dirk. "Overconsumption." In Luk Bouckaert, Hendrik Opdebeeck, and Laszlo Zsolnai, eds., *Frugality: Rebalancing Material and Spiritual Values in Economic Life*. Frontiers of Business Ethics 4. Bern: 2008.

Horrell David G. *The Bible and The Environment: Towards a Critical Ecological Biblical Theology*. Oakville, London: Equinox Publishing, 2010.

- Ignacimuthu, S. *Environmental Spirituality*. Nagasandra, Bangalore: St. Paul Press Training School, 2010.
- Koenig-Bricker, Woodeene. *Ten Commandments for the Environment: Pope Benedict XVI Speaks out of Creation and Justice*. Notre dame, Indiana: Ave Maria Press, 2009.
- McDonagh, Sean. *The Greening of the Church*. Maryknoll, NY: Orbis, 1990.
- Menamparampil, Thomas. *All Creation Groans with Pain*. India: Bandra, Mumbai, 2012.
- Monera, Arnold T. "The Integrity of all Creation: Christian Perspective." Graduate School of Philosophy and Religion Assumption University – Bangkok, Thailand: Suvanmabhumi Campus, Bang Na, and January 24-25, 2008.
- Pilch, John J. *Galatians and Romans: Colledgeville Bible Commentary*. Bandra, Mumbai, India: St. Paul Press Training School, 2001.
- Rasussen, Larry L. *Earth Community Earth Ethics*. New York: Maryknoll, Orbis Books, 1996.
- Ratzinger, Joseph (Pope Benedict XVI). *"In the Beginning..." A Catholic Understanding of the Story of Creation and the Fall*. Grand Rapids, Michigan, USA: William B. Eerdmans Publishing Company, 1995.
- Schaefer, Konrad. *Psalms*. Berit Olem: Studies in Hebrew Narrative and Poetry. Edited by David W. Cotter. Colledgeville, MN: The Liturgical Press, 2001.
- Schor, Juliet B. *True Wealth*. New York: Penguin Books, 2011.
- Smith, Pamela. *What Are They Saying About Environmental Ethics?* New York: Mahwah, N.J., Paulish Press, 1997.
- Sparkes, Russell. *Global Warming: How should we respond? Catholic Teaching on the Environment*. London: The Incorporated Catholic Truth Society 40-46, Harley ford Road, 2009.
- Secretariat of the German Bishops' Conference. *Committed to God's Creation: Suggestions for a Sustainable Approach to Energy*. An expert report on the ethical foundations of a sustainable energy supply, Working Papers No 254en, Bonn, 2011.
- Secretariat of the German Bishops' Conference. *Climate Change: A Focal Point of Global, Intergenerational and Ecological Justice*. The German Bishops'/Commission for Society and Social Affair, Commission for International Church Affairs. An expert report on the Challenge of Global Climate Change, 2nd ed., Bonn: 2007.

Turker, Gene M. "Rain on a Land Where No One Lives: The Hebrew Bible on the Environment." *Journal of Biblical Literature* 116, no.1, 1997.

Scheid, Davud, "Saint Thomas Aquinas, the Thomistic Tradition, and The Cosmic Common Good." *Green Discipleship: Catholic Theological Ethics and the Environment*, ed. By Tobias Winright. New York: Oxford University Press, 2005, 129-147.

4. Portable Document Format (PDF files)

Aquillina, Eddie. "Saint Francis and Pope Francis." <http://www.timesofmalta.com/articles/view/20131004/opinion/Saint-Francis-and-Pope-Francis.488880>

Bishops of the Boston Province. A Pastoral Letter, *The Forum of Religion and Ecology at Yale: And God saw that it was good*. New Haven: Yale University Press, 201. <http://fore.research.yale.edu/publications/statements/and-god-saw-that-it-was-good/>.

Bischofskonferenz, Deutsche. <http://www.dbk.de/en/ueber-uns/>

Bishops of the Episcopal Church. A Pastoral Teaching on the Environment. *Environmental Stewardship*. Quito, Ecuador: September 2011. <http://www.tens.org/resources/free-resources/free-resources-blog/pastoral-teaching-on-the-environment>.

Catholic Climate Covenant. *Care for Creation. Care for the Poor: Prudence, Poverty, the Common Good and Solidarity*. <http://catholicclimatecovenant.org/catholic-teachings/>.

Catholic Online, the German Bishop's Conference Visits the Catholic TV Network. <http://www.catholic.org/prwire/headline.php?ID=10230>

Dodson, Jonathan K. *Lord of New Creation: The Fall Doesn't Stand Alone*. USA: Austin City, 2008. https://www.movingworks.org/wp-content/uploads/2013/08/1.19-20_Lord-of-New-Creation.pdf.

Dorr, Donald. *The Fragile World: Church Teaching on Ecology before and by Pope Francis*. <http://www.thinkingfaith.org/articles/%E2%80%98fragile-world%E2%80%99-church-teaching-ecology-and-pope-Francis>.

Edwards, Denis. *Ecological Commitment and the Following of Jesus*. SEDOS Bulletin, Vol.41, No.7/8(2009):159-168. http://www.sedosmission.org/web/en/sedos-bulletin/doc_view/1614-ecological-commitment-and-the-following-of-jesus.

EPA (United States Environmental Protection Agency). <http://www.epa.gov/climatechange/science/overview.html>

European Energy Review.

<http://www.europeanenergyreview.eu/site/pagina.php?id=1188>

Harris, Elise. *Pope Francis' Writings on Ecology could become encyclical.*

<<http://www.patheos.com/blogs/catholicnews/2014/01/pope-francis-writings-on-ecology-could-become-encyclical/>>.

Jillions, John. *Jesus and Natural World.*

<<http://www.incommunion.org/2004/12/11/jesus-and-the-natural-world/>>.

Kamran. The Concept of Sustainable Development. :

<http://envirocivil.com/environment/the-concept-of-sustainable-development/>

Laframboise, Nicole and Loko, Boileau. *Natural Disaster: Mitigating Impact, Managing Risks.* Washington: International Monetary Fund, 2012.

<http://www.imf.org/external/pubs/ft/wp/2012/wp12245.pdf>

Marshall, Edmund. "Jesus and the Environment: How Green is Christianity?" *Modem Churchman* 33, (1992) no. 4:1-5. ATLA Religion Database with ATLA Serials, EBSCO host.

McCarthy SJ, John. *Catholic Teaching and Ecology Fact Sheet.*

<http://www.ecojesuit.com/wp-content/uploads/2011/06/CST_ENG.pdf>.

Morris, Henry. *Creation and the Cross.* (Institute for Creation Research, 1976).

<<http://www.icr.org/article/creation-cross/>>

Laframboise, Nicole and Loko, Boileau. *Natural Disaster: Mitigating Impact, Managing Risks.* Washington: International Monetary Fund, 2012.

<http://www.imf.org/external/pubs/ft/wp/2012/wp12245.pdf>

National Post, Religion.

http://en.radiovaticana.va/storico/2013/06/05/pope_%20at_audience_counter_a_culture_of_Waste_with_solidarity/en1-698604

Rachel Carson. *Silent Spring.* 1962. See,

http://library.uniteddiversity.coop/More_Books_and_Reports/Silent_Spring-Rachel_Carson-1962.pdf

Sustainable Development: From Brundtland to Rio 2012, prepared for consideration by the High Level Panel on Global Sustainability at its first meeting, 19 September 2010, United Nations Headquarter, New York, 1-26, esp. 2. http://www.un.org/wcm/webdav/site/climatechange/shared/gsp/docs/GSP1-6_Background%20on%20Sustainable%20Devt.pdf

United States Conference of Catholic Bishops. *Environment.*

<http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/>

Vatican Radio, the Voice of the Pope and the Church in Dialogue with World, Pope at audience: counter a culture of waste with solidarity. http://en.radiovaticana.va/storico/2013/06/05/pope_%20at_audience_counter_a_culture_of_waste_with_solidarity/en1-698604

White, Lynn. "The Historic Roots of Our Ecologic Crisis: Science." Vol.155, No. 3767. 1967.

World Economic Forum. <http://www.weforum.org/projects/circular-economy>