Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus on the city of Nampula

By

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DECLARATION

I declare that this study entitled: Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus on the city of Nampula is my own unaided work.

The sources (citations, references and borrowed ideas) used for development of this dissertation have been correctly acknowledged. Neither I nor anyone else at this University or any other educational institution has submitted this kind of work focused on the eco-theology and this targeted group of the city of Nampula for degree purposes.

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ABSTRACT

Economically, Mozambique is one of the poorest countries globally. Given to its poor state, Mozambique remains environmentally deteriorated. Fortunately, the Mozambican government has embarked on environmental programmes as a strategy for ecological management. However, these strategies seem irrelevant due to ineffective implementation of such programmes. It lacks local community awareness, involvement and participation. The church lacks eco-theology as well as theology that can protect nature and people's struggles. This study investigated the policies and their implementation towards environmental management in Mozambique. The study also discussed church's role and proposed a comprehensive theology towards the environment in the city of Nampula. Nampula city is one of the busiest cities in the province and in the northern region of Mozambique due to its business attractions.

This study was limited to the Union Baptist Church of Nampula. The data collection was based on two approaches, fieldwork and literature analysis. Fieldwork approach resulted in 20 Nampula citizens' residents being interviewed. The finding showed that environmental crisis is a socio-economic, political and religious problem of concern. It also revealed that the citizens of Nampula face detrimental and environmental health impacts caused by a weak waste management policy. The incapacity of the implementation of waste management policy, deficiency in the enforcement of awareness and local people input contribute for ecological crisis, leading for water pollution and health problems.

The ambiguity of making ecological regulations and resources available worsens ecological crisis. When such regulations are drafted and promulgated without local people's participation, it may indicate that the law-makers exclude local knowledge about environment into the scientific debate. This can lead local people to resist and not participate even when they are called for. Hence, the research has shown that to make a dynamic ecological policy and an effective waste management, a combination of both top-down and bottom-up approaches are needed. A top-down approach guarantees constant framework while the bottom-up approach encourages local community involvement. In this study, the significance of local community involvement, church advocacy, and pressure in making waste management policy function constitute a key finding.

Without active involvement of local people in planning, designing, implementing, monitoring, evaluating, and the decision-making process participation, the earth management may never take place. Therefore, the challenge remains for the government, the church, and the private sector to draw and define methods to attain economic development, protect ecological and civil society.

Key terms:

Environment, ecology, eco-theology degradation, awareness, prevention, waste management, monitoring, policy, justice, economy, poverty, development, local community involvement, population growth, government authority, church advocacy, oikos, creation, humanity, sustainability, livelihood, and Nampula city.

DEDICATION

This thesis is dedicated to my father who passed away while I was a child and to my mother who is getting old while not currently living nearby to me. Both raised me with love and taught me to work hard and never give up. God bless my mother!

ACKNOWLEDGEMENT

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CCM	Christian Council of Mozambique
CDS	Center for Sustainable Development
CMCN	Nampula Municipal Council
CIEL	Center for International Environmental Law
DFID	Department for International Development
DIMAS	Directorate of Environment, Water and Sanitation
EEPCs	Environmental Education Programmes Campaigns
FAO	Food and Agricultural Organisation
FURA	Fund for Environmental Rehabilitation
FRELIMO	Mozambique Liberation Front
GAMA	Office for Environmental Affairs
HIV	Human Immune Virus
INE	National Institute for Statistics
IUBM/UBCN	Union Baptist Church of Nampula
IUCN	International Union for Conservation of Nature
IUM	Institute for Urban Ministry
ICSU	International Council of Scientific Union
LWF	Lutheran World Federation
MAE	Ministry of Public Administration
MDP	Mozambique Development Project
METL	Mohammed Enterprises Tanzania Limited
MICOA	Ministry of Action and Environmental Co-ordination
NEPAD	New Partnership for African Development
NGOs	Non-Governmental Organisation
NIV	New International Version
NIV-UK	New International Version-UK
NRSV	New Revised Standard Version
OT	Old Testament
PROGAU	Programme for Urban Environment
SADC	Southern Africa Development Community
SLF	Sustainable Livelihood Framework
UNEP	United Nations Environment Programme
UNISA	University of South Africa
USAID	United States Agency for International Development
USCCB	United States Conference of Catholic Bishops
UKZN	University of KwaZulu-Natal

MAP OF MOZAMBIQUE AND NAMPULA

Map of Mozambique with full description of provinces, important lakes, mountains, reserves and national parks and respective neighbouring countries. http://www.lonelyplanet.com/maps/africa/mozambique/

Map of Mozambique divided into 10 provinces. Highlighted in green is Nampula province where the present study was conducted. See the web: http://en.wikipedia.org/wiki/Nampula_Province

THE ROMAN CATHOLIC CATHEDRAL IN NAMPULA

This picture illustrates the Roman Catholic cathedral in the inner city of Nampula. It is the most beautiful cathedral in the country of Mozambique. For more details, see the web for more information: http://en.wikipedia.org/wiki/Nampula_District

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Chapter One

Introduction to the Study and Methodology

1. Introduction

After years of unlimited mistreatment of the environment, pollution, erosion of biodiversity and skewed development in favour of the rich nations, poor countries now face the situation of serious environmental deterioration. This is marked by global warming, climate change, increased deforestation, desertification and pollution of oceans, all affecting societies. This environmental deterioration creates the risk to millions of livelihoods and indeed to life itself on earth (Osano and Muli 2001:37). Additionally, it is observed that "the environmental crisis now threatening our future is as a result of the accelerated social devastation now gripping our continent and the world. Hunger, poverty and diseases are on the increase, unemployment, inequality within and between nations has widened, and social tensions are on the rise. On the other hand, environmental degradation in turn compounds the impoverishment of the African people (Osano and Muli 2001:37)."[1] Therefore, the main task in this study is to discuss the environmental crisis beginning from global, African and Mozambican levels and more particularly in Nampula province.

1.1 Global environmental crisis

The global environmental crisis is a serious issue and the causes can be due to a variety of factors such as the tendency of economic and population growth worldwide. For example, it is argued that "if the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will

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[1]This information was accessed from the report of the African civil society forum in Nairobi, Kenya on 15-16 October 2001. An African civil society position to the African Ministerial Prep Com in preparation for the World Summit on sustainable development, Johannesburg, September 2002.

be reached sometime within the next 100 years. The most probable result will be a sudden and uncontrollable decline in both population and industrial capacity"[2]. This suggests that unless there is a possibility to regulate such growth trends the state of environmental and economic stability that is sustainable will take another century of years to achieve. Furthermore, it is observed that "the root causes of the global environmental crisis stem from the disconnect of people from acknowledging they are part of nature and environmental cycles rather than being separate from or able to control nature"[3]. It is clear that besides previous causes mentioned above, the element of human negligence and not taking responsibility towards environmental conservation constitute another root of the ecological crisis, thus showing that human beings are responsible for ecological degradation.

1.1.2 African environmental crisis

Africa is a beautiful and wealthy continent due to its variety of resources, eg minerals, land, mines, petroleum, oceans and also culture, even though this continent does not always actually appear as it is characterized above. For instance, it is observed that "despite Africa possessing wealthy natural resources many Africans live in poverty unable to benefit from the African wealth because of uneven distribution across the continent and partly because of the complications of African history over the past 50 years after the decolonization"[4] and this results in this beautiful land facing a crisis. Moreover, temperature and precipitation variations as well as people's attitudes and other factors place African environments in precarious conditions.

Maddox (2006:10) observed that "one of the most complex aspects of the understanding of the environmental history of Africa is the effect of climate change...climate, in this sense has two main features: temperature and precipitation". High temperature variations that hit Africa causing droughts and precipitation that provokes torrential rains, floods and cyclones are some of the elements that contribute to the African environmental crisis. According to Dharam Ghai (1992:7) "natural disasters provide the most dramatic illustration of the social impact of changes

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[2]See: Examination of the environmental crisis. Specific focus on the balance between the instrumental and intrinsic value of nature from a Baha'i perspective, by Chris Jones. http://bahai-library.com/jones_environmental_crisis.Accessed on 09/06/10.
[3]See: Global Environmental Crisis. http://coordinate4u.org/2010/05/24 - Logged on 09/06/2010.
[4]See: Environmental Problems in Africa, 2006.http://www.articlesbase.com/environment-Articles.

in environment... The great droughts of the early 1970s struck the Sahelian and the Sudano-Ethiopian regions. Between 100,000 and 250,000 people died in the Sahel according to a report prepared for the United Nations Conference on desertification".

In this regard, the environmental problems now seem to be one of the greatest challenges of the 21st century on African soil. Maddox (2006:3) noted that "African environments are specific to their contexts. Models of human environmental intervention developed for different landscapes and in different historical contexts will not apply in the same way in African history...African environmental history must account for the extreme variability of African environments across time and in space." This is what can be observed in many African countries. Like Mozambique, many environmental problems are due to the various changes that took place along different periods such as colonialism, independence, the civil war, and natural disasters. These phenomena account for and change significantly the social and economical aspects and specifically in some African nations, where some social and political values may influence the environmental crisis to become worse. Beside the abovementioned phenomena, it is accurate to observe that the social attitudes of some Africans sometimes play a role that contributes to ecological deterioration. For example, it is noted that "...eventually, human actions brought great change to African environments, to the point where their ability to survive in them is now threatened" (Maddox 2006:5).

Regarding poverty, "Africa has a vast majority of poor states and regions, and poverty is a major reason and consequence of the environmental degradation. The environmental problems have already waited a long time for their turn to become a focus of concern. Among them there are air and water pollution, inefficient use of natural resources and oil spills. Environmental problems of sub-Saharan Africa also include air and water pollution, deforestation, loss of soil and soil fertility, and a dramatic decline in biodiversity throughout the region"[5]. The same source observed that "the terrestrial, freshwater and marine environments have declined in virtually all aspects. New developments in industry and manufacturing were root causes of environmental degradation over the past three decades. The rapid growth of population, urbanization and

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[5]Ibid

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globalization are the driving force of the environmental problems...”[6] In short, one can observe that the African environmental crisis is derived from a variety of phenomena like climate change, natural disasters, colonialism, independence, people's attitude over their own space and other factors.

1.1.3 Mozambique environmental crisis

Mozambique's environmental crisis cannot be disassociated from that of other African countries and the world at large. The causes include many factors such as natural, socio-economic and political disasters. For example, UNPD observed that "Mozambique is among the most disaster - prone countries in the world, combined with high levels of poverty and weak national institutions. The occurrence of natural disasters such as floods, cyclones, drought and earthquakes has consistently had a significant impact on people and the economy. It is estimated that as much as 25 percent of the population faces a high mortality risk from such events, and the country ranks as the second most geographically exposed country in Africa.[7]

Climate change in Mozambique also constitutes a challenging factor. Climate change has proven its potentiality to increase irremediable consequences if its mitigation is not preferred responsibly. The negative impact of climate change can include that of undermining developmental efforts and increasing the vulnerability of poor people, who basically depend on the environment for their livelihoods. Mozambique environmental causes are similar to those throughout Africa and even worldwide. Political failure, economic instability and constant natural disasters constitute some of the causes. To validate this view it is argued that:

> The civil war combined with natural disasters from flooding and droughts have created a life-threatening situation for the nation's people. According to a 1992 UN report, humans were the most endangered species in Mozambique. Other significant environmental problems include the loss of 70% of the nation's forests. The nation lost 7.7% of its forest and woodland between 1983 and 1993 alone. Mozambique has since launched reforestation projects, mostly involving the planting of conifers and eucalyptus... As of 2001, 13 of the nation's mammal species and 14 bird species were endangered. About 57 plant species were threatened with extinction.[8]

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[6]Ibid
[7]See from UNDP Mozambique. www.undp.org.mz/en/what_we_do/cpr_and_environment. *09/06/2010.*
[8]SeeEnvironment-Mozambique-farming. http://www.nationsencyclopedia.com/Africa/Mozambique-

Therefore, political instability and natural calamities, specifically the droughts and floods of 2000, have contributed brutally to the environmental crisis in Mozambique. The loss of 70% of the nation's forests also has tremendous consequences for Mozambique's environment in both rural and urban areas.

1.2 What is this particular study about?

This particular study is about environmental deterioration in Mozambique and more particularly in the city of Nampula. It is to discuss socio-theological and missiological issues towards overcoming such ecological deterioration. It is to discover if people do realise that there is an environmental problem and if so, who do they believe is responsible for the problem and what are some possible solutions to such a crisis.

Considering that cities also have important roles to play in religion, this study also seeks to examine and describe the theology and influence of the Christian churches in the city of Nampula with regard to their urban environmental context. The target groups of this present study are the members of the Igreja União Baptista de Moçambique, (IUBM)[9] in Nampula. The study endeavours to understand the strategies with which the target group deals with the urban environment. The IUBM is the church where I have been a member since 1981. Therefore, the present study has the following title: *Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, with Particular Focus on the city of Nampula.*

1.2.1 Research problem: key questions

The key issue in this study is that people living in Nampula city experience environmental degradation which greatly affects them economically and socially. In addition, their general life impacts the health and well-being due to the degraded quality of their environment. This study is aware that there are already several scholars such as Cabral, L. & Francisco, D. (2008: vi); Da

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Environment.html, logged on 09/06/2010.
[9]IUBM is an abbreviation which in Portuguese stands for Igreja União Baptista de Moçambique em Nampula. In English it can be translated Union Baptist Church of Mozambique, Nampula (UBCM). In this study I use this English abbreviation.

Conceisão, A.M.R.W. (2006); MICOA (1996); Mushala, H.M. (1992) and Pelissier, R. (2006) who have researched the issue of environmental crisis in the city of Nampula and elsewhere in Mozambique.

However, there is an absence of missiological and theological reflection in the abovementioned studies. Works like that of Mushala, H.M. (1992) and MICOA (1996) do not consider clearly the involvement of civil society toward ecological management. In some of these works, there is little mention of government environmental policies. In some instances, such policies lack strategic plans to address the issues of environmental crisis, Cabral, L. & Francisco, D. (2008:vi). Therefore, this study is an attempt to construct a comprehensive theology and mission towards the environment. In this regard, the research question of this study is as follows: *What is the role of the faith community in raising awareness of, and curbing environmental degradation in the city of Nampula?* The related questions that the research attempt to answer are:

> ➢ What are the causes of environmental degradation in the city of Nampula?
> ➢ What are the consequences of environmental deterioration?
> ➢ What are the environmental policies for management?
> ➢ What is the nature of the Churches' equipping or lack thereof with regards to working towards a healthy environment in Nampula?
> ➢ What experiences of the church inform a comprehensive theology of environment?
> ➢ What is the nature of the relationship human beings have with the environment? Who and where is God in the environmental degradation?

1.2.2 Aims of the research

The general objective of this study is to investigate the value of the existing environmental policies and resources that will encourage the residents of the city of Nampula to be involved in ecological management programmes. The specific objectives are:

> ➢ To investigate the roots of ecological crisis in the city of Nampula and how the residents perceive and rationalise this crisis;

- To evaluate the level of awareness of Nampula city residents about the importance of environmental conservation in ensuring a sustainable water supply;
- To analyse the biblical and traditional teachings toward the environment;
- To critically assess the existing government policies toward environment in Nampula;
- To discuss the existing theologies of stewardship of the environment amongst Christian churches in the city of Nampula.

1.3 Geographical Location of this Study (Mozambique and Nampula)

Geographically, this study is located in the Republic of Mozambique, Nampula province and more particularly the city of Nampula. Administratively, Nampula is the third largest city in the country. The city of Nampula is the capital of Nampula province and it is situated in the northern region of Mozambique. A fuller description of the geographical location of this study can be seen in the sections 3.2 and 3.3 of this chapter.

1.3.1 The significance of choosing Nampula as the context of this study

There are many reasons why this study is targeted to these particular groups of church youth, leaders, women and the Municipal director for environment in the city of Nampula. I was born, raised and educated in Nampula. My first job opportunity was in this city. I have been a member of the Union Baptist Church in Nampula since 1981. My work for the Christian Council in Nampula over five years gave me a vision, challenge and opportunity to obtain knowledge and a sense of the urban and environmental crisis in Nampula. My time working for the Christian Council was also an opportunity to learn from other churches, NGOs and civil society, as well as many issues relating to theology of transformation. Unfortunately, I did not find a clear understanding of how the church as the body of Christ comes across concerning the environmental issues. Above all, I learnt a great deal from my church and I know quite deeply their theological strengths and weaknesses on issues of social concern. I am also aware of the environmental crisis in the city of Nampula.

At the Baptist church where I am a member, there is no agenda that addresses environmental issues and social transformation except that of spiritual repentance. During my time at the Christian Council of Mozambique, there was some concern expressed by the members or churches about the degradation of nature. Likewise, it was rare to hear churches holding responsibility and planning sessions on how to preserve and keep the earth safe. Therefore, it was after my first and second degrees at the University of KwaZulu-Natal (UKZN) and my involvement with the Institute for Urban Ministry (IUM) and UNISA that my vision and interest in this study, the target groups and the city of Nampula were stimulated.

Furthermore, my participation in different workshops, seminars at IUM in Pretoria and theological workshops at UKZN contributed significantly to my interest in this study and the urban environment.

It is also important to mention that the target groups with which this study is conducted are the members of the Union Baptist Church and most of them live in the vicinity of Nampula. The church is well - known in the city. A variety of well - known NGOs such as World Vision, Care International, Oxfam and the Department of Environmental Management are also active in Nampula.

1.3.2 Location in Mozambique

The city of Nampula is located in the northern region of Mozambique and it is the capital city of the Nampula province. In the category of Mozambican cities, Nampula is the third largest. Due to its strategic location it attracts many people of different cultural, religious and racial backgrounds for business purposes. In substantiation of this view, it is observed that:

> Nampula is Mozambique's third largest city, with an estimated population of 477,900[10]...The city is situated inland in a rich agricultural region and is the provincial capital. In addition to the city's political functions it is an important trade hub for both internal consumption and international products that enter Mozambique through the nearby port of Nacala and then are shipped to central Africa. The city is home to a thriving Indian merchant community and is often referred to as the 'Indian capital' of Mozambique (Sumich 2009:3-4).

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[10]This information is a result of the 2007 population census and is supplied by Instituto Nacional de Estatística, an institution responsible for the population census in Mozambique, and is available at http://www.ine.gov.mz/.

The city of Nampula including the residents also deserves a healthy environment and better treatment as do other Mozambican cities. Before Nampula became inundated by the mass exodus from rural areas and neighbouring countries, there were few major incidents of crime. Nampula was an attractive city to walk in at any time, and plausibly morally well-off, more so than it is today. This is because before it became overpopulated, it was the cleanest city in the country. Public places such as supermarkets, stadiums, and gardens were attractive places for daily entertainment.

So, who will recover the original beauty and image of this little city if there is no one interested? Who will restore the peace, justice and hope of the urban environment and people in the city of Nampula if the church ignores these evils? Who will educate young people to stop behaving irresponsibly but begin thinking for environmental conservation? In my opinion, the government, private sector and church, rather than neglecting them, should look seriously at the significance of their young people since modern cities are populated mainly by youth and they constitute a strong asset for development. It is commented that "…young people in the city…were looking for healing and deliverance…Numerous city churches had become irrelevant to them and the drug-music-alcohol combo, the night-club, is now their church where they heal their wounds…" (James 2007:16).

1.3.3 The historical cities in Mozambique

Historically, the Mozambican cities have to be grounded in their colonial roots. The country bears the term Mozambique which according to some views, may be taken from Musa-al-Mbiki. Musa-al-Mbiki was a citizen and resident of Mozambique Island in Nampula province, north of the country. Mozambique Island was the first area in Mozambique where Vasco da Gama, the first Portuguese colonizer, navigated to and discovered this country in 1498. Mondlane said that:

> Contacts between Portugal and parts of what is now known as Mozambique began at the end of the fifteenth century, when Vasco da Gama, the celebrated Portuguese navigator, reached the island of Mozambique in early March 1498… Keystone in the administrative structure was the governor-General, who first wielded his power from the capital city of Mozambique in the north, and later from Lourenço Marques in the south (Mondlane 1969:23, 28).

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Concerning the origin of the term/name 'Mozambique', it is observed that "according to tradition, from Musa Mbiki, the name of a sultan at the time of first Portuguese colonization…became the name of a settlement, later applied to the whole country [sic]"[11]. At that time Nampula, was the capital of the country for several years. It has been pointed out that "until 1898 this was the capital of the Portuguese colony of Mozambique and the focal point of their trade and industry"[12]. During the colonial period, or before independence, many Mozambican cities were bearing the roots of Portuguese names as a means of achieving full domination. Even people's names with African roots were changed into Portuguese ones. For this reason, most of the names and surnames of Mozambican people have Portuguese derivation. For example, the name Nampula was the name of the local chief, called at that time 'Mphula' or in terms of respect 'aNamphula'. When the Portuguese arrived they changed the name from Mphula to Nampula.

1.3.4 Nampula as a city; the population size

Demographically, the city of Nampula has the following populations black, coloured, Indian and white people. As the third-largest city in the country it is argued that "…over 405,000 people live in the city, with an additional 450,000 people in the surrounding rural areas. It is the capital of the most populous province of the country with 3.5 million people."[13] The city is primarily populated with young people aged between 15-35 years old. The city has five secondary schools and some private universities. It has one provincial and one regional hospital. In the peripheries of the city there are some general medical and health-care centres. The city of Nampula has major service facilities including an international airport and railway which facilitates imports and exports to neighbouring countries such as Malawi, Zimbabwe, Zambia and also overseas. Other facilities include communication services, health care, secondary and university education. Roads and security services play a more significant role than in other provinces.

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[11]See: Mozambique Provinces: http://www.statoids.com/umz.html, logged on 31/03/09.
[12]See Mozambique Island website: http://www.go2africa.com/mozambique/mozambique-island, 31/03/09.
[13]Grace Missions Ministry is a mission agency and works in the city of Nampula. Their main task is evangelism in the hospitals. For more information website: http://www.gracemissionsministries.org/, longed on 31/03/09.

1.3.5 Main services/industries in Nampula

In relation to this section, it is true that both before and after independence, the existing factories and services have all been based in Maputo. However, Sumich (2009) observed that:

> Sixteen years after the end of the war Nampula City's economy is booming, but the benefits seem to be monopolised by a select few. Many of the plantations and factories (especially cashew-nut production, one of the largest cash crops) that managed to survive the war and economic crisis of the socialist period were finally shut during the post-war structural adjustment programme, creating even more unemployment...A frequent complaint heard from the well-off and the poor alike is that despite the construction of a cement plant, a Coca-Cola bottling factory and the O'Connor's industrial chicken farm, much of the economy is based on trade and commerce, which can create great wealth, but relatively few jobs for the poor and little stability for the better-off, Sumich (2009).

Beside these few abovementioned industries, Nampula city offers services such as: mechanical, electrical, cotton industry and cereal industry services, cashew-nut production, transportation and other general services. However, because of the civil war lasting about 16 years, some of these services are inoperative and those which still operate only benefit the minority.

1.4 The social significance of this study

This research is sociologically based. In my understanding sociology is a study that uses systematic methods of empirical research and critical analysis to develop knowledge about human structures. To validate this statement, it is noted that:

Sociological study enables us to understand the structure and dynamics of society, and their intricate connection to patterns of human behaviour and individual change. It examines the ways in which the forms of social structure-groups, organizations, communities, social categories (such as class, sex, age, or race), and various social institutions (such as kinship, economic, political, or religious) affect human attitudes, actions, and opportunities.[14]

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[14]Seewhat is Sociology? http://www.dartmouth.edu/~socy/intro.html - longed on 22/04/09.

Hence, one of the social significances of this study is to discuss the issues that are linked with society and human social interaction and struggles. It is also an attempt to look at the rules and processes that bind and separate people not only as individuals, but as members of associations, groups and institutions. Another social significance for this study is that sociological study analyses in depth the problems that affect people directly or indirectly, such as the target group of this study. For example, James observed that sociological study "contain discussions on the moral, cultural, social, economic and political issues pertaining to the subject group" (2007:4), as mentioned above. In this regard, one can observe that sociology and religion are inseparable subjects since there will be no church without dealing with social matters that affect people and vice versa.

For example, it is observed that, "sociology's task is to study both the interface of the objective social context and its bearing upon religious experience as well as subjective interpretations of religious experience and how they impact the social world" (Yamane 2000:167). This shows that religion that values only spiritual issues has little perception of being God's envoy on the earth. For example, it is discussed that human beings are seen as "part of this environment...for an integral ecology, society and culture also belong to the ecological complex" (Boff & Elizondo 1995: ix).

Thus, the environmental crisis is a serious situation which affects society negatively, and more specifically poor people. A sociological analysis is important in this present study and to this particular target group of IUBM in Nampula. In the interview chapter, this target group has shown its pain caused by environmental degradation. That is why a sociological analysis cannot be indifferent in this study because understanding social matters helps to analyse the causes of ecological crisis and propose some possible solutions/precautions. It helps also to identify the theological and missiological roles within the environmental deterioration in areas such as Nampula.

1.5 The theological significance of this study

This study cares out a theological significance. Its significance is that it is an attempt to critically reflect on the church's impact and theology in society. Critical reflection is what Bonino (1983:52-53) calls theologians to keep up...as they serve the prophetic ministry of the church. The four Gospels teach that the Church stands as the salt and light of the world, (Mt 5:13-14; Mk 9:50; Lk 14:34-35)[15]. In my point of view, the theology of salt and light portrays a church which displays the qualities of being the church of Christ on Earth. The essence of salt is to purify, preserve and improve flavour as well as to prevent rottenness of goods, while light serves to illuminate or cast away the darkness.

Thus, the church symbolizing the salt and the light can represent the word of God through preventing the evils in society. It can be an institution that promises a healthy life, light, and hope to people and nature as a whole. The church as salt plays an influential role in society and serves to make the earth a better and more wholesome or healthy place. As the light, the church illuminates and gives guidance to the world, to move from darkness into light or from Earth's destruction to its preservation. However, it seems that there is often no response to God's commands in relation to his creation.

Adeyemo (2006:1120) observed that "if Christians are called to be salt and light, then it flows that the world into which they are sent needs these qualities. It is a place of insipid morality, decay and darkness…" The church which refuses its calling to heal and save the world and earth from sin and destruction will become unserviceable, worse than salt which has lost its saltiness. The church will lose its theological confession of faith, and theology which has not critically reflected on the church's commitment to the public arena seemingly will not have any impact.

In addition, "theology is critical reflection on the churches' confession of faith and social praxis in the light of the word of God in order that we might better know and serve God revealed in Jesus Christ today" (De Gruchy 1986:52). From this point of view, this study seeks to be participative, dialogical, empowering and contextual. This is because theology is "God in

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[15]The version used for this information istaken from New Revised Standard Version (NRSV) with Apocrypha.

dialogue with his people in all their thousands of different environments" (Bakke 1981:62). From a Christian point of view, theology denotes the understanding of Christian faith and God's relation to the rest of world. In the light of the relational aspect, this research is oriented to, or deals with, urban theology. It is an area that I believe has been neglected by many churches in Nampula. Neglecting to preserve the environment is unscriptural since "the Bible is indeed filled to the brim with ecology" (Conradie & Field 2006:48). Furthermore, "rescuing the environment from an impending disaster is biblically mandated...Christianity at its best is environmentally responsible" (Campolo 1992:5-6).

This means that since all religious activities are practiced on the earth, then the environment is also part of religion. So, one can suggest that religious believers should not in any circumstances separate their activities from other things like protecting the environment responsibly. Each believer of each religion should also work towards environmental protection as he/she protects his/her religion against threats from other faiths. It is given that the Scriptures do not deny the importance of environmental protection and do not allow the Earth's destruction. In this regard, Christians could consider environmental conservation as a key part of their mission on the Earth.

1.6 The missiological significance of this study

This study discusses a missiological significance approach. In my understanding the church, as the body of Christ and a faith-based institution has to be a driving force for social change and relief from struggles. This study therefore becomes an enquiry into the role of the church in environmental conservation. It is also to seek how the church should be involved in empowering people to deal with their environment.

Another motivation for the missiological approach of this study is simply that "missiology is…the study of communication of God's concern for people…missiology is interested in the city because people are living there" (Kritzinger 1995:201). Furthermore, "to be a Christian means to participate in the Missio-Dei, God's work in the world. This means to bear witness to the work of God in partnership with others...to make our world a place that is closer to God's vision of shalom" (De Gruchy 2005:56). Otherwise church mission on earth will be

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compromised. Thus, since the city of Nampula is the third largest and more densely populated city in Mozambique it is important to note that urban mission in this particular city is a priority, an urgent challenge to be considered.

1.7 Urban Theology

It is important to engage in the urban environment theologically. As human beings we must be aware that urban contexts are part of our environment and we must not allow it to deteriorate. Environments provide us the air to breathe, the water to drink, the soil to grow food and the place to live in. So, it is humanity's responsibility to protect both the urban and rural environment. Hendry (1980:11) states "the immediate and practical response to the ecological crisis is the search for measures to protect the environment against the abuses that have caused its deterioration".

In relation to Hendry's thoughts, I must say that the immediate and practical response to the nature crisis, to me it has to do with the vision that "God is present in all the spaces and places of creation as well as in human civilisation as manifested in cities, despite human neglect and injustice" McFague (1993:137,160−161). This means that God's people should not look for human neglect and injustice as an excuse of not doing mission in any environments. Otherwise it should be an opportunity to speak prophetically to solve the problems affecting nature and human lives instead of just condemning in an unresponsive way. Exploring the issue of hope in relation to the Christian doctrine of salvation, McFague (1993:198) stresses that:

> Eschatology is not a concern with the afterlife, but is the breaking through of new possibilities, of hope for creation, a vision of a different present based upon a new future. In this eschatological vision, salvation or the good life for all means first and foremost that the basic physical needs of the earth's creatures and systems have to be met. We are all bodies who need the basics of food, clean air and water, shelter and space, community, care, and so forth, to live. In the Christic reading of the new creation, the vulnerable and the marginalised are now included in a community of abundant life" (1993:198).

The urban context involves a high concentration of people and structural and systemic injustices which contribute to environmental degradation and social disadvantage. It is pointed out that "environmental degradation on top of social injustice is already causing massive suffering among

humans and other kind" (Hessel 1996:1). Urban theology plays a pertinent role since it functions to reflect God's concern towards the urban environment. It also gives people knowledge of how to deal with ecological matters from the grassroots since God gives every human being the responsibility and mission of taking care of this earth. It is upon this earth that humans depend for their living. In this regard, Van Schalkwyk (2014:10) challenges that:

> Mission is also God's 'No' to the world as Christian urban practitioners are not secular to the point that they do not stand back and look critically at the world in the light of the Gospel. Where there is wrong, or where public role players speak smoothly about sophisticated plans for urban transformation but do not really serve those who are the most vulnerable and marginalised in the city, there Christian urban practitioners have to be vociferous in their critique of the actions of public servants and tenaciousin their endeavours to engage, on a practical level, with public servants, government, legal agents and community organisations to find alternatives for those inhuman situations which government agents do not solve or have even brought about and which affect the lives of the vulnerable.
> Van Schalkwyk (2014:10)

James (2007:18) said that "urban theology involves doing theology (critical reflection, praxis) in the context of the city and urban areas in general". In other words, urban theology is more than thinking narrowly about church doctrines. Urban theology, similar to other Christian theologies is "…a radical call from God to reflect with the people in the midst of decay and despair upon the realities of the situation and what the gospel said to it" (Duffield 1997:18). Cities are important sites of influence since "decisions made in cities affect the rest of the country and even the world" (James 2007:18).

In the case of Mozambique, decisions still take place in the capital Maputo, even within the democratic system. It significantly affects adequate engagement with environmental issues because the people equipped to deal with environmental issues, as well as other economic resources, are all centralized in Maputo. Centralisation makes local communities unable to prevent their environmental problems. It is another way of oppression because people cannot think for themselves about doing something, until the decision is taken from the central office. Centralisation is not only a Mozambican issue. It is a global ideology especially when it comes to economic issues. Developing countries for example, are guided in how to do things. According to Sassen 1996:89, (cited in James 2007:18) cities become an important place and "strategic sites in the world economy" which in my view increases their environmental vulnerability.

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1.7.1 Urbanisation and city

It is notable to see the increase of the people in urban areas as never before. The increase in population migration from rural areas into cities has innumerable consequences on human life. For example, James (2007:20) observed that "such an unprecedented shift of rural dwellers to urban areas has caused great imbalances, lack of facilities, congestion, poverty, crime, violence, pollution and other negative consequences" . Related to the congestion, one can observe that the city of Nampula is in danger of becoming a place of decay.

For the Nampula city context, where urbanisation is in disorder, the environmental degradation is also high. In some peripheries of the city the buildings are dilapidated and the lives of people are also dehumanized. In this area the proliferation of waterborne, hygiene-related and contagious diseases are also imminent. To support this view, Cities Alliance, one of the agencies dealing with issues of urban settlements in Nampula said "the third-largest urban centre in Mozambique, Nampula has been experiencing explosive urban growth, most of it unplanned. Today, more than 80 percent of the population lives in slums without access to basic infrastructure and services"[16].

1.7.2 Ecology and urbanisation in Nampula

It would be impossible and inadequate to separate ecology and urbanisation. Ecology, as Guha (1994:42) perceives is "the study of the relations between organisms and their environments." Thus, this section is an attempt to analyse the situation of both ecology and urbanization in Nampula.

Although Nampula occupies a third position in the categories of the city after Maputo and Beira with vast, attractive facilities, in practice it does not show this attractiveness due to the degraded realities it presents. For example, in terms of urbanization itself, Nampula is the most disorganized city in the country. Non-observance of urban laws and unskilled staff in the field of environmental management are responsible for this disorder and degradation. Another element

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[16]Cities Alliance is an international organisation working for urban settlements in Nampula as well. For more information it can be accessed onwww.citiesalliance.org/publications/homepage-features/dec 08/nampula.html.

which may contribute to such deterioration could be the centralisation phenomenon as mentioned above. Centralisation constitutes a barrier because it delays the progress of work, deprives the poor people of power and attracts bureaucracy in the government institutions as well. For example:

> The post-1994 dispensation inherited a very centralised and hierarchical system of administration, initially bequeathed by the Portuguese colonisers and left pretty much intact by the FRELIMO one-party regime in the period 1975 to 1994. At the sub-national level, the administrative system is organised into three tiers. Provinces, districts and administrative post…All the officials working at these three levels are civil servants appointed by central level institutions, a situation which not only encourages bureaucratic delays in paper work and appointments but also guarantees political loyalty to the national government and ruling party and permits only limited forms of autonomy and flexibility.[17]

In support of this statement, it is pointed out that this institutionalised ambiguity creates "a continuing source of uncertainty and tension in the administrative affairs of provincial...and represents a significant impediment to the empowerment...of publicly-funded development programmes" (Helling 2000:9). In the centralisation system many issues such as ecological degradation remain unsolved because people depend on the head office decisions. Then, in the situations where the environment has deteriorated, consequences such as diseases are inevitable.

1.7.3 Malaria, cholera and HIV/AIDS in Nampula/Mozambique

Due to these various factors, the city of Nampula is one of the most vulnerable urban areas in Mozambique. These factors include persistent diseases caused by the lack of hygienic materials, unhealthy drinking water and poor management of garbage disposal in the city.

For example, the Mozambican newspaper has reported that "poor hygiene conditions, the proliferation of piles of garbage, and pools of water left by recent rains favour the spread of the disease. It is feared that water contaminated by cholera is seeping into the wells which much of the Nampula city population relies on for its drinking water"[18]. The same source reported that "at

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[17]This information is taken from: Report of mid-term evaluation mission. 2000. Project of the Government of Mozambique Support to Decentralised Planning and Financing in Nampula Province (District Planning & Financing Project) http://www.uncdf.org/english/local_development/upl.
[18] This incident was reported in the daily Mozambican newspaper (Noticias), on 14 January 2009. See at http://allafrica.com/stories/200901150332.html.

least 38 people have died in a cholera outbreak in the northern Mozambican province of Nampula that began in late December"[19] in 2008. According to the same newspaper, besides the 38 people who died, 210 cases of the same disease were diagnosed previously. It is also pointed out that "a cholera treatment centre has been opened in the provincial capital, Nampula city, and on Monday 40 people were hospitalised there…"[20]

Besides cholera, there is malaria which decimates many people countrywide. Though there are efforts from the government and other private sectors to combat malaria through health education and nets distribution, it is still there. This disease basically happens from October to January every year when the heat is intense. The most vulnerable people are pregnant women and children. Another cause also seems to be the poor hygienic conditions and uncontrolled water which often one can see running along the roads or neighbouring households. HIV/AIDS is another deadly disease in Mozambique.

The major vulnerable groups are women and young girls, as the result of powerlessness and economic disadvantage. It is noted that "transactional sex is a key driver of HIV infection among women and young girls. Faced with few economic opportunities, many young girls and women engage in sex in exchange for money or goods in order to survive"[21]. Because of this serious need, donors today invest a lot in HIV/AIDS projects rather than in any other developmental areas. In other words, the money that could be allocated for environmental conservation will be used to help sick people and in countries like Mozambique it becomes a challenge for environmental reform.

1.8 Definitions of terms

Ecology – This refers to the circumstances and conditions affecting land, air and water in which people, animal and plants live and depend on. According to Bishop, "the term ecology is

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[19] Ibid
[20] Ibid
[21] This is a short report presented by UNAID 2004, concerning women, girls and HIV/AIDS in Mozambique. The information was accessed through INE (National Statistical Institute), Mozambique Demographic and Health Survey, 2003. More information can be accessed on the following site:
http://womenandaids.unaids.org/documents/factsheetmozambique.pdf, logged 4 May 2009.

understood in a wider sense than its strict scientific definition; it means 'understanding ourselves and our environment as part of nature'. Underlying the concept of ecology is the need to find our place in the ecosystem" (1991:8). In addition, "ecological theology, in particular, is obviously elicited by the widespread concern over environmental destruction. It draws on the Christian tradition for wisdom and resources to respond to such environmental destruction. At the same time, it also calls for a multi-levelled transformation of the Christian tradition in the light of the challenges posed by environmental destruction" (Conradie 2002:14). Ecology "refers to the earthly habitation which human beings share with other living beings and specifically to the mutual relation between organisms and their environment" (Chetti 1991:18). Therefore, in this study, ecology is used in relation to the economy, ecumenicity and housing. People, plants and animals cannot have good health when the ecology is degraded.

Environment - This term includes "both natural and society, which relate to each other and coexist. In the environment we find forests, human beings, land, mountains, water, air, animals, etc., which are mutually inter-relating. This relationship can be good or bad. It is good when human beings can make adequate use of other environmental components, like water, forest and air. It is bad when humankind destroyed them…or when a few people appropriate resources and thus endanger our survival and reproduction..." (Neefjes 2006:1).

In this study environment plays a key role because this term refers to everything that makes up our surroundings and affects our ability to live on the earth. This includes the air we breathe, the water that covers most of the earth's surface, the plants and animals around us.

Environmental sustainability - This term refers to people's capability in managing their resources including the environment. Prance defends that "there have been various definitions of the concept of the sustainability, but the underlying idea is that present human needs should not be at the expense of future generation. However, a glance at the use of almost any non-human resource shows we are far from achieving this sort of attitude" (2007:70). In addition, Bookless said "in the context of environmental sustainability, money and the human economy should be set within the wider context of the earth. True value lies not in measurable monetary wealth, nor in usefulness to human beings, but is intrinsic to being created by God. Thus, every object and

every creature must be respected not simply as resources but as unique repositories of God's wisdom" (Bookless 2007:43). Therefore, environmental sustainability is "the ability to maintain things or qualities that are valued in the physical environment..."[22]

Prevention – It points to an "intervention directed toward eliminating potential difficulties before…sufficiently problematic" (Solomon & Jackson-Jobe 1992:61). Thus, prevention is used in this study because people in environmentally degraded areas seem, in many cases, unable to mediate crises. There is a need for empowerment.

Economy – According to Blakely, economy is a process by which local government and/or community-based groups manage their existing resources and enter into new partnership arrangements with the private sector, or with each other, to create new jobs and stimulate economic activity in a well-defined economic zone[23]. This study uses this term because environmental management cannot happen without consideration of economic realities.

Oikos – Thisis a "Greek word used to describe a variety of often overlapping structures and the basis for a number of compound words central to classical Western thinking. Its basic translation is house" (Gran 2005:1221). Theologically, *oikos* is a metaphoric term, used to "...describe the relationship between economic and environmental factors" (Warmback 2008:169). Thus, in this study *oikos* plays an important role since ecology and economy share the same roots.

Theology – This refers to the "way each person understands their faith, what the experience tells them about God…" (Breauilly & Palmer 1993:5). The way the word is used in this study relates primarily to contextual theology. People can understand that ecology is biblically rooted and that we have a responsibility to care for God's creation.

Justice – This term is used in this study to mean right and fair behaviour over creation.

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[22]A paper for the Victorian Commissioner for Environmental Sustainability, addressed by Philip Sutton, the Director of Strategy of Green Innovations: http://www.green-innovations.asn.au/
[23]Defining economy development mailer.fsu.edu/~tchapin/garnet-tchapin/urp5540/.../IntroED.ppt.

City – It is primarily a "site where commerce and trade happen…" (Orum and Chen 2003:9). Moreover, Donald (1999:92) quoted in Eade and Mele (2002:7) historically describes the city as engendering a specific mode of seeing, narrated and described and represented by different sets of actors with corresponding interests. In addition the city "…consists of multiple and modest endeavours aiming to reconcile the ways in which urban social processes … are constructed at particular historical moments" (Eade and Mele 2002:3-4).Thus, the term city is used here because this study is located in the city and apparently the church in Mozambique little considers city as an important place for mission.

1.9 Research methodology

The term research is perceived as the "act of advancing and clarifying arguments, reasons and evidence..." (Mouton 2001:113). Analysing Mouton's thought, indeed one can interpret research as a process whereby a researcher uses as a tool to investigate something beginning from what he/she knows and works through into a subject for the purpose of discovering facts. However, this process does not end here. The main aim of doing so is to analyse and revise a theory in order to develop a plan of action based on the facts discovered.

1.9.1 Qualitative research

This study holds a qualitative research. Qualitative research is best suited for this study because it is based on interviews, field observation and personal experience. In addition, wide consultation and extensive review of the literature was carried out. Qualitative research methodology helps to encompass "methods that try to describe and interpret people's feelings and experiences in human terms rather than through quantification and measurement." (Blanche, Kelly and Durrheim 2006:272). According to (Moody 2002)[24] qualitative research also helps to collect data drawn from observation, interview and documentary review. In social research, this approach helps with in-depth analyses into a small number of cases which "are examined

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[24]More details can be seen in the following website:
www.idi.ntnu.no/~ekaterip/dif8916/Empirical%20Research%20Methods%20Outline.pdf

intensively, by techniques designed to facilitate the clarification of theoretical concepts and empirical categories" (James 2007:31).

Furthermore, "qualitative research deals with everyday life, based on analysis of social/practical problems…" (Mouton 2001:140-141). In my understanding, Mouton's view on qualitative study is that it helps to identify the real research problem directly within a vulnerable community. It happens when the researcher can observe and describe the mood, esteem, and behaviour experienced from the interviewees trying to explain their simple everyday actions and experiences. This approach is important for this study as it attempts to acquire in-depth knowledge through studying a small group of members of the Union Baptist Church and the municipal department of environmental affairs.

1.9.2 Style of Research (fieldwork and literature review)

This study comprises two styles of research, descriptive and explorative. In other words, this study uses a literature review in which the main characteristic is writing and a fieldwork research style based on observation. According to James, "the writing style is purposely narrative and descriptive…exploratory research has, as its purpose, the formulation of a problem for the purpose of more precise investigation" (James 2007:31). Williamson et al 1977:4, quoted in James 2007:31 said that "descriptive research attempts to accurately portray the characteristics of a particular individual, situation or group". This study intends to apply this approach because it allows for in-depth exploration, narration and accurate description of the findings from the field.

1.9.3 Fieldwork (primary data collection)

Fieldwork plays a major part of this study. Fieldwork constituted a process of going to the specific community and interacting with people directly, not just listening to their environmental stories but also learning the meaning of such stories. Hence, it was an attempt to employ two types of fieldwork such as participant observation and unstructured interviews.

1.9.4 Participant observation

The technique of participant observation originated in the early 1900s, it is fast becoming a trusted and well-utilised tool in a wide array of studies in the 21st century. This technique involves deep observation of people's linguistic expression, culture, religion, and socio-economic context. To do so, I attended and analysed my church's activities (services, worship groups, youth and Sunday prayer meetings and Bible study cell groups). The purpose of doing so was to investigate whether the message taught provides a theological, missiological and sociological impact that leading to ecological awareness by the target group of this study.

This process of attending and analysing church services, helped me to discover and formulate theological themes inherent in people's beliefs and actions, in relation to the environment. I visited the municipality of the city of Nampula to learn their policies, involvement and strategies concerning the eradication of urban ecological degradation. The present study implemented the technique of field observation in order to assess the conditions and impact of environmental degradation from theological, missiological, economic, social, and political perspectives. Such observations were noted, and tested with informants in the field for clarity.

1.9.5. Unstructured interviews

Primary data collection was undertaken through an unstructured interview. Attempting to understand an unstructured interview, Kelly argues that "if you want people to talk to you in more depth about their feelings or experiences, you will do better to plan for an unstructured interview" (Kelly 2006:298). An unstructured interview seems to be which does not necessarily follows questionnaires like "a very structured interview – essentially just a list of standard questions would do fine. This kind of interview is really more like questionnaire used in quantitative research projects" (Kelly 2006:297-98). In other words, orally administered open-ended questions are used. An unstructured interview method enables further questioning beyond what the researcher had planned. It gives the researcher an opportunity to hear in-depth the participants' feelings and experiences on particular topic researched.

1.9.6 Subject group

This exploration attempts to study only one church, namely the Union Baptist Church of Mozambique in Nampula. It was a privilege to interview the members of this church. It gave me an opportunity to identify the theologies of this congregation towards the environment. I was also privileged to see the level of the church's perception and position towards the environment and its involvement in addressing issues of degradation. I learnt from a women's group that there is willingness to curb the environmental crisis in the city of Nampula, but they lack church leaders' encouragement to do so. They did not know that environmental management can be fully dealt with only by the government authorities rather than by the church alone.

1.9.7 The sample groups

The term sample means a selection of people needed for a particular scientific study. Such selected people serve to be interviewed in order to provide an explanation and a sense of a certain problem that will be studied. The use of a sampling group method, although sometimes creating some biases, helps to research a big city or community through a small group of people without high costs. Such selected people play a role of representing, for instance, a Christian community or school rather than interviewing everyone in the city which would be difficult and/or even impossible.

It is observed that "sampling is an essential part of most research, and researchers must know how to choose sample groups that are as free from bias as possible, and also be aware of the extent to which they can extrapolate their results back to the general population"[25]. Furthermore, a sample group constitutes a process of "assortment of people on whose thoughts and opinions will comprise the bulk of your results...efforts will involve asking customers and potential customers not only what they think of your products and services, but how they'd react if you did things differently"[26].

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[25] See Sample group by Dr Hani (2009) http://www.experiment-resources.com/what-is-sampling.html.
[26] See an Education in Market Research.http://ezinearticles.com/?An-Education-in-Market-Research

Thus, the sampling group in this particular study is the IUBM. In other words, it constitutes some church members that were selected categorically. Such categories refer to the small groups of church leaders, women, men, youth and a government representative for environmental matters. These people represented the entire IUBM in the province and country at large, with the expectation that the results of the findings of this study will be made known to the whole church.

1.9.8 Why was a church, and this particular local church, selected?

The church was selected because I believe that it constitutes an asset community and tool for development. Often, the church is in constant contact with society rather than just the authorities. For example, every Sunday pastors or any church leader meets his church members while usually only once a year would the president of a country meet some people. This study is also interested to understand more fully the practical church mission in the context of environmental matters, social oppression, poverty and many evils that occur on the planet. In this regard, the Union Baptist Church was selected because I have been a member of this church since 1981 and so, I could know well the strengths and weaknesses of this church towards ecological matters.

My interest was to study the involvement of this particular church in social concerns. To me it is an honour to study my own local congregation and of course it can help me in practical involvement and applying my findings contextually. Another reason is that this church has been working on evangelism for many years. However, the focus has been only on theology of spiritual repentance from the sin. Thus, the church should not ignoring repentance of social negligence over marginalised environments. To me if we preach focusing on only one aspect of life, then the Great Commission of reaching out to free the oppressed and the damaged land will be senseless. Consequently, nature can be seriously damaged due to the church's irresponsibility and carelessness. The purpose is therefore to attempt to formulate a possible working model for a way forward to address issues that have largely been neglected by the church.

1.9.9 The sampling used in this study

This study used both size and random sampling methods. A size sampling method constitutes a small group that accurately represents the population whose opinions you're hoping to gauge[27]. It also used a random method because this study selected the participants by using an unstructured question system. Randomly, this study observed a group of 20 women, men and youth, rather than the entire church which would have been impossible and too costly.

The choice of IUBM and the city of Nampula is because the church constitutes a large urban - sized institution and the city is a large urban and business centre in the north of Mozambique. The Municipality member represented governmental authority.

1.10 The interview procedure

This study employed a focus group interviewing method by selecting people randomly and explaining to them the aim of the study. The focus group interview is a method which "is socially oriented…the format allows the facilitator the flexibility to explore unanticipated issues as they arise in the discussion…" (Marshall and Rossman 1995:84).

Furthermore, "when we work with groups we can gain access to intersubjective[28] experience…we also gain access to understanding differences between people" (Kelly 2006:304). The purpose of the interviews was to hear different views from different groups of people about the ecological crisis and how they cope with this situation. It was also to hear what they think should be the actions to overcome ecological deterioration in the city of Nampula. The process of gathering together and hearing people of different backgrounds expands the accuracy and fruitfulness of this study.

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[27]Ibid
[28]Intersubjective experience is experience shared by a community of people, as quoted in Kelly 2006:304, *Research in Practice*, Blanche, M.T. et al (eds) Intersubjective experience is where people meet and exchange their views and experiences in different ways as a process of learning from each other.

The participants were contacted in advance to build up a relationship of trust. This process motivated people to come and participate without suspicion. The focus group interviews occurred in convenient venues and people were not disturbed or suspicious, and they participated fearlessly. Concerning trustworthiness, Marshall and Rossman (1995:61) argument that "an intensive and extensive study requires the researcher to devote considerable time early on to developing trusting relations with the participants". Furthermore, "after the participants have been recruited, they were invited to participate in the focus group and asked to sign informed consent forms" (Van der Riet and Durrheim 2006:98). In accordance with this statement, the participants were informed in detail of the aim and purpose of the research. So, they were aware of this before they agreed to their participation.

The random selection process included people of a variety of ages, race and socio-economic backgrounds from the same church. I interviewed twenty people, both male and female aged from eighteen years and older. The participants were selected and divided into four groups. Each group consisted of seven, five and one persons in the following order:

- ➢ Group 1: five youth males/females from ages 18 -30
- ➢ Group 2: seven church women from ages 30-60
- ➢ Group 3: seven male church leaders from 40-75
- ➢ Group 4: Municipal Director of Environmental Affairs in Nampula, 45 years old.

Each participant was interviewed once using the same questions about the environment. The questions were clear and short. The participants answered the questions without coercion. I used a tape-recorder and took notes during the interview after informed consent was granted. I then recorded, translated and transcribed the interviews from Portuguese to English. Afterwards, the tape-recorder and other materials were kept in secure storage.

1.10.1 Narrative approach

Narrative is a detailed description of storytelling. Thus, the narrative approach employed in this study constitutes an attempt to describe people's stories of the urban and environmental situation

in the city of Nampula. Using James' statement, the purpose of using the narrative approach in this study "is to draw out theologies, culture, values and worldviews present in the life stories of the individuals interviewed" (James 2007:33).

1.10.2 Literature review (secondary data collection)

Secondary data were collected through consulting and evaluating written documents such as published and unpublished theses, essays, books, journals, articles, and dissertations. These sources were critically interrogated and analysed in order to meet the objectives of the study and respond to the research problem as well as to contribute to environmental management effectively. According to Marshall and Rossman (1995:85) reviewing written documents are useful since "researchers supplement participant observation, interviewing, and observation with the gathering and analyzing of documents produced in the course of everyday events…"

1.10.3 Data analysis

Data analysis is a "process of bringing order, structure and meaning to the mass of collected data" (Marshall and Rossman 1995:111). In addition, "data analysis involves reading through your data repeatedly, and engaging in activities of breaking the data down…and building it up again in novel ways …" (Blanche and Kelly 2006:322). In this regard, all data collected was critically analysed. This was possible through careful study of each word, behavioural movements that were observed during the interviews, and the content gained during the reading.

I analysed the data by using symbolic interactionism theory. This theory is socially based and seeks to understand the meaning of the thoughts of the people in their daily life. For instance, Blumer (1969:4-5) quoted in Joniak's[29] paper, argues that "… the symbolic interactionism sees meanings as social products, as creations that are formed in and through the defining activities of people as they interact…"

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[29]This information is taken from Joniak, Lisa's (undated) notes on the qualitative paradigm: some overview about some basic concepts, assumptions, and theories of qualitative research. This can be accessed on the following website: www.unf.edu/dept/cirt/events/past/joniak/qual_par.pdf.

In the process of analyzing data, I attempted to code the data. Experts described that "coding means breaking up the data in analytically relevant ways" (Blanche and Kelly 2006:322).The interviews and the information collected was carefully analysed to avoid any distortion of the facts, and also to give meaning to the study. It is important since it makes one "understand the various constitutive elements of one's data through an inspection of the relationships between concepts…and to see whether there are any patterns or trends that can be identified or isolated…in the data (Mouton 2001:108).

1.10.4 Difficulties experienced

There will be always difficulties and so they cannot be avoided. Difficulties are part of our daily life. In this study some of the difficulties that I faced include time management due to some interviewees arriving late or not at all, lack of co-operation from the municipal representative, high weather temperatures and limited financial resources. Lack of academic written documents about environmental issues in the Mozambican and more particularly in the Nampula context was indeed a serious challenge.

1.11 Chapter Outline

This study comprises eight chapters and each chapter has a number of sub-headings that the study attempts to cover. These are as follows:

Chapter One presents a general introduction of the study including the background, interest, motivation and research question. It reveals the objectives, rationale, theoretical framework, and research methodology and methods. It concludes with a preliminary literature review, limitations, and research ethics.

Chapter Two, discusses the social understanding of environmental degradation from international to local perspectives. The chapter analyses governmental environmental management and policy and implications for the role of development partners and funding modalities. The chapter analyses the economic and political implications of the ecological crisis.

It researches the major causes and effects of environmental degradation in Nampula. The chapter ends by looking at the role of women, youth, and children in environmental conservation in Nampula.

Chapter Three, uses the Sustainable Livelihoods Framework to describe the historical background of Mozambique from socio-cultural, socio-economic and political perspectives. It discusses the urban systems, powers and the structures of the church and the emerging history of the city of Nampula. It considers the impact of the ecological crisis and development. It examines the environmental problems that are due to poverty and the population explosion. The chapter discusses unplanned urbanization, negative impact on the life of residents, the issue of pollution, sewage and erosion, and the coping strategies for survival.

Chapter Four, describes the findings of the interviews conducted with the Union Baptist Church members, including youth, women, and leaders, as well as a municipal director for environmental affairs in Nampula. The description includes details such as names and the time and place of the interviews.

Chapter Five, analyses the data of the interviews in terms of the following criterion/order: five youth from the church; seven church women; seven church leaders; and a municipal director for environmental affairs in Nampula.

Chapter Six, discusses the church's attitudes toward environmental management, education and pollution. It assesses how the church can potentially shape public policy and law-making in favour of environmental conservation. This chapter examines the Church's theological mission, responsibility and role for the alleviation of the ecological crisis. It explores the possibilities of the church's engagement in these public matters so that it can speak on behalf of society.

Chapter Seven, presents theological themes related to environmental conservation, the concept and purposes of God's creation of the Earth and of humans. It analyses the importance of land as the main source that sustains human life. It seeks to apply the theological significance of the Garden of Eden for humans, social sin, Jesus and his redemption.

Chapter Eight, presents a summary, suggestions and recommendations on how the Church can contribute to the transformation of the city, from the current environmental degradation to conservation. The chapter is followed by a conclusion, list of interviewees and bibliography.

1.12 Conclusion

This opening chapter has provided a general introduction and described the scope of this study. The objective of this chapter was to present the real problem of this study, the target group, aims, motivation and suggest possible strategies to reduce the environmental crisis in Nampula. The chapter attempted also to unpack the research methodology and methods of the study. The next chapter discusses the social understanding of environmental degradation from international to local perspectives, ecological policy management, and the development implications.

Chapter Two

Social understandings of ecological crisis and development impact

2. Introduction

After having introduced the scope of this study in chapter one, chapter two presents a social perception of the Nampula citizens towards ecological crisis and developmental impact. The objectives of this chapter are to explore the elements that make the environment in Nampula to be degraded. This chapter serves to discover the Nampula residents' experience of environment. It looks at what they consider an environmental crisis and who they think is responsible for environmental prevention. A further objective is to discuss some economic implications of the ecological crisis countrywide and more particularly in the city of Nampula.

The argument is that although the environmental crisis affects everyone on the planet, the degree of the crisis depends on the people's economic level and how they access and consume their natural resources. Thus, "an ecological perspective looks at the influence of the natural environment on social processes and factors which determine society's and individual's response to the natural environment and treatment of it" (Solomonraj & Petet 1998:118). In addition:

> The social pressures of these poor people are immense. Poverty and lack of opportunities, especially for women, make bearing children attractive. Two-tiered social systems, with few rich and many poor and held in place by custom, religion, and brute force, make little land available to the poor, increase their desperation, and force them to degrade their environments in the name of survival (Martin-Schramm and Stivers 2003:11).

To me, developing nations like Mozambique where the economic situation is deficient, aggravated by political conflicts and where people have less responsibility over their natural resources, the extent of the environmental crisis is also dramatic. Besides economic and political reasons, there is also the fact that some people lack information on the subject of environmental matters.

With reference to economy, Nürnberger (1999:21) defines it "as the process in which humans use tools to transform raw materials into commodities sustainable for human consumption".

With regard to the consumption issue, it is stressed that "the largest pressure on ecosystems comes from the consumption of people in wealthy countries" (Martin-Schramm and Stivers 2003:11). To me, ecosystems have impact on developing countries, eg. air pollution, ocean pollution and global warming. Hence, this chapter investigates the major causes and effects of environmental destruction in the Nampula and Mozambican contexts. Briefly, it discusses the global ecological situation and its negative impact on the economy.

The chapter also examines the relationship between environmental degradation, poverty and development. Further, it explores some economic implications of the environmental crisis and its management. Furthermore, it analyses environmental policies and their applicability.   This chapter works through the consequences of earth degradation particularly regarding the issues of pollution, sewage, erosion and coping strategies for survival. The chapter concludes with a closer look on what should be the role of women, youth and children towards ecological conservation.

2.1 Description of Nampula environment

The environmental crisis is a serious situation due to its implications for social health and the economy. Hence, there is an increasing call for a mutual concern about the growing environmental deterioration. At the eighth summit of the Lutheran World Federation held in Curitiba, Brazil in 1990, there was a common commitment in relation to care of the earth as one can learn from the following statement.

> We hear cries from creation as a chorus of anguish. The future of the earth is threatened. In all regions of the world we observe the destruction of the environment. The rain forests are being destroyed in Asia and Africa. There are alarming estimates about the rate of the extinction of species (Chakanza 2002:47).

This statement seems to mean that the earth is becoming more and more an endangered place. If there is no immediate solution, there may be serious consequences with the possibility that people may not find enough space to live. It shows also that the earth is becoming a hostile place as the result of human aggression towards nature. Consequently, there may be a challenge facing humans in relation to development. For example, it is observed that the "challenge facing

humanity is that of development, which results in the improvement of human life while maintaining the availability and quality of the resource base: the environment" (Msuku 2003:9).

It is important to observe that development relates to the environment. The challenge here is that development never takes place without exploiting nature. However, exploiting nature in an irresponsible manner does not only increase poverty but also has other major consequences. For example, over-utilising nature may compromise conditions for the next generation. The Lutheran World Federation (LWF) reported that the developers should consider development in a way that they "meet the needs of the present without compromising the ability of future generations to meet their own needs" (LWF 1997:5; WCED 1987:43 & SDB 2010:6)[30]. The worldwide ecological crisis is a reality in our days since "industrialized and developing countries contribute to the damage done to their environment and to the decline in their natural resource…" (World Bank 1995: vii).

From Msuku's insight, one can understand that earth's degradation is related to the thoughtless use of ecology mainly by industrialized countries in order to promote self-centred wellbeing. Msuku observed that "the raw material from forests, soils, seas and waterways are being displaced by economic growth. Furthermore, economic growth now has new technological end-products referred to as "new technology", and in turn, it also has a negative impact on the environment. (Msuku 2003:11). In the same vein Martin-Schramm and Stivers (2003:15) observed that "a third shortcoming that has contributed especially to environmental degradation is the great emphasis on economic growth". As a way of specification, the former two shortcomings include: "the current incapacity of these systems to limit self-interest...the narrow focus of these systems on human material well-being to the neglect of spiritual well-being and the flourishing of biotic communities" (2003:14-15).

Even if economic growth and new technology are seen as icons for development, they also constitute the cause of the problem of pollution of nature. For instance, Mugambi (2002:80)

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[30] WCED, this is an abbreviation which stands for World Commission on Environment and Development. It is taken from the Report of the World Commission on Environment and Development: Our Common Future, by Brundtland, according to the following site: http://www.un-documents.net/our-common-future.pdf. While SDB. 2010:6, means Sustainable Development from Brundtland.

wrote; "technology divides more than it unites unless it operates in conditions where self-development of societies can flourish…the ontological roots of solidarity are common humanity, mutual occupancy of one planet and identical destiny".

The industrialized countries seem to be the leading experts who run the international economy, and they apparently have advanced resources to control their systems which ensure that they do not suffer as great ecological consequences as the poor societies. Although the industrialized nations produce most commodities they suffer less pollution because they are highly capable in controlling their waste. One of the ways industrialised nations do this is by disposing their waste in the developing countries.

An example of this is the many imported Japanese used vehicles sold in Durban to some Southern African countries like Botswana, Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe.[31] Although this trade seems to benefit some poor buyers from these African countries, in the long run it can also be environmentally prejudicial. So, judging this trade of Japanese used vehicles, one can consider it as a way of cleaning up the Japanese environment through getting rid of what they cannot use in their territory.

While the cost of such used Japanese vehicles may seem relatively low to the buyers from the countries I named above, the Japanese traders have a double advantage or gain. Firstly, they get economic benefit and secondly they manage to maintain a clean environment by removing the waste from their environment. However, when a developing country like Mozambique buys vehicles which seem to be at a 'reasonable price', they lose more resources and their environment remains degraded. For instance, walking around some Mozambican cities, one can see some of such vehicles bought at 'reasonable prices' looking like monuments because they are broken down on roadsides and in public places. Therefore, some of these city spaces end up being polluted by these abandoned vehicle scraps.

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[31] This is my own reflection because my country (Mozambique) is one of the importers of these Japanese used vehicles sold in Durban. I was also in Botswana in 2008 and I saw that most vehicles are from Japan but bought in Durban. When I visited some carriage sellers of such cars in Durban I was told that most buyers are from these abovementioned southern countries.

Msuku observed this when he wrote; "industrialised countries have benefited from trading at the expense of the suffering countries" (Msuku 2003:11). Thus, since in Mozambique there is little international trade regulation and many Mozambicans cannot afford to buy a brand new vehicle within their country given that they live under the poverty line, it will continue to experience this situation and the solution to the environmental crisis will be long in coming.

2.1.1 The physical state of the city

The city of Nampula, located in the Northern hinterland of Mozambique, has always been considered the capital of the North. According to De Araújo (2005:209-222), this city was "founded with the aim of ensuring the military control over the colonial penetration of the hinterland, it is an important crossroads where the littoral-hinterland and centre-North axes intersect". The same source indicates that "...the city of Nampula underwent considerable demographic growth in the period that followed the independence of the country, including the period of civil war and the peace that ensued from 1992 onwards"(De Araújo 2005: 209-222).

2.1.2 Urbanisation of the city and its impact on the natural habitat

I think of urban housing as a designed way where people in urban areas build their houses in an orderly manner. For example, the natural process of urban housing in Nampula, before the war, was designed according to the demographic growth at that time. For instance, according to the 2007 census, it has "approximately 600.000 inhabitants...It is the provincial capital of Nampula Province, the most populous in Mozambique with more than 4 million inhabitants" (CENSUS 2007). The current demographical phenomena pollute the city of Nampula. Consequently this phenomenon such as population growth affects the beauty of the city of Nampula.

Currently, the infrastructures are inundated with people who migrated from their homelands into the city. Hence, De Araújo (2005) observed that as the city's infrastructure and economic activity was unable to keep space with this growth, the idea of migrating to the city with the aim of improving the livelihood of the migrant population was nothing but a mirage, which eventually resulted in the proliferation of the informal economy as a means of livelihood. Therefore, the city

is now very degraded because of various reasons such as population growth, poor management of the environment and the lack of political willingness of some people who are responsible for environmental matters. The roads are almost destroyed, and most buildings still only have the original old painting as from before independence.

2.1.3 Water quality

Admittedly, "water is integral to every part of our life: from the political, cultural, social, recreational, environmental and religious to our obvious physical needs. All life is dependent on water. God made water an integral part of creation" (Green 2007:138). However, according to my personal reflection, the political tension and natural disasters like flooding and drought have resulted in a life-threatening situation for water in Mozambique.

The UN report holds that "humans were the most endangered species in Mozambique. Other significant environmental problems include the loss of 70% of the nation's forests" (UN 1992)[32]. In relation to the water quality, the same source indicated, that "the purity of the nation's water supply is also a significant issue. Surface and coastal waters have been affected by pollution.

According to the World Bank, "Mozambique has 104 main river basins, of which 50 have catchment areas less than 1000km2, 40 have areas between 1000 and 10,000km2, 12 between 10,000 and 1000,000km2 with the Zambezi River and Rovuma River having catchment areas more than 100,000km2", (WORLD BANK 2007:6-7). This source has stressed that "agriculture , which includes irrigation, forestry and livestock, is by far the largest water user, accounting for 73% of the total water consumption, while domestic and industrial water supply constitute about 28%" (WORLD BANK 2007:13). Only 81% of the nation's city dwellers and 41% of the rural population have access to pure drinking water" (UN 1992). It seems people cause their own destruction by cutting down forests and polluting the water, also ruining the ecosystem.

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[32]See United Nations Development Programme Crisis Prevention and Recovery/Environment Mozambique 1992.www.undp.org.mz/en/what_we_do/cpr_and_environment - Logged on 09/06/2010.

Moreover, it observed that "Mozambique has one of the lowest levels of per capita[33] water consumption in the world. With an average of less than 10 litres per day the country is far below global benchmarks...due to existing gender norms, girls and women are responsible for collecting most of the water at the household level. They spent hours fetching water, leaving little time for child care, attending school, or income-generating activities" (Kong and Mazzarella 2007). Moore adds; "water plays a pivotal role for sustainable development, including poverty reduction" (Moore 2003:69). Water being a precious liquid for human and non-human beings, and since people have little access of clean water in Mozambique, they get such polluted water and use it for their daily domestic needs. Consequently, they may get sick. Further, the lack of public toilets which lead to some people urinating in the open air and the civil war that forced many people to move into cities, also constitute ecological problems.

The insufficiency of access and water supply in Mozambique more particularly in the city of Nampula is a serious concern. It creates incalculable damage affecting sanitation services, growth and health problems. Accordingly, "water pollution occurs when a body of water is adversely affected due to addition of large amounts of materials to the water. When it is unfit for its intended use, water is considered polluted", (Kong and Mazzarella 2007). In addition:

> Pollution is also caused when silt and other suspended solids, such as soil, wash off plowed fields, construction and logging sites, urban areas, and eroded rivers banks when it rains. Pollution in the form of organic material enters waterways in many different forms as sewage, as leaves and grass clipping, or as runoff from livestock feedlots and pastures. Three last forms of water pollution exist in the forms of petroleum, radioactive substances, and heat (Kong and Mazzarella 2007).

Although these forms of water pollution also characterize worldwide water pollution, there are further factors affecting Nampula's urban water pollution. Walking around Nampula city one can observe that there are a lot of substances that make Nampula water polluted. Substances like dead animal bodies such as dogs, cats, rats, snakes, etc. Some rivers are used as dumping places which in turn pollute the water. Nonetheless, the Mozambican government in conjunction with MCC is making efforts to eradicate the water problem countrywide.

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[33] Per capita, means the amount for each or the per capita income in Mozambique is very low.

For instance Kong and Mazzarella (2007) argued that "MMC's capital investment in water and sanitation will build on the pioneering work begun in mid-1990's and funded by the World Bank to put in place the key sector institutions and regulatory framework...In urban water supply, the strategy is based on a separation of asset ownership and operations and maintenance". If these investments could be taken seriously the city of Nampula and the country at large would have hope because it can improve access to protected consistent water supply and sanitation services, increasing the productivity and reducing polluted water.

2.1.4 Land quality

Land constitutes the economic and social commodity for humanity worldwide. The Mozambican land for example, has quality for all kind of activities such as agriculture, mining, settlement, tourism, etc. The argument is that the land and agriculture occupy the major source of Mozambique's economy. However, due to the economic and financial deficit the Mozambican land is not properly used.

Also, "the erosion and loss of soil is a major concern" (Prance 2007:72). He continues that "one of the most serious environmental problems we are facing today is soil erosion. It has been calculated we are losing about seventy-five billion tons of topsoil a year by mine and water erosion, mostly from agricultural land" (Prance 2007:73). Thus, this situation is related to the issues at Nampula specifically when we look the erosion issue.

2.1.5 Air quality mess

Air quality is that which sustains human and non-human creatures' lives. Otherwise it becomes air mess or pollution, which is the "accumulation of hazardous substances into the atmosphere that endanger human life and other living matters" (Kong and Mazzarella 2007). The same source presents some of the main contributors to air pollution like "automobile emissions, tobacco smoke, noise pollution from motor vehicle and construction, manufacturing buildings, large ships, wildfires, nuclear weapons"(Kong and Mazzarella 2007). These factors harm the air quality and environment in the city of Nampula. If the political interest cannot be assured

towards mobilizing people to take care of nature, it may contribute to air pollution. What Kong and Mazzarella said suggests that curbing environmental problems does not necessarily depend on science and technological innovations alone. It needs joint effort with other stakeholders like the political, economic, social, private and religious sectors. Conradie (2009:63) pointed out that:

> The political will required to endorse and enforce alternative energy sources should not be underestimated. ...What is required here is moral imagination, moral will and moral leadership...moreover, what is still lacking is the religious commitment, moral imagination, and ethical engagement to transform the environmental crisis from an issue on paper to one of effective policy, from rhetoric in print to realism in action, (Conradie 2009:63).

Therefore, following Conradie's view, one can understand that though environmental policies and government investment are needed, these alone cannot tackle any kind of pollution and even resolve environmental threats without them being internalised and imprinted on people's hearts as well as the church's action (Conradie 2009:63).

2.2 The causes of environmental degradation

In a poor country like Mozambique the causes of environmental degradation include factors such as high levels of poverty, illiteracy, unawareness about environmental matters, migrations, population growth and individual human attitudes about nature, and civil war. For example, it is stated that "many residential areas in the urban centres of Mozambique have typical slum characteristics: low-incomes, no basic urbanization, ambiguous or insecure land tenure rights, high population density, poor environmental conditions, poor or very poor building quality, absence of an urban culture, high levels of criminality and delinquency, among others" (CEDH & UEM 2006)[34].

For other causes of environmental crisis Bookless (2007:39) states that, "environmental crisis is seen to be caused by an alienating mechanistic distancing between humans and their

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[34]"CEDH" stands for Center for Habitat Studies and Development, while "UEM" is for University Eduardo Mondlane.

environment, and can be overcome, healed or regain sustainability only through an integrated and harmonious holding together of all things".

2.2.1 Poverty

Green (2007:138-139) states that "poverty and environment are inextricably linked. Water shows, perhaps more profoundly than any other environmental issues, our dependence on natural resources for poverty reduction and sustainable development. We cannot address poverty and injustice, unless we also manage our natural resources in a just and sustainable way". Poverty is a relative phenomenon. It is relative because it varies from one situation to another, while absolute poverty constitutes a total depravation on human life and it is also easy to identify. Admittedly, poverty can dehumanise and make people unable to exercise their rights, expectations and dreams. Where there is poverty associated with political intimidation, people cannot claim their rights and by not doing so they lose their identity. As a result, their expectations and dreams can be unreached. Thus, Wilson (1991:13) is right to say that "poverty is profoundly a political issue..."

In the situations where there is no political freedom of expression people find themselves limited to access and can't exploit their own resources like land, forest and fauna. In the same way, they find themselves excluded from the decision-making process.

Wilson's statement captures in essence the situation in the city of Nampula. Some people of this city and Nampula province at large cannot stand up for their rights perhaps because some fear political persecution. Furthermore, Muagerene (2000:12) states; "the current status of natural resources in the province is determined by political constraints, economic, social and demographic…The socio-economic situation is in general degraded, not only by war, but also by the abandonment of important infrastructure such as reserves, forest conservation and fauna that have fallen into the hands of illegal forest exploiters..."

In the same vein, Goldblatt (1996:1) linked environmental degradation to "economic and demographic change". When there are few basic opportunities and people have no control due to

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the high rate of poverty, they may be forced to move into cities and consequently this will deplete the environment. The point is that:

> Poverty is said to be both cause and effect of environmental degradation. The circular link between poverty and environment is an extremely complex phenomenon. Inequality may foster unsustainability because the poor, who rely on natural resources more than the rich, deplete natural resources faster as they have no real prospects of gaining access to other types of resources. Moreover, degraded environment can accelerate the process of impoverishment, again because the poor depend directly on natural assets (Das Sharma, 2007).

Das Sharma shows that the demographic element causes environmental and economic degradation. In addition, Kalipeni (1994:6) said the "exploitation of the region's mineral resources has had a major environmental impact. Copper, iron, gold, and diamond mines have scarred the landscape and polluted waterways...Urban sprawl and increased tourism also create pressures on the environment. Overuse and misuse of productive land had created wastelands across southern Africa" (Kalipeni 1994:6).

Nampula is affected by these mineral exploitations during the process of previous historical excavations. For instance, when the exploiters looked for gold and diamonds, this created erosion and degradation. It is therefore noted that "in many countries in Africa, crop harvests are falling as consumption increases. People are finding less nutritious food to eat. One argument held is that while fields in wealthier nations are used to grow crops for bio fuel, poorer countries, especially those around the Equator, are vulnerable to weather changes, water shortages, and urbanization. All of these factors are increasing risks to the health and lives of thousands..."[35]

Thus, on the one side it can be considered that many environmental consequences can be linked to wealth for the benefit of powerful nations as far as unregulated exploitation of resources from disadvantaged communities is concerned. On the other side, poor nations themselves deplete their own environment when they utilise their local resources in an irresponsible manner which, coupled with lack of skills and failure to repair appropriate infrastructure, the consequences lead to environmental ruin. Hence, it is important also to highlight that poverty is not necessarily only lack of wealth, but there is also another element which makes people poorer even when they

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[35]See Impacts of Environmental Degradation, available at
http://greenliving.lovetoknow.com/Impacts_of_Environmental_Degradation - Accessed on 02/0910.

have some money, this may be called "mind poverty" which sometimes is linked with the lack of creativity and willingness to work.

2.2.2 Illiteracy

Illiteracy is another phenomenon that can blind and become a stumbling block to human's realisation of their dreams as can be observed in some people of the city of Nampula. Fortunately, illiteracy is decreasing. With regard to this matter, Muagerene (2000:12) stressed that "...at the social level, only in the last 10 years Mozambique has made progress with respect to improvements in the education, health, and social infrastructure, which are still incipient...". Illiteracy is also an enemy of any kind of development. For instance, some untrained people may be limited in realizing many benefits like human rights, technological information and work policies. Illiteracy may not necessarily refer only to a person who never went to school or achieved a university degree; literacy is rather a matter of transforming the inner person. It becomes a learning and changing process, being willing to take steps to apply in a right way good thing you never knew before. Thus, being literate is more than just obtaining a degree.

For example, there are many educated people who live a bad lifestyle in their societies. So education itself without inner personal transformation is useless. When a person is literate only in a formal sense, their main thoughts are sometimes focused on empowering and transforming others. In my understanding, the functional literacy follows the roots of the regulations concerning ecological recovery. In short, the debate between formal literacy and functional literacy play a role in transformation towards eco-theology concern.

2.2.3 Population growth and population pressure in Mozambique

According to Crush (2007:3) in the World Population Datasheet,[36] "population is an important source of development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems. Unless the relationship between the multiplying

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[36]World Population Datasheet, it is a source of providing records about the Population growth and Environmental Degradation.

population and the life support system can be stabilized, development programs, however innovative, are not likely to yield desired results". From this statement, it can be deduced that population growth can be a tool for development. It can also constitute a challenging factor which can lead to environmental crisis.

Further, Crush (2007:3) wrote that "the growth in urban population in many countries of the SEA[37] region has been dramatic between 1990 and the latest census[38]. Although relative changes cannot be compared outright due to the variable time periods involved, rates are relatively modest for countries such as Botswana and Zambia but reach as high as 6% for Mozambique". This shows that in terms of population growth, Mozambique alone in this region is growing rapidly, which can affect negatively the environmental crisis. This phenomenon of population growth is mainly caused by political and tribal pressures, natural disaster and economic imbalance. Muagerene (2000:12) affirms that "...population growth was evident in years after the war, either in urban areas with emphasis in the city of Nampula..."

Besides these above mentioned factors, in this region of Africa it is noted that "the high population growth rates are primarily due to Africa's position in the second stage of the demographic transition. In this stage, crude death rates suddenly plummet and birth rates remain at very high levels or even experience an increase" (Kalipeni 1994:1). According to the Mozambique Demographic Profile (MDP 2014) in Mozambique, it showed that the current population countrywide is about 24,692,144 inhabitants. In this regard, Mozambique's population explosion in the cities is phenomenal. There are many reasons for this situation namely political conflicts and economic instability which force people to move from their homelands to other places seeking a better life. Although the main reason behind this exodus is to look for a better life, there are, however, a number of risks. For example, Eskemose (2004:110) said:

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[37]According to Prof. Jonathan Crush, 2007:1, SEA stands for Southern and Eastern Africa. This was a paper presented to establish a background for understanding the complex and dynamic linkages between urbanization, migration, HIV/AIDS and urban food security in these regions of Africa.
[38] It refers to the census of 2007.

The migration from rural to urban areas of Mozambique, especially during the civil war, combined with the concentration of economic growth in urban areas in the post-war period has led to a situation where approximately 40% of the population lives in towns and cities. It is expected that the towns will continue to grow and more than 50% of the population is expected to be urbanised within the next decade. To accommodate the continuing influx of people and the population growth due to natural increase, urban areas in Mozambique continue to grow in an uncontrolled manner with informal settlements proliferating on the outskirts of all urban centres. The housing in these areas provides just basic shelter, is overcrowded and poorly serviced. The residents are mostly unemployed or under-employed and most seek their means of survival in the informal economy and some from subsistence agriculture. As a result it is estimated that 62% live below the absolute poverty line and 28% suffer from chronic malnutrition, Eskemose (2004:110).[39]

Poverty in the rural areas also plays a role in motivating people to move to the concentrated urban areas in order to have access to basic facilities. This move to the urban areas aggravates environmental problems since the government authorities seem to pay little attention to accommodating these people decently. Hence, the urban planning process is hampered because people take over the reserved public places to build their houses. This creates numerous problems including soil erosion, water pollution, destruction of trees, and sewage accumulation.

2.2.4 Environmental degradation and population explosion in Nampula

The question of environmental degradation and population explosion in the city of Nampula has the same root causes as those of the rest of Mozambique. The exodus from rural to urban areas of the city of Nampula is attributed to the outbreak of the civil war, economic instability in the remote areas and many people seeking for other basic facilities in town. FAO states;

Mozambique's civil war has caused large numbers of refugees - *dislocados* - to flock into the cities, establishing homes in *bairros*, peri-urban squatter settlements. At least 80% of Nampula's current population lives in the *bairros*. Located on steeply sloping lands around the original hill-top city, the *bairros* have no proper drainage system, and are prone to soil and gully erosion, to the extent that houses and productive land are washed away in heavy rains (FAO[40] 2005).

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[39]This is an unpublished paper about debating participation in a post-socialist society, Cases from Mozambique, by Eskemose 2004.Eskemose is Architect/Planner, Associate Professor, Department of Human Settlements, and linked with Copenhagen School. More information can be accessed on the following site. http://people.plan.aau.dk.
[40]FAO stands for Food and Agriculture Organization of the United Nations

2.2.5 Inadequate settlement, poor drainage and dumping systems

In the city of Nampula, inadequate settlements, poor drainage and lack of dumping sites contribute to major causes of environmental crisis. Some sources pointed out that:

> The unplanned growth of the precarious and peri-urban areas, aggravated by the absence of land uses planning instruments and their execution and control. As result, most of the urban population was living in areas without adequate access to basic infrastructure and social amenities and was living in sub-standard housing, without secure land tenure rights"(CEDH & UEM 2006:9).

Due to population growth and exodus, local authority is unable to control this crisis. As a result, there is an increase in diseases, such as malaria and cholera. The lack of drainage infrastructure aggravates ecological degradation because when it rains water cannot easily run off. This results in water stagnation where malaria mosquitoes and germs for other diseases will breed. In relation to the diseases caused by water pollution as the result of ecological crisis, Donohoe (2002:575) said "while tap water is subject to treatment and is required to meet detailed testing and purity standards, it is not always disinfected of diarrhoea-inducing microorganisms, as illustrated by waterborne disease outbreaks such as that caused by Cryptosporidium in Milwaukee in 1993, which affected over 400,000 people".

Non-existence of dumping sites is another challenging situation that stimulates environmental crisis. In the vicinity of Nampula for example, littering is uncontrolled. Unplanned urbanisation due to population growth has also made some people in various parts in Mozambique including Nampula city, to have no space to build private sanitation facilities. With regard to this situation, it is observed that "according to data from the 1970 census, 66.8% of families in the urban areas used common latrines frequently without minimum levels of sanitation..."(CEDH & UEM 2006:13). Undoubtedly it increases environmental and water degradation putting people's health at risk; because, when the rain drains the pollution into water systems and latrines, the water systems and latrines become degraded. The pictures below illustrate some of the latrines made with precarious materials which most people use in the periphery urban areas in Nampula.

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Fig 1: Real slabs constructions for latrines[41].Fig 2. Some traditional latrines in Nampula illustrating sanitation problems in the neighbourhood.

The unwillingness of government authorities to implement the existing environmental policies also worsens the causes of degradation. Sadly, I have observed that the lack of seriousness in the government authorities in applying the policies, influences ordinary people to not be willing to care for nature.

2.2.6 Agricultural practices

Mushala (1992:44-45) states "land-use practices which reduce groundcover initiate environmental degradation. Major agricultural practices that remove groundcover include over cultivation, overgrazing, and the felling of trees for fuel wood and construction purposes…The loss of important plant nutrients to the subsurface constitutes another form of land degradation".

Additionally, Mushala (1992:44) stated that "since farming systems depend mainly on the quality of the physical environment the most common type of environmental degradation is the physical removal of the upper portion of the soil profile". In Nampula for instance, the situation sounds the same since some ecological degradation problems are linked to irresponsible land use. In the peripheries of the city, some people use land for agriculture, while others extract the sand for house-building purposes, leading to erosion.

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[41]These pictures are the product of the Mozambican government project entitled National Programs of Sanitation in Mozambique: Pioneer in the Suburban Sanitation, 2002, p. 01, available at www.wsp.org. This study illustrates the reality of the sanitation problem in the city of Nampula and also elsewhere in Mozambique.

Furthermore, (MAE)[42] noted that one of the environmental problems of the city of Nampula is related to the "exploitation of massive forestry resources and fauna. It is also given to the massive increase of 97% of the population of the city of Nampula, to the district of Nampula for cutting building material, fuel wood and also for the acquisition of certain kinds of wood for making furniture" (MAE 2005:31)[43]. In this regard, and as Mushala (1992:43) recognizes, that since agriculture is one of "the backbones" for African nations' economies, the land must be dealt with carefully.

We should rather value forestry or the trees and the environment because they play an important role in the life of humans and other creatures. Prance (2007:70) estimates that "it highlights plants at work in a closed environmental chamber, showing a life support system taken for granted by most people, where photosynthesis by plants provides the oxygen we breathe, the transpiration of plants influences our weather, and plants remove toxic substances from our air and water".

2.2.7 Victims of environmental crisis

Since environmental crisis is associated with some factors such as political instability, economic inequality and moral and leadership carelessness, the victims are the poor, women and children. Socially and economically these groups of people are placed in the low classes. They are defenseless and powerless people.

In relation to women's victimisation it is noted that "women suffer disproportionately from the effects of poverty, famine, and human rights abuses through impaired access to employment, education, ... and other basic health services; salary inequities; political and legal marginalization..."[44] (Donohoe 2002:580). Undoubtedly, it is worth noting that when women lack money, education, due to political and social exclusions, they become more limited in the

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[42]MAE in Portuguese stands for Ministerio da Administração Estatal and in English, means the Ministry of Public Administration (English). See further information in the bibliography.
[43]This quotation is taken from a Portuguese text as follows:"exploração massiva dos recursos florestais e faúnaticos. Isto é devido ao afluxo de 97% da população da cidade de Nampula…para corte de material de construção, combustível lenhoso, para além da exploração de espécies de madeira".Thus, the English translation is mine.
[44] The exclusions in this reference are mine.

way they deal with environmental issues. Likewise, women in Nampula, specifically those of the IUBM find themselves in the same situations of powerlessness. For example, they lack financial resources, education and freedom of expression. The cultural, political and religious environments they find themselves in, work against their liberation.

2.2.8 Improper urban planning system

Non-maintenance of an urbanisation system and infrastructure is one of the challenging phenomenons in most developing countries. In most cases this phenomenon is due to factors such as civil war, poverty, policies and institutions. These factors disrupt the progress of technology and inhibit social welfare and appropriate environmental management. Admittedly; "today's urban planning system can be described as a technical and political process concerned with the welfare of people, control of the use of land, design of the urban environment including transportation and communication networks, and protection and enhancement of the natural environment"[45]. If there is no maintenance, environmental deterioration will ensue for many years to come.

The majority of Mozambican cities have the same problems associated with unplanned urban areas due to political and technical unwillingness. This problem seems to be one that the government authorities inherited from colonial roots. It does not mean that there are no policies concerning the environment at all. The issue here is that the existing policies are not applied according to what they are designed for. Jenkins (2001:14-15) stated that:

> The lack of political interest in urban development and land use throughout most of the Post-independence period has meant that weak urban planning and land management practices inherited from the colonial period have been continued and adapted, with no clear policy orientation. …Apart from the lack of urban planning legislation, there is limited technical capacity for planning, especially at local government level, which is the level where this responsibility lies. Even Maputo as the capital, with a stronger fiscal and political base than any other urban area, has only 3 planners, all recently graduated from the university and with no specific training or experience….

Then, as result, many Mozambicans take advantage of the situation by building their houses or business infrastructures in a disorderly manner. This may be because there is little attention to

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[45]See also urban planning at this web: http://www.mcgill.ca/urbanplanning/planning/

environmental policy management and implementation by the authorities or perhaps it is because there is less mobilisation and integration of financial and human resources to respond to urban planning and management.

2.2.9 Urban planning in the city of Nampula

Eskemose (2004:112) states; "the majority of the population lives in a semi- or non-urbanised neighbourhood, in traditional houses with rudimentary infrastructure. Most peri-urban areas are occupied spontaneously, often in inadequate areas subject to erosion or floods". From this account, it comes across that the ecological crisis in the city of Nampula is closely associated with unplanned urbanisation.

Further, it seems as if in the peripheries of the city, little is offered in the way of well-planned and healthy villages or townships. Another reason is that there is little order and structure in house-building. Almost everyone chooses space to occupy, and builds a house in a way he/she prefers without following the municipal regulations on urbanisation. To illustrate these irregularities of spontaneous occupation, it is stated that "areas of spontaneous occupation, with about 2,500 houses (2,000 counted in 2003) distributed across various areas with footpaths, only some of which are more than one meter wide. No road is accessible for vehicles. According to the master plan people should be removed from these plots and there should be anti-erosion work" (CEDH & UEM 2006:35).One can conclude that the urban authorities actively allow this disorder to occur on the peripheries and inner city. Therefore, it shows that there are no policies in place to correct the wrong attitudes and practices of people.

Another example is seen in the practice of building and selling residential property. It is practical for one family to live adequately on a piece of land 30 by 20 meters in size, designed for the building of a decent house. However, it is common that such a family re-sells it to two or more families. The buyers will build their houses in any way they want, and consequently the space becomes too overcrowded. This practice seems to be rooted in a greedy money-making attitude of some city dwellers. Consequently, this overcrowding can facilitate the outbreak of frequent occurrences of diseases in the communities.

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The way buildings are structured among neighbours creates enormous risks, creating health problems. Some do not have enough space to build basic facilities like toilets. People wash their dishes in the open air and it causes serious problems because the water from this washing and bathing runs from one house to another. Those who do not have toilets use the neighbour's toilets. Since some of the toilets are built inadequately, they often become too full. When it rains, some toilets let waste flow all over the area, endangering people's health.

Therefore, it is important to do good planning for the city. Gorringe (2005:17-18) explains "the plan helps to pioneer many new ideas including landscaping to an overall plan, the inner ring road strategy for minimising through traffic, the attempted coordination of building design and the use of the city's landlord powers to control advertising and land use". In addition to Gorringe's explanation, urban planning is important because it enables a better life and brings a vibrant and attractive look to the city.

In relation to urban planning, Gorringe (2005:18) adds that "the city must be planned for a community life…and not as a mere repository of industry". Admittedly, Gorringe (2005:18) believes that "industry and housing should be ordered in adequate zones rather than mixed promiscuously as they had been in the old town" like Nampula city. In the light of Gorringe's insights discussed above, the importance of good plans and urban management does not only enable a better and healthier life, it also attracts business people and tourists for economic investment.

Furthermore, this shows that urban planning is not only a matter of civilisation and for purposes of beauty only, rather, it a necessity as good urbanisation processes may facilitate the control of health risks and crime as well. However, urban planning can only be achieved when the government works in partnership with civil society and through clear programmes and policies. The next section discusses some literature concerning how urban communities view the environmental crisis.

2.3 Literature on societal perceptions of the environmental crisis in urbanization

It seems that there is a perception in Nampula that environmental problems can only be dealt with by the scientists. Hence, Soderbaum (2000:xi) states; "most people view science as part of the solution to a variety of problems…in the present situation concerning environmental problems, it would seem wise to argue that no part or sector of society should be excluded from consideration in an attempt to identify problems and to seek improvements". Thus, a societal understanding towards ecological care is necessary because the environmental crisis results in several consequences for the lives of people and the economy. If the people cannot understand the root and risks engendered by ecological problems, they will remain careless people.

Soderbaum and Hannigan hold that in urban contexts, society has understood environmental crisis as a matter of authorities' negligence, a power dominion-related matter resulting from poor management by the elite. Furthermore, the social and scientific worldviews understand and explain the environment that "humans are not so immediately dependent upon the physical environment, having been emancipated by the division of labour…Technology has allowed humans to remake their habitat and their world there rather than to be constrained by it…Human society, then, in contrast to the rest of nature, is organised on two levels: the biotic and the culture (sic)" (Hannigan 1995:15). Of course, technology somehow came to empower humans and assist them to innovate and make life easy for the transformation of nature and the economy. The question is therefore how humans with their technological innovations and power should live without causing crises over the earth but using such technology in a way that will protect and benefit all creation and coming generations.

During fieldwork, I learnt about many issues raised by the participants concerning environmental problems. Many participants agreed that there are huge environmental problems, the foremost being land degradation, soil erosion, air pollution and consequently people find themselves getting affected economically, and socially. For example, Esmirna (one of the interviewees) stated that "torrential rains, cyclones and sometimes floods constitute the main cause of erosion and environmental problems in the peripheries of the city. Consequently, houses built in

precarious conditions and other infrastructures are destroyed. Inadequate dumping sites of waste materials can also cause health-hazards. (Esmirna 07/09/2009).

Moreover, another interviewee noted that "our space in the city of Nampula is sick due to the fact that many residents do not conserve it properly, for example many people urinate and defecate in the open air" (Flores 07/09/2009). This indicates that some people from Nampula are careless about hygiene and the environment which constitutes a serious problem for environmental degradation. With reference to the United States of America, literature holds that "due to a dearth of curricular time to cover the environmental sciences and a lack of quality curricula, Americans suffer from environmental ignorance. A majority of Americans believe that electricity in their country is produced in non-polluting ways; only 25% are aware that the majority (70%) comes from oil, coal, and wood" (Donohoe 2002:581). This indicates that rich as well as poor nations may need awareness to care for God's creation.

Environmental ignorance then, leads people to the lack of a cultural mandate to take care of God's creation and waste management. This careless attitude to nature tells one that there is a problem of awareness and perhaps the lack of love for nature. For example, many times the Nampula municipality tries to plant trees and grass along main roads as a mechanism of reducing erosion and pollution. Unfortunately, some people destroy such trees irresponsibly. This carelessness is elaborated in the way some people deal with waste in an uncontrolled manner. Some people still think the municipality is the only one who holds the responsibility, power and financial resources for the environment. This misunderstanding has presumably led many people of the city of Nampula municipality to do little about ecological conservation.

The government has indeed power to mobilise all resources needed including education and awareness in order to curb such ignorance. In this regard, the Nampula Municipality could learn from other experiences like that of Americans as noted by Costanza (1987:410): "Our approach in the United States towards avoiding and escaping environmental traps has been mainly education and governmental regulation. Hence, in terms of promoting education on the environment, this research contends that if the government and other private sectors began working together in educating people and regulating human attitudes, this environmental crisis

will be curbed in a short space of time. The argument is that, unplanned expansion of urban and slums associated with people's attitudes are seen as one of the main causes of earth squalor as is pointed out by World Population Datasheets:

> Mega cities are emerging and urban slums are expanding. Such rapid and unplanned expansion of cities has resulted in degradation of urban environment. It has widened the gap between demand and supply of infrastructural services such as energy, housing, transport, communication, education, water supply and sewerage and recreational amenities, thus depleting the precious environmental resource base of the cities.[46]

Substantiating this thought, Nampula city seems to be in the stage of development in terms of rapid expansion of villages which consequently lead to urban slums and unplanned urban housing stimulating ecological degradation. This aspect of urban disorder sometimes can be associated with lack of political will and external powers as discussed below.

2.3.1 Politics, culture and the role of power in fostering the environmental crisis

Social theory has seen environmental degradation as something related to political and cultural forces. Hence, Goldblatt (1996:1) said that in terms of addressing "the origins and consequences of environmental degradation in modern societies...political forces can be successfully mobilised against environmental degradation" (1996:1). Goldblatt (1996:2) adds that political and cultural powers play a dual role in fostering environmental crises and these powers have really no impact in diminishing the environmental problems.

With reference to Nampula and in relation to the aforementioned, in many cases environmental degradation is caused by 1) Political tension. 2) Economic instability, this means that the local community cannot access their natural resources, the distribution of such resources is done nationally and people are powerless to contribute locally. 3) Advanced technology, can be a wonderful tool which helps to improve development, however, if it is used in an abusive manner it can then be a destructive source. 4) Cultural demands- this is a strategic phenomenon which if

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[46]See World Population Datasheet. Population growth and Environmental Degradation by Partha das Sharma, 2007 http://saferenvironment.wordpress.com/2008/08/16/population-growth-and-environmental-degradation/ - Accessed on 02/09/10.

it is not carefully handled can be used to pollute the ecology. People must not simply reject or accept everything from their cultures. Culture changes, people also need to reform their attitudes towards nature.

For the purpose of fostering this reform, "the Judeo-Christian ethic which elevated the status of mankind (sic) as inheritors of the earth..." (Simpson 1990:15) has to be properly interpreted to arrive at a point where people maintain and benefit responsibly from the earth without destroying it. This understanding will in essence reinforce the notion that the earth belongs to all human and non-human beings whose life depends on it.

2.3.2 Society's view in solving the problem

There will be no solution while local communities remain unaware of the policies, and do not take part and get involved in decision-making. A balanced economic distribution, power decentralisation and a public participation in decision-making will help curb the ecological crisis in Nampula. Simmons (1991:106) observed that "a good deal of resource use and environmental management in the world is done by individuals or small groups of people, often acting in accordance with customs which are orally transmitted... beyond them, there is a great body of written policy and law which affects resource process". In addition, the interviewees, Henriqueta & Pirilau (09/09/2009) agreed that the "solution to the environmental crisis is only through the willingness and involvement of every individual person".

In this research, these interviewees also observed that government, together with the private sector must engage directly with local people to fight against ecological degradation. In addition, as a way of mitigating some of the environmental challenges that the city of Nampula faces, some specific strategies were taken into consideration by local authorities. For instance, these strategies include: "research; technical assistance; pilot project implementation/demonstration; technical training; inter-sectoral co-ordination, including community participation; setting up a data bank and participation in policy formulation" (World Bank 2000). If these strategies are implemented, ecological problems will be abated.

2.3.3 The role of science in the exploitation and preservation of the environment

Having discussed some views about science and technology, it is necessary to point out that science plays multiple and important roles in society. Science is both a tool for technological development yet can also play a role in escalating environmental degradation. However, the scientific world is also aware and concerned with ecological management. It is argued that "most of the phenomena that we are now faced with have been established in principles formulated by philosophers and scientists over many centuries" (Simpson 1990:17). The concern of scientists toward ecological management is supported by the establishment of some institutions that aim to fight degradation, for example:

> The International Council of Scientific Union (ICSU) was established in 1931 to encourage international scientific corporation along non-political lines, in the earth, life and physical sciences to serve mankind. In 1948, the International Union for the Conservation of Nature (IUCN) was founded to deal with such specific topics as the preservation of flora and fauna… (Simpson 1990:17).

2.4 What does literature say about who are the victims of ecological degradation?

Wherever environment has deteriorated, economic activities and the poor are affected or victimised. For instance, it is argued that "...the poor are both the agents and victims of environmental damage, as they overuse environmental resources, which increases the burden of disease that eventually results in the loss of their income"[47]. This is not necessarily about overusing their resources, but it could be associated with lack of equitable economic distribution in certain developing countries as is the case with Mozambique. Also, the lack of clear policies on the issue of the environment and the absence of local communities in terms of participation in environmental programmes aggravate the situation.

For example, there is "...the need for a policy at strategy level that could address the linkage between environmental degradation and poverty, evaluate sectoral policies, and ensure the inclusion of environmental issues to monitor the effectiveness of strategy"[48]. If there were clear policies and inclusion of local people in educational and environmental campaigns the situation

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[47] See The News. 2010. http://www.thenews.com.pk/daily_detail.asp?id=226022 – Accessed on 07/08/2010.
[48] See The News. 2010. http://www.thenews.com.pk/daily_detail.asp?id=226022 – Accessed on 07/08/2010.

would not be as alarming as it is today. Research conducted in Pakistan by Dr Jaward Chrisht revealed that "environmental degradation affects the poverty situation in other ways, such as reducing sources of livelihoods for poor people and making them vulnerable to disease. On the other hand, poverty also affects the environment in various ways – by forcing people to degrade the environment and encouraging civic managers to promote economic growth at the expense of the environment"[49].

Further, "the overwhelming majority of those who die each year from air and water pollution are poor people, as they generally live nearest to dirty factories, busy roads, and dangerous waste dumps"[50]. This seems to indicate that the poor are victims and most affected, they are the first group to suffer rather than rich people. Accordingly, it is because "poor people's livelihoods are more likely to depend upon a mix of skills, assets, access to natural resources, social capital, and income-generating activities than on any single income source" (UNDP 2003:64). Most people in Nampula city however, have little access to natural resources and basic activities for sustainability which would help them rather to promote ecological conservation.

2.4.1 Consequences of environmental degradation affect the quality of community life

Environmental degradation has negative implications on the life of the victims of ecological crisis. For instance, Donohoe (2002:573) argued that "worldwide the greatest effects on the health of individuals and populations results from environmental degradation and social injustice, operating in consort". When the environment suffers, the poor are affected. Worse still, the poor often are unable to solve the problems since they are not in a position of power, nor do they have financial resources to finance such solutions.

Poor people are affected by developing health issues where there are probabilities of contamination by many diseases from waste materials, water stagnation, as well as air pollution. With reference to the United States of America, Dockery et al. 1993, quoted in Donohoe (2002:575) observed "the global increase in asthma prevalence has been attributed to increasing

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[49] Ibid
[50] Ibid

urbanization and poverty, with greater exposure to indoor allergens such as dust, mite and cockroach antigens, as well as to outdoor air pollution". Although Dockery et al. have written from an American perspective, it seems similar to what people of Nampula experience. For example, the people of Nampula suffer diseases such as asthma and respiratory infection. Other consequences that the victims suffer include:

> Increased poverty, overcrowding, famine, weather extremes, species loss, acute and chronic medical illnesses, war and human rights abuses, and an increasingly unstable global situation that portends Malthusian chaos and disaster. Normally, when people cannot afford or even when they live below a U$D1 per day, they cannot even think about schooling. In short, victims of the environmental degradation do not have quality in their lives. This is because their health, economic and education situation decline to a low level, (Donohoe 2002:573).

2.4.2 What forces trap them into victimhood?

The forces that trap poor people into victimhood include poverty, political and economic instability, social, cultural and religious differences. Poverty, in particular, is seen as a major enemy for all humankind. Poverty kills by making the poor unable to realise their dreams. As indicated earlier, "a major consequence of environmental destruction and the maldistribution of the world's resources is a rise in poverty, overcrowding, and famine..." Donohoe (2002:580). Thus, in poor nations like Mozambique many people live on few dollars a day due to economic imbalance.

2.4.3 Why is it a struggle for victims to get out of this poverty trap?

As mentioned previously, most victims of environmental degradation are women, children and poor people. The reasons why this group of people struggle to avoid being victims seem to be linked to the poverty, powerlessness and defenselessness these people find themselves in. It is observed that:

> ...The countries of extreme poverty have citizens which are abysmally unhealthy, have populations which are expanding unsustainably fast, may be home to unimaginably violent civil wars which routinely kill tens of thousands, are lacking the money needed to build infrastructure, and are ruled by governments which are exceptionally corrupt....[51]

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[51] See Poverty available at: http://www.povertyeducation.org/poverty-traps.html - Accessed on 02/09/10

For me, these five factors named above play a role in keeping developing countries in poverty and find themselves powerless in the face of the environmental crisis. Moreover nations led by governments which often make disastrous policy decisions often decrease foreign investors efforts to build up manufacturing works. In the countries with high rates of unemployment like Mozambique, people find themselves incapable of overcoming the impact of environmental deterioration. Consequently, poor people have no means to prepare, adapt and rebuild their dreams. Therefore, the poor struggle to escape victimisation.

2.4.4 Effects of environmental degradation on the poor

Environmental degradation increases the vulnerability of societies as it affects and contributes to the scarcity of resources that humans and animals need to live on. For example, "environmental degradation can lead to a scarcity of resources, such as water and farmable land ..."[52] Such resources could be damaged by acute environmental elements like flooding, drought, cyclones etc. Poverty and uncontrollable diseases can be the result of environmental degradation. The poor are usually on the receiving end of the consequences of environmental degradation.

For instance it is pointed out that "... more than two million deaths and billions of illnesses a year are attributable to water pollution. Water scarcity compounds these health problems. Productivity is affected by the costs of providing safe water, by constraints on economic activity caused by water shortages"[53]. The people who are prone to use polluted water are usually the poor because they have little choice. With regard to air pollution it is pointed out that "as per the estimation of the UN, urban air pollution is responsible for 300,000 -700,000 deaths annually and creates chronic health problems for many more people[54]. Again, the poor are susceptible to air pollution because they live near health-hazard places such as dumping sites and factories. Therefore, it is important for human beings to think and act responsibly bearing in mind that the consequences of degradation come back to haunt us and cause our own suffering.

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[52] Ibid
[53] Ibid
[54] Ibid

2.5 The ecological crisis in the city of Nampula

Agreeably, environmental deterioration affects human beings worldwide, yet it does not do so in the same way. Further "there is a growing recognition that the victims of environmental degradation are also victims of social-economic injustice. These include various groups of marginalized people on the economic periphery, i.e. indigenous peoples, environmental refugees, women, children, the poor and workers in mines" (De Gruchy 2002:104).

When indigenous people are not empowered through awareness and skill training that can enable them to respond effectively to their needs, it is difficult for them to deal with environmental management and conservation. This section discusses the roots of environmental degradation in the city of Nampula.

The city of Nampula experiences environmental degradation as a result of the problems associated with the civil war and population growth.[55] Population growth is the most critical problem since it creates pressure on Nampula's natural resources and is resulting in people's unsustainable use of their resources. Furthermore, the environmental crisis can be "caused by...powerful technologies that frequently damage nature's ecosystems, supported by economic and political systems..." (Martin-Schramm & Stivers 2003:10). The lack of proper collection, disposal and management of industrial and domestic solid wastes has become hazardous in many *bairros* of the city of Nampula. The misuse of scarce or limited economic resources may be the result of implementation of non-sustainable projects and programmes. The problem includes poorly-enforced legislation on property rights and environmental protection and poor management of existing resources.

2.5.1 Infrastructures and urban demands

Houses, work stations, public services, hospitals, bus and train stations and places of recreation in the cities are supposed to be built in a way that reflects the people's enjoyment and urban

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[55]For further discussion, see in the population growth section of this study.

needs. These are places where people often meet, and so they need special and constant attention. However, in Nampula it is observed that there are:

> The unplanned growth of the precarious and peri-urban areas, aggravated by the absence of land use planning instruments and their execution and control. As result, most of the urban population were in areas without adequate access to basic infrastructure and social amenities and were living in sub-standard housing, without secure land tenure rights. These areas represented 50% of the total urban area in 1980, and the population living there comprised 50% of the total urban population" (CEDH & UEM 2006).

For example places like hospitals, work stations, bus/train stations, gardens and beaches should not be disgusting areas because people meet there. Gorringe (2005:28) offers this when he says: "planning is about people and their local environments. It is a process of social decision-making based upon promoting and reconciling the interests of all the various groups in society". This scholar goes further to say that the concept and purpose of a town is to "create an environment as conducive as possible to good health, happiness, stimulation and satisfaction during their youth and working lives, and contentment and care in their old age" (Gorringe 2005:21).

However, the poor management of these places in the city of Nampula indicates that negligence from the municipal authorities and private sector is responsible for the poor condition of the urban area. Some of these public places look abandoned and do not appear as city public places should. As has been mentioned above, there is no sanitation system policy among residents. Public facilities are rarely built, perhaps due to the lack of resources. On the peripheries of Nampula, it is difficult to circulate by vehicle because there are no good roads, and even to travel on foot sometimes becomes impossible.

This disorder can be associated with the lack of adequate plans, awareness and public participation where people could be challenged and encouraged to organise themselves for earth conservation. For instance "generous tree-planting helps deal with air pollution, but also cuts down vistas" (Gorringe 2005:26).

2.5.2 The impact of unplanned urban environment

Sometimes there may exist positive as well as negative impacts of unplanned urban environments. The positive ones are when the government, NGOs and private sectors' tutelage for environmental issues are technically, materially and financially well equipped. In addition, positive impacts appear when there are clear policies and willingness to apply them. Moreover, it is positive when awareness towards such policies and community participation in issues of the environment are not ambiguous. It is also positive when the developmental programmes and technologies applied in urban areas protect the rights and well-being of the people and the earth. Accordingly it is indicated that:

> Since 1989 the Municipality has tackled environmental problems through the Office for Erosion Action…Over the past ten years, GAMA has undertaken level awareness and mobilisation campaigns focusing on preventing and combating environmental problems…This had a significant positive impact on environment awareness issues amongst local authorities based in this city, and especially Nampula Municipal Council (CMCN), (WORLD BANK 2000).

On the other hand, the negative impact on the urban environment appears inevitable when it is not dealt with properly. The impact can be a direct consequence of civil works and inadequate basic infrastructures that include sanitation, drainage, and water and sewage removal.

In addition, urban environmental problems may be an indirect result of human activities when people are largely unconscious of the negative impacts of their actions. It seems that there is some ignorance about environmental conservation among Nampula communities and education is needed to make people aware and to facilitate the transfer of skills to curb the ecological crisis. "Although environmental monitoring is to be incorporated into the Council's day-to-day activities, none of the technical staff have benefited from specialist training in this context" (WORLD BANK 2000). Thus although the Nampula Municipal Council and other NGOs seem to be committed to preventing and combating environmental crises, there is still more to be done. In the urban environment for example, health is challenged. There are frequent and uncontrolled outbreaks of diseases such as malaria and cholera. In the city of Nampula, these diseases are caused mainly by accumulation of waste and lack of sewage removal on the peripheries of the city. In addition to having only a few trained people (as public health inspectors)to control

public   sanitation, the marketing of fresh products, the crisis of a clean water supply, uncontrolled proliferation of informal settlements in urban and peri-urban areas and open air defecation contribute to this attitude. These are some of the environmental challenges that the city of Nampula faces and need urgent response.

2.6 Relationship between the environment and poverty

When I was young, my brothers and I used to fight because at home we did not understand each other. I tried to identify what was behind that misunderstanding between us. As I grew up in a matrilineal tradition my mother called our uncle to come and solve the problem of fighting. Firstly, he told us a story which many people may already have heard. The story was about four blind men being asked to identify the object in front of them so that they could tell what the object was. Each blind man just identified a part of the object so no one identify the whole as an elephant. At the end of the story my uncle asked why the blind men were not able to tell what the object was.

The explanation is that each blind man touched only different parts of the object. To tell that it was an elephant, it was also necessary to investigate the whole object rather than only a different part. Thus, the reason for our fighting was because at home we were treated in different manners even though we were equal. Similarly, both environmental degradation and poverty alleviation are urgent global issues that have a lot in common, and which should be looked at inclusively and with special attention. However, before establishing such relationships it is important to understand the concept of poverty.

Poverty is the inability of people to live at an acceptable standard of living. In the Nampula context, an acceptable standard life would be when a person has at least one meal per day and a permanent home/residence. It is also when people cannot afford to generate their income and resources materially, culturally and socially. In addition, "poverty is the condition of those groups of people we abstractly describe as the poor. Poverty results from a lack of things. It is obvious that poor people do not have enough to eat, a place to sleep or clean water. Their land is

poor, there is no water for irrigation, there are no good roads and there are no schools for their children" (Myers 1997:578).

Therefore, as a consequence of poor income and resources, people may be excluded and marginalised from taking part in essential and important activities in society. This exclusion may also affect environmental management negatively in that it reinforces the notion that poor people have no rights and security. Hence, the UN Committee on Economic, Social and Cultural Rights has defined poverty as: "a human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights" (WHO & UNHR 2008:18)."

This statement points to a comprehensive definition of poverty. If society does not reinforce individual rights and basic responsibilities it will indeed deny the poor the ability to manage their environment. If people are also poor in a way that they have no meaning in life, the consequences are immeasurable. For an example with regard to international agreements to eradicate poverty, the Millennium Development Goals (MDG) state that; "good intentions are not enough. Around the world land is being degraded. Forests are being lost. Fisheries are being overused. Plant and animal species are becoming extinct. And carbon dioxide emissions are driving changes in global climate,"[56] I submit that good intentions without willingness for practical action means that the situation of earth degradation will remain unsolved.

Even if the governments around the world and more particularly that of Nampula hold good policies without applying them, and also when they do not assist the poor significantly, the earth will continue deteriorating. Poor people in Nampula rely on available resources from the environment for their sustained livelihood but unfortunately it seems these people get little assistance from the government authorities. In relation to assistance, it includes environmental education, skills training and other awareness-raising activities that would empower them to solve their own crises. They are often the victims of natural disasters, mainly floods, cyclones,

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[56]This information was accessed from the World Bank Group at the following website: Millennium Development Goals. http://ddpext.worldbank.org/ext/GMIS/gdmis.do?siteId=2 – 22/04/09

storms, fires, drought, and famine. Since people find themselves limited in resources in order to prevent environmental degradation and remedy the effects of these calamities, they are consequently exposed to the diseases as well as possible death. Therefore, unless the basic needs of poor people are addressed justly, people will continue misusing the environment since they rely on its resources. According to Muagerene:

> The province of Nampula's economic growth over the long term is dependent on two factors mixed together: poverty alleviation and protection of the environment. The pattern of use of natural resources is conditioned by poverty both in the rural and the urban housing…Currently; the visions are discouraging because for needy people, the relief need takes precedence over the immediate to long-term programs. It is to the immediate problem of survival that the poor are forced to make an exchange between explicitly accepting the long-term environmental degradation in order to meet their immediate needs for food and housing (Muagerene 2000:14-16).

Furthermore, Muagerene wrote "only after the poor have met their basic needs, can they think of reducing soil erosion and other earth problems" (2000:16). The basic needs include awareness, access to information and decision-making towards environmental matters. Therefore in this context, poverty alleviation is not necessarily about giving money or food to the poor. People are poorer in their mind because they lack knowledge. If poor people begin to become empowered through ensuring their right to land and are taught how to use their own resources, the poverty and the environmental crisis will be curbed.

To maintain economic growth and earth conservation, both rich and poor people must use natural resources wisely. This can happen if rich people consider the consequences of exploiting natural resources uncontrollably and when the benefits of the economy are equitably distributed countrywide. It will also be possible when the rights of poor people are observed by empowering them with skills and when the resources are mobilised adequately toward meeting their basic needs. It is accurate to observe that:

> For the poor of the countryside and city, natural resources are an asset that can be mobilized when it is required to meet an immediate need and not just because life is entirely linked to resources *natural* (sic). The conflict arises when what is good for the environment is not good for the poor... (Muagerene 2000:16).

Therefore, having observed these issues, one can see that dealing with economic growth and poverty alleviation without considering environmental degradation is nonsensical. I have observed that since poverty alleviation depends on the availability of natural and human resources it is wise to consider the close relationship between environment and poverty. Hence, I submit that environmental crises and poverty should be considered together as far as solutions and strategies are concerned. The effect of earth crises will also increase poverty levels and consequently will have a negative impact in managing the environment in a sustainable way.

2.7 Government and environmental management in Mozambique

Historically the Mozambican government has never paid special attention and importance to the issues linked with the environment. Environmental management was not included in the government development agenda. Only five years after Independence (decade of the 1980s), the government of Mozambique began looking significantly at the environmental issues. The government of the Republic of Mozambique now recognises environmental issues as important factors that impact positively and negatively on socio-economic growth. Now there is a government ministry body namely (MICOA) which teaches environmental programmes countrywide in collaboration with other private sectors. For example, it has been reported that:

> Historically, the environment management in Mozambique never attained due recognition, in the conjunction of development actions, limiting itself only to some conservation measures. Thus, since the beginning of the 1980's the environmental issue started to deserve special attention, thus leading to the creation of the National Committee for Environment (June, 1992) and more recently, the Ministry for Coordination of Environment Action (MICOA 1996:3)[57].

Cabral & Francisco explain; "MICOA is the government agency with responsibility for overall coordination of government activities in the environment sector…MICOA is structured around six areas of intervention: (i) inter-sectoral coordination, (ii) research, planning and environmental management, (iii) territorial planning, (iv) environmental impact assessment, (v) environmental

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[57]In Portuguese, MICOA stands for Ministério para a Coordenação da Acção Ambiental (The Ministry of Environmental Co-ordination) in Mozambique. The quotation translated above into English is mine. So, the original text in Portuguese is as follows: "Historicamente, a gestão ambiental em Moçambique jamais mereceu a devida importância, no conjunto das acções de desenvolvimento, restringindo-se apenas a algumas medidas de conservação…Só a partir dos principios da década oitenta a vertente ambiental começa a merecer uma atenção especial, evolução esta que culminou com a criação da Comissão Nacional do Meio Ambiente (Junho de 1992) e, mais recentemente, do Ministério para a Coordenação da Acção Ambiental."

education and dissemination, and (vi) inspection and control" (Cabral & Francisco 2008:8). It seems the issue of poor management of the environment observed in the entire country of Mozambique is not only based on the government's poor policies but can also be linked with the problem of separation of institutional powers and the lack of serious attention to care.

For me, it seems senseless that MICOA as the ministry of environmental management in the country will not take the responsibility to implement these activities. MICOA should not work only as a coordinating body while having these important tasks under its authority. To illustrate this point, it is indicated that "MICOA is a coordination – not an implementation – agency…MICOA does not have the mandate to do things, but only the mandate to coordinate environmental actions carried out by other sectoral ministries" (Cabral & Francisco 2008:9). As a result, "the general perception is that MICOA experiences serious difficulties in performing this coordination role effectively" (2008:9). For that, MICOA has no mandate and power to implement the pro-environmental projects on its own.

This is perhaps the reason why MICOA, being a government institution, lacks clear policy, skilled labour and capital resources to devote to environmental issues. It is argued in MICOA's circle that "part of the problem is that '*coordination*' seems to be a rather fuzzy concept. Another problem is that MICOA has little political leverage over other sectoral ministries and hence has limited scope for influencing sector policies. This limited capacity to explain policies is exacerbated by the fact that MICOA is poorly endowed in terms of human and financial resources" (Cabral & Francisco 2008:9). Therefore sometimes, the environmental crisis in Nampula can be impacted by these weaknesses of MICOA. MICOA as a government institution should be the driving force to mobilise and invest greatly for ecological care.

2.7.1 Environmental policies in Mozambique

Environmental policies play an important role in meeting the development needs of people in the new[58] Mozambican democratic system established since 1994.

For example, some of such ecological policies, include the spatial planning law n◦ 17/2007 and the spatial planning policy according to the resolution n◦ 18/1997, cited bellow. Mozambique is currently experiencing an exciting process of socio-economic transformation. This continues as it attempts to correct the imbalances caused by colonial history and the recent civil war. The colonial system, for example, which lasted for more than 400 years, had denied the rights of Mozambicans to have education, a voice to participate in decision-making and access to the country's natural resources. Where there is no participation, justice, sustainable use of natural resources and environmental protection, it is likely that sustainable development will not easily take place.

2.7.2 Understanding Environmental Policies

Environmental policy can be understood as the regulations that help to guide natural resource users to manage such resources responsibly. It is important for environmental policies to prevent the risks that may affect human beings and sustainable development against the effects of earth degradation.

In relation to the policy issue, the Constitution of the Republic of Mozambique adopted laws that prevent the misuse of natural resources and protect the management of the environment. According to MICOA (1996:27), the Constitution of the Republic of Mozambique of 1990 contains several articles or decrees that address the issues of natural resources and the environment. For example, MICOA[59] points out in article 37 of the same constitution that the State promotes initiatives to guarantee ecological equilibrium and environmental conservation

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[58]It is a new democracy because, only in 1992, a cease-fire agreement between Frelimo and Renamo was worked out in Rome...In 1994 Frelimo won the nation-wide multi-party election by a narrow margin. Renamo accepted a place in a government of national unity, becoming the official opposition party (Hammond, 1998:68).
[59]See MICOA 1996:27

and preservation by envisaging improvement of the quality of the life of the citizens. Moreover, article 72 of the same constitution states that all citizens have the right to live in a good environment as well as the obligation to defend it. In other words, this constitution gives rights and powers to local communities for participation in ecological conservation. Further, the following statement elaborates this point of view:

> The 1997 environmental law (law no. 20/97) set the foundations for the policy and institutional framework for environmental management in Mozambique. The law defines the scope, agents and management tools for managements… Specific environmental management policy instruments include the Spatial Planning Law (Law no. 17/2007), the Spatial Planning Policy (resolution no. 18/1997), the law and regulation on environment impact assessment (decree no. 45/2004.), (Cabral & Francisco 2008:7).

These regulations as a framework for environmental management are well and clearly elaborated. However, they seem to be general and vague. For instance, many Mozambicans are not aware of these policies because they were not invited to have a public debate. These policies also do not indicate who is going to do the work and how, and do not provide resources for their implementation. Cabral & Francisco (2008:8) said that the "policy documents are poor on prioritisation and specification of concrete activities and targets…the budget does not provide sufficiently detailed information to indicate how resources are distributed across areas of intervention…" In addition, it is pointed out that "the legislation tends to be too general and that regulations are produced without sufficient debate and consultation and often contain gaps and mistakes…" (Cabral & Francisco 2008:7).

Therefore, these problems make one see that the existing policies are only well-crafted but do not have the impact they should have on the ground, because they lack clarity. These policies will not work effectively unless there is willingness from policymakers to implement them, this would include accurate and faithful distribution of resources through the government agencies mandated with the coordination of environmental action.

2.7.3 Rights and power to participate in environmental management

Although the abovementioned articles give rights and an obligation to all citizens to defend the environment, it is unclear on methodology and conditions of such community participation. In

theory it is expected of decentralized local authorities to facilitate this participation. Decentralisation is defined as the process of passing power from central to local levels as a way of promoting and assuring sustainable development and poverty eradication. In the context of Mozambique there is still more to be done regarding the decentralisation of resources since in practice, the power is in the hands of the central administration. It is difficult to expect people to do something when there are no resources and space for participation in decision-making. When power is centralized, local communities become isolated from development. Salomao explains:

> The nature of decentralization depends to a significant degree upon who gets to exercise power and the accountability relations to which they are subject. Consequently, while local actors form the institutional basis of decentralization, this cannot be said to take place until they hold significant powers and are accountable to the local population. Salomao (2002:10)

Yet, continues Salamao (2002:10), decentralisation becomes an important tool, which gives power to create or modify rules, and power to make decisions on how to use opportunities and available resources. It also gives power to deliver judgment when conflicts arise in the community without waiting unnecessarily for central government to decide. For instance assessing Article 33 of the Mozambican law n◦ 10/99 on participatory management toward wildlife and forestry seems to indicate that the central government keeps hold of the power to decide the circumstances and restrictions under which local communities should participate in environmental management.

To support this assumption, in Article 33 it is observed that "the state, represented by the government, has the ultimate power to decide whether or not communities can participate in wildlife management and access benefits from wildlife."[60] However, real mechanisms for involvement and decision-making powers that would help and empower the expression of community participation are not time-bound by any stipulation of this law. Consequently, the freedom that would allow for community contribution towards management strategies on environmental conservation remains ambiguous. In other words, little is said on how the community should participate in decision-making.

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[60]See in the bibliography/reference list of this study, Salomao, Alda I. A. 2002.Participatory Natural Resources Management in Mozambique. It was a draft working paper and submitted to Decentralization, Accountability and the Environment Research Program Institutions and Governance Program World Resources Institute.

2.8 Environmental management in the city of Nampula

The environmental management in the city of Nampula does not differ from that of Mozambique countrywide in terms of weaknesses. In Nampula, there are institutions that deal with environmental issues such as MICOA, DIMAS and CDS.[61] However, the function of the existing institutions established to "promote and coordinate sustainable management of the urban environment…" (WORLD BANK 2000) seems deficient and ambiguous. In my observation, this deficiency can be linked to the inequality in the distribution of resources experienced countrywide. For those who closely work for the government authority and those who briefly visit Maputo, they may see that Mozambique's economy is growing.

Indeed, if one compares it with the economy of the 1990s it is possible to see the differences. However, the question is whether or not this economic growth is reflected evenly countrywide, and is it evident in the life of ordinary people? Balanced economic growth cannot be restricted to one province while people in other provinces and rural areas are starving as it is the case in Mozambique. So, unless power is transferred from central offices to other levels of governance which will allow equitable economic distribution, the ecological crisis and poverty will be a perpetual reality in Mozambique.

Accordingly if there is no clear policy, equitable economic distribution, and decentralisation of power, there will certainly be no good management, and this is the case of environmental management in Nampula because Mozambique's economic growth is reflected mainly in Maputo where central authorities are based. It thus becomes difficult to deal with environmental problems and even poverty reduction when people lack a voice and resources.

Simpson (1990:22) pointed out that "environmental management has to do with the conservation of economic and natural resources". He adds that "the human race is the resource and it may be argued that most would not seek to protect the environment for its own sake but to arrive at a more equitable relationship with nature in order to sustain the human race" (Simpson 1990:22).

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[61]DIMAS stands for Directorate of Environment, Water and Sanitation and CDS is for Centre for Sustainable Development. The main work for these institutions is to promote and coordinate sustainable management of the urban environment.

This implies that if people emphasise and rely only on economic growth without being willing to preserve the resources which demand such economic growth they may be acting irresponsibly and unethically. The priority should be based on restricting economic growth for the sake of ecological protection.

People as the inheritors and beneficiaries of the earth need to be skilled on how to deal with and manage the earth. It can only happen when they have access to the resources available in their environments and when also, the government wills to do so. Therefore, though there are some agencies dealing with environmental issues, their management in the city of Nampula does not have a clear agenda. Consequently, it will take time to reverse the ecological crisis. However, it is from this perspective that this research seeks to address this issue by mobilising a local church and society into action. It should be a time to move and act justly to recover from land deterioration. Having said this, the next section discusses the strategies of land management.

2.8.1 Strategies toward environmental management in Nampula

The strategies for environmental management in Nampula are spelt out in the 1997 environmental law no. 20/97. It is indicated that since the 1997 environmental law was promulgated, "a number of specific laws, regulations and strategy papers have been produced. The main strategy papers on broad environmental management issues are the Strategic Plan for the Environment Sector 2005-2015 and the Environment Strategy for Sustainable Development 2007-2017" (Cabral & Francisco 2008:7). Specific strategies taken at NMC include: "research; technical assistance; pilot project implementation/demos; technical training; inter-sectoral co-ordination, including community participation; setting up a data bank and participation in policy formulation" (WORLD BANK 2000).

These are beautiful strategies established by the Municipal authorities to minimise the environmental crisis in the city of Nampula. The World Bank further points out that "the studies conducted include environmental, health, socio-economic and demographic profiles of Nampula

City and District. Under PROGAU and FURA[62] additional studies and projects have been developed, notably urban rehabilitation (roads, market places, gardens, sewage, sanitation, solid waste and urbanisation" (WORLD BANK 2000).

However, the questions still remain unanswered as to whether these strategies and studies are really applicable or not. The issue here is that the problem of the environment in Nampula is still challenging the society. For example, the drainage system, which would facilitate the removal of waste, is deficient. Adequate public toilet facilities in the city and in the peri-urban areas do not exist. The urbanisation process is in disorder. Roads being destroyed by soil erosion and the lack of clean water supply continue to be the major problems in the city.

2.8.2 Ecological deterioration and development in Nampula

After discussing the social understanding of the environment, this section attempts to discuss the ecological deterioration in the context of Nampula and its implications for development. The attention in this section is the dual relationship between human beings as the consumers, and the environment as the resource provider for development. Accordingly; "development implies change in favour of general human improvement, and change of two kinds, usually linked: expansion in consumption and enhancement of welfare..." (Riddell 1981:4). Thus, in this study, the assumption is that poverty and wealth seem to inhabit the same space. The degradation of natural resources and conservation of the environment are two sides of the same thing. There one may require the presence of the other. However, the expected consequences can include the destruction of the welfare of human life, of other species and the reduction of biodiversity.

In this regard, the relationship between environmental degradation and development in Nampula can be linked with the issue of imbalance in economic distribution. It can also be associated with the centralisation of power. Economic distribution does not necessarily mean to give money or food. It includes fairness in the distribution of goods; power; skilled labour, technology and clear policies in order to facilitate local institutions to function. Cobb Jr (1992:48), rightly indicated

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[62]PROGAU is an abbreviation meaning Programme for Urban Environment Management for Nampula City and District. FURA indicates Fund for Environment Rehabilitation.

that "only as local communities regain basic control over their own economies can there be health in human community and an effective community of people within the larger environment of living things". With reference to Nampula, this will only be through a thorough decentralisation of power and comprehensible policies so that environmental degradation and inequitable distribution of goods can be overcome.

The present study, therefore, does not propose that political power at central level, such as the national state, should give up all their control over local governments. It recognises that there are some sensitive and complex issues that have to be dealt centrally. The argument is that "the great need is that economic power be subordinated to political power…But political power needs not to be so fully localized" (Cobb Jr. 1992:49). In other words political powers according to Cobb Jr. (1992:50) "…can be approached better when we think of the large political entities as communities of smaller ones than when we try to locate sovereignty definitively at any one level, such as the nation-state". However, CIEL argued that:

> Achieving sustainable development requires a more complementary and coherent framework of global economic and environmental governance…The international community will need to address a range of issues, both legal and practical, if it is to ensure that the policies, rules and institutions governing trade and the environment contribute to a more effective institutional framework for sustainable development (CIEL 2002).[63]

To solve the environmental degradation and meet the development problems worldwide, it seems necessary that at the national and international levels they demand hard work. This will help them to ensure that such policies, rules and institutional structures that demand economic distribution are mutually supportive, to make the best use of their common contribution to environment, economic and sustainable development.

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[63]CIEL stands for *Center for International Environmental Law.* Issues Brief for the World Summit on Sustainable Development (26 August - 4 September 2002), (Unpublished paper). For more information it can be accessed through: http://www.ciel.org/Publications/meas.pdf - 27/04/09.

2.8.3 Environment and economics

Economic imbalance in developing countries such as Mozambique determines the environmental conditions. This is because any maintenance requires human and financial resources. It has been argued that "the challenges of protecting of the environment are all economic: Cleaning up the pollution in the earth is an economic problem, especially for the poor countries that are polluted by the rich countries but do not have resources to clean up the pollution. The challenge of a sustainable development is again an economic problem…" (Rajaratnam 1996:2).

In addition, environmental imbalance, mainly in developing nations, has its roots in "the commercial, political and cultural expansion of the West over the last four or five centuries" (De Santa Ana 1995:4). It is also believed that "thoughtful evaluation suggests that the innate flexibility of a market-based economy would allow the adoption of pollution control and conservation objects without structural changes, but at financial cost which incumbent governments are not prepared to meet" (Simpson 1990:14). The citations above concur with the reality of the situation in Nampula and Mozambique at large. There is emphasis and flexibility on economic growth yet without paying attention to possible ecological ruin.

2.8.4 Economic implications for environmental conservation

This section attempts to assess some economic implications that may be part of the problem behind the environmental degradation in the city of Nampula. Accordingly, economy is "the process in which humans use tools to transform raw materials into commodities suitable for human consumption. This process has a few clearly distinguishable aspects which can be depicted as follows: resourcebase-extraction-processing-distribution-consumption-waste" (Nürnberger 1999:21). In short, the economy enables people to acquire productivity powers and to unlock dimensions of satisfaction which go beyond their immediate survival needs.

As this study has shown previously, because the majority of the Nampula population are characterized by low income, the economy can be the tool for development. For instance, it is argued that "if we want to help secure a reasonable, equitable and sustainable degree of

prosperity for humankind we need an economic approach" (Nürnberger 1999:6) of some sort and kind. This economic approach would encompass a designed programme of change that would address the needs of human beings and the needs of nature. Thus, any economic programme that does not acknowledge the value and importance of humankind and the realities of ecology will not have a transformative impact.

The goal of the human enterprise as a whole should be the comprehensive wellbeing of its entire social and natural environment…Ecological concerns should receive priority over economic concerns, rather than the other way round…The reason is, simply, that an economic growth which is not sustainable is also irresponsible. If we squander the earth's resources now, others have to pay the bill in the future (Nürnberger 1999:7).

Since we cannot avoid exploiting nature for our sustainability, the abovementioned points indicate that human beings need to use nature wisely so that it can also continue producing goods for people's own benefit. Nürnberger (1999:20) holds that "human beings are creatures that have material needs. They need space, time and energy to exist. They need protection, food, rest, clothing, and shelter. The availability of these resources cannot be taken for granted; they must be secured".

The economic process, continues Nürnberger, which "constitutes a process of extracting and putting material together for transformation has been considered as a process of destruction, although its intermediate stages seem to be constructive" (Nürnberger 1999:22). This does not mean that the economy itself is bad, but the way it is implemented may create environmental problems. Thus, when we use natural resources we need accountability and responsibility. For instance, Rajaratnam believed that "economic price or market equilibrium no longer holds good unless the cost of environmental damage in producing goods and services is taken into account" (Rajaratnam 1996:6). One can therefore notice that sometimes economists tend to maintain their elevated economic system by exploiting the earth in a destructive way.

For example, "pollution, growth in conditions threatening to health, decrease in the protective ozone layer around the poles of the planet, acid rain which causes the death of important plant

life are some of the phenomena showing the senseless way in which the environment is being exploited" (De Santa Ana 1995:4).Though it is not directly the economists' problem to protect ecology, however, economic growth often represents a problem in terms of environment protection. This happens when the economists give too much attention to economic growth without observing the damages and consequences this growth brings to the ecology and people's life.

2.9 Consequences of environmental degradation in Nampula

The consequences of degradation of the urban area of Nampula are among those mentioned in the section which dealt with causes. One of the problems includes the moving of people from their homelands to the cities, and population growth. For this, Muagerene (2000:20-21) indicated that the crisis experienced in the environment of the urban eco-system is associated with constant population growth. This movement resulting from this population growth also brings pressure on the environment of the city, as well as its natural resources.

Muagerene added that rapid and uncontrolled urbanisation in the time of the civil war was difficult since there was a lack of adequate infrastructure which would enable it to accommodate this influx. Therefore, according to my experience as a Nampula citizen, the consequence of environmental crisis in the urban area of Nampula can be summed up in five main areas such as (i) pollution, (ii) erosion, (iii) inadequate management of solid waste, (iv) inadequate sanitation and (v) inadequate drainage.

2.9.1 Pollution

Nampula Municipality faces air and water pollution. Most residents using the road, - pedestrians, cyclists and passengers in open trucks, - suffer from terrible dust pollution along the roads constructed only with gravel. In the city and peri-urban areas, they do not have grass to protect people from pollution. It can be assumed that at times high dust levels create negative impact such as traffic accidents and aggravate chronic diseases such as malaria, cholera, and flu caused by various infections.

Nampula municipality is also surrounded by small rivers that help people in the irrigation of their small gardens and also for domestic use. Muagerene (2000:21) observed that "these rivers are polluted too from organic matter, originating from residential areas, industries and also from some people who use open spaces for defecation. Pollution of surface waters [is] caused by poor management of demand and overload…Polluted waters result in diseases transmitted by water, economic costs and loss of attractiveness of residential areas". The consequences of air and water pollution include cholera and malaria outbreaks since there is water accumulation around the communities.

2.9.2 Erosion

Environmental degradation has serious consequences in the life of people, the economy and development. Nampula Municipality seems to have little basic infrastructure such as drainage, grassland and tree-planting systems that would limit erosion in peri-urban areas. Sometimes, when people cut trees and overgraze the land, it can cause erosion. For example, Muagerene (2000:21) observed that the problem of soil erosion is attributable to human behaviour; the growth of uncontrolled urban areas; the limited space for the passage of water, and increase of surface water due to rain or ruptured pipelines. The effects include land degradation, reduction of the base of renewable resources and replacement costs. It is important to note that not all erosions are caused by humans, because some are caused by natural hazards. In this regard the negative impact of soil erosion extends also to loss of properties, damage of poorly-built houses, and health.

2.9.3 Solid waste and sewage management

Sewage in the inner city of Nampula and its peripheries is a serious issue that calls for mutual and urgent concern. The problem is due to a lack of awareness amongst some people, of how to deal with sewage in a healthy manner. There is no clear system implemented by the local government to educate people to manage sewage adequately and consistently. For example, there is an archaic system such as distribution of containers and use of plastics where people would keep the sewage until the municipality's workers would pass weekly and remove it for dumping.

Instead, it is normal to see Nampula residents accumulating or even throwing anyway the waste along their yards, roads and even in public places.

The situation described previously shows carelessness with regard to the environment. For instance, there is pollution from tyres, bottles, wood dust, plastics, unwanted cloth, and other industrial and domestic products. These items sometimes block the drainage systems and consequently, endanger human health. Since Nampula has no facility for recycling urban waste, they could use urban forests as dumping grounds to ensure that sewage is completely harmless against the environment and society.

As Onganga (1992:219) comments, "urban forests are considered by many people as the most ideal place to dump industrial waste. This is a major problem which is not easy to solve in Kenya because it involves very rich and influential people…" The same happens with the people of Nampula. In relation to the inadequate management of solid waste in Nampula it is noted that it occurs "due to mismanagement; the practice of depositing waste without care and education. Inadequate management of solid waste is due to inadequate hygiene, and has led to health impacts, numerous diseases, high costs due to the blockage of drainage and flooding and loss of attraction to the areas affected" (Muagerene 2000:21).

2.9.4 Inadequate sanitation

Sanitation as a process of maintaining clean and hygienic circumstances that help to avoid disease through services such as waste collection and waste water removal cannot be overlooked. This is because sanitation essentially seeks to control all the possible factors in the environment that surrounds people, which could compromise society's survival or development. Sanitation in the urban area of Nampula is inconsistent with this principle because it seems that Nampula's citizens lack awareness.

It is pointed out in Nampula that poor states of sanitation are "due to inadequate technology; mismanagement, lack of servicing and maintenance, uncoordinated investments; hygiene education, inadequate and inappropriate cultural values… (Muagerene 2000:21).This is an

important argument since very few people of this city use appropriate latrines. In addition, the government rarely provides small container systems to deposit or dump rubbish, and since people are not used to doing so, when they find such containers along the road, for example, they remove them for their own purposes. For this reason, it is necessary to involve and empower women, young people and children to help curb this environmental crisis.

2.10 The role of women, youth and children for ecological conservation

This section does not deal extensively with gender issues. However, it is an attempt to look at the significant role that women, children and youth play toward environmental preservation, since although these groups of people constitute active agents for change they are also the first to be vulnerable with regard to many hazards such as environmental degradation. Thus, the present study is convinced that socio-economic development and environmental protection are interdependent. Jointly they reinforce components of sustainable development, which is the framework for our efforts to achieve a higher quality of life for all people. Thus there is a need to recognize that women, youth and children play a vital role in the reduction, prevention, mitigation and preparedness, in response to the environmental crises. Dankelman said that:

> Worldwide, women have manifested themselves as agents of change for environment and sustainable development. This has resulted in a gender-specific approach in environment and sustainable development policies and practices. Women's active participation and empowerment are important prerequisites for such an approach. Women's leadership in environmental matters is reflected in the fact that women take on major environmental issues and seek drastic solutions. Organized women's groups are fighting against deforestation, pollution and other forms of environmental degradation.[64]

Women, youth and children are also the first victims of any vulnerability because they are powerless when it comes to decision-making. Another reason is that in most cases women and children are characterized as being mainly indoors while men are seen as mainly outdoors. In other words, many hazards happen when women and children are at home and men when they are out of the home. Accordingly "in an environmental disaster, women can be more vulnerable

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[64]Irene Dankelman is the head of a sustainable development program, Radboud University, Netherlands. See the full address in the bibliography.

than men. Disasters present particular dangers for women who can be related directly to their social position" (Reardon, 1993:2).

Reardon (1993:2) proposes that the problem of victimizing women and children is not just a result of the climate itself. For him, it is also associated with "social systems which create barriers to survival…many women are trapped in the homes which they fear leaving; they risk their own lives to save their children..." Either in the rural or in urban areas, if women are given more opportunities, perhaps the current ecological situation would be reduced considerably. The underneath section discusses some of women's challenges in the urban environments.

2.10.1 Women in urban areas

Due to various factors such as low income and their indoor status, women in the urban environments also face enormous consequences. Significantly, Davi has listed a series of women's problems in urban settlements.

For an example, Green (2007:147) said that "women and girls in Africa and Asia have to travel an average of six kilometres to collect water and carry about twenty kilograms of water. This is exhausting and often dangerous. Furthermore, time spent walking to and from water points are often time spent not attending school". Consequently illiteracy and illness of women and girls will persist due to limited water access. Moreover, "women living in urban areas find themselves in an unfriendly environment. They face problems associated with housing, noise and air pollution. Lack of accommodation makes them to adjust (sic) with small dwellings. In many cases there is no moving place in the cooking area. They spend 3 to 4 hours in the kitchen for cooking purposes. Inefficient fuel and improper ventilation make them disease-prone..." Davi1994). Likewise, the majority of women in the city of Nampula find themselves in the same conditions. Most of them have no internal kitchen. Cooking activities are done outside and this increases pollution in the neighbourhoods.

2.10.2 The role of women in environmental management

Women occupy an important place and play a vital role for environmental recovery. Firstly, most women as indoor people are deeply committed to saving their children when hazards occur. Secondly, indoor women are more skilled in cleaning and preventing whatever risks there may be in their society. Thirdly, women are also good for education. "Women have the advantage of increasing the awareness about environmental protection. They can educate their children and the neighbours" (Davi 1994). Also, "women are victims of environmental pollution. Women, forming 50 per cent of the population can be a very important human resource to combat environmental pollution. The role of women in increasing the awareness of the requirement of environmental protection is important" (Davi 1994).

Another challenging role of women in combating environmental degradation is that stated in the Rio declaration toward the general obligations of women in this matter. For example the Rio Declaration (1992:8) presumes that women have a vital role in environmental management and development. The declaration argues that the total involvement of women is indispensable to achieving sustainable development. Women play an important role in environmental protection, in view of their status in social production, consumption and their influence on future generations at home. Women in science can also contribute greatly through technology to decreasing pollution in defense of the ecology. In many urban and rural areas, women can also play a role in combating environmental crises through forming small groups and mobilizing them for tree planting.

2.10.3 Youth, children and the environmental preservation

In any society worldwide, youth and children represent a valuable driving force for the continuity of development and also "young people constitute a large part of the world's population" (WYR 2003).[65] They are an energetically active group to mobilise for support, and have the ability to acquaint themselves with the new technological challenges. For these reasons, youth's responsibility towards ecology matters should not be ignored. It is noted that:

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[65]WYR, stands for World Youth Report 2003: *Youth and the Environment*:http://www.un.org/

> Youth have both special concerns and special responsibilities in relation to the environment. A number of environmental risks and hazards disproportionately affect young people, who have to live for an extended period with the deteriorating environment bequeathed to them by earlier generations. Young people will be compelled to engage in new forms of action and activism that will generate effective responses to ecological challenges (WYR 2003).

Furthermore, youth and children need also to learn now how to deal with natural resources so that they do not compromise their future. Thus, it is necessary that they should be included in any decision-making toward environmental matters and development, as it is indicated that:

> It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account.[66]

The rights of the young generation need to be considered and valued as a way of granting them secure hope. It is apparent "that youth are provided a secure and healthy future, including an environment of quality, improved standards of living and access to education and employment. These issues need to be addressed in development planning" (UNEP, undated)". Some important suggestions concerning adequate youth involvement in environmental care include:

> Establish procedures allowing for consultation and possible participation of youth of both genders…in decision-making processes with regard to the environment, involving youth at the local, national and regional levels. Promote dialogue with youth organizations regarding the drafting and evaluation of environment plans and programmes or questions on development; Consider for incorporation into relevant policies the recommendations of international, regional and local youth conferences and other forums that offer youth perspectives on social and economic development and resource management…(UNEP, Undated).

Therefore, since we have seen that youth and children occupy a large part of the world's population, it seems impossible not to include them in the combating of environmental challenges, and decision-making concerning environmental recovery. Young children, for example, are for the most part defenseless against environmental hazards. For instance, they are at risk in the process of access to clean and safe drinking water.

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[66]UNEP, stands for United Nations for Environment Programme. http://www.unep.org/

Another reason that youth and children should not be ignored for the care of the earth is linked with the fact that they are assumed to have a longer life-expectancy than older people. Within their journey of life they are also going to be exposed to and experience more the consequences of current environmental decisions than we do now. For example it is indicated that "future generations will also be affected by these decisions and the extent to which they have addressed concerns such as the depletion of resources, the loss of biodiversity, and long-lived radioactive wastes" (WYR 2003). Youth and children are the largest category of the worldwide population with potential in technological skills. The youth and children are a teachable group of people. Thus, they should be involved in decision-making. When the youth start participating in decision-making and understand the risks of environment they will know how to avoid environmental degradation and secure preservation.

2.11 Conclusion

In conclusion, this chapter has shown that environmental degradation is a matter that needs urgent concern worldwide and Nampula in particular. Specifically in southern Africa environmental degradation is a consequence of social, cultural, economic, and political degradation. It is not necessarily the will of Africans themselves, but also the pressures of economic imbalances and political conflicts that often occur in Africa.

The colonial system, which neglected to assist the indigenous to develop skills to deal with their own problems, created dependence for the majority of Mozambicans. Imbalanced resource distribution and centralisation of power play a major role in environmental crises and development at large in the city of Nampula. For instance, through MICOA (1996:3) we have seen that until the 1980s the Mozambican government attached no special importance or attention to an inclusive agenda for environmental management. Overcrowding caused by colonial policies of land alienation resulted in the overuse of land and environmental degradation. Exodus from rural areas to the city caused by economic imbalance and the civil war caused an ecological crisis. The city is now overcrowded to an extent that was not planned for.

Thus, to ensure a sustainable environment that contributes to economic development, the people and governments of Mozambique and Nampula in particular need to learn from their past experiences. This learning process should help to correct and improve their policies and institutions in a way that will favour the entire population. In doing so, it would help to address adequately the environmental problems more than they do now.

This chapter has also noted that women, youth and children of both genders, can play important roles in combating ecological degradation. These groups of people as human capital for transformation should be included in the policy and decision-making. Otherwise, the ecological issues in Nampula will remain in crisis. The next chapter discusses a sustainable livelihood framework as a model for this study.

Chapter Three

Environmental Crisis and Sustainable Livelihoods Framework

3. Introduction

Chapter two discussed the social understanding of environmental degradation from international to local perspectives. In addition, it looked at many issues like economic imbalances and political instability. Major causes and effects of environmental degradation in the city of Nampula were discussed and possible remedies were suggested. In this chapter the focus is to discuss the environmental crisis within the Sustainable Livelihood Framework (SLF). The objective of this chapter is to assess environmental vulnerability contexts; livelihood capitals/assets; transforming structures and processes; livelihood strategies and livelihood outcomes in Nampula. This assessment attempts to establish the linkage between people, their livelihoods, and their environments. Through the livelihood outcomes, this chapter proposes some strategic plans for curbing the real problem of this study which is the people of Nampula's experience of environmental crisis, it affects them economically, socially and missiologically in the urban areas of Nampula.

Based on the significance of the terms environment and sustainability as seen in chapter one, it is important also to understand what livelihoods are. The term livelihood indicates the possible ways people find to live. According to Omosa "livelihoods refer to a people's way of life" (1998)[67] and "a livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base" (DFID 1999).[68]

Comparing between Sustainable Livelihood Framework (SLF) and assets one can say that the way people engage themselves with their existing assets will determine the way they live. For

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[67]Mary Omosa is a senior research fellow, Institute for Development Studies, University of Nairobi
[68]DFID stands for Department for International Development and is the publisher of sustainable livelihoods guidance sheets. Institute of Development Studies. Thus can be accessed on the following website: www.livelihoods.org/info.

example, people who have asset access live a better life without stress and they are assured for justice, hope, peace and freedom from any threat. For this study, the SLF and Asset-based community development promote "improved access to high-quality education, information, technologies and training and better nutrition and health; a more supportive and cohesive social environment; more secure access to, and better management of, natural resources; better access to basic and facilitating infrastructure; more secure access to financial resources; and a policy and institutional environment that supports multiple livelihood strategies and promotes equitable access to competitive markets for all" (DFID 1999:1).

Therefore, this chapter is an attempt to discuss the sustainable livelihood framework (SLF). The SLF is believed to be an important model because it is provides guidance in constructing a comprehensive theoretical model for both environmental alleviation and developmental reflection. Thus, the importance of SLF to this study is to enable people to discover their strengths and weakness points, people can learn from it and be enabled to use their local strengths to decide for their future.

In addition "it will facilitate the identification of practical priorities for action that are based on the views and interests of those concerned" (DFID 1999:1). In other words, as we have seen that the situation of environment in Nampula city is degraded, then the livelihood results they seek might be good environment, a sense of power and dignity and improved access to services. In this regard, the SLF seems to be appropriate to ensure a better understanding towards environment and the city of Nampula. For example, by engaging in SLF people will learn their capabilities and also learn how to utilise their own potential local resources.

3.1 The sustainable livelihood framework

Of significance is the fact that the SLF "is essentially people-centred and aims to explain…the relationships between people, their livelihoods, and their environments, policies and all kind of institutions" (Neefjes 2000:82). Furthermore, "the livelihoods approach is concerned first and foremost with people. It seeks to gain an accurate and realistic understanding of people's

strengths (assets or capital endowments) and how they endeavour to convert these into positive livelihood outcomes" (DFID 1999).

In my view, the foregoing indicates that the SLF is a representation which helps people to comprehend clearly how we should live our lives, the resources humankind draws upon, the strategies we must adopt, and the resulting outcomes. However, it does not mean that the SLF is helpful in all respects. The SLF may not provide an exact representation of all local realities since it may pursue its complexities by fitting into other contexts. In other words the SLF is constituted by many different parts such as vulnerability context and livelihood assets as both parts interplay differently according to the context. The SLF "can be seen as an analytical framework that structures when and why environmental issues are important in human lives and particularly in relation to livelihoods, but without ignoring the complexity of the human reality" (Neefjes 2000:80).

Although it seems as if SLF does not provide a theological approach nonetheless it provides a thoughtful manner with which to analyse the lives and livelihoods of the marginalised people and the earth. It also motivates discussion and reflection on the vulnerability context of ecology and its relation to society as is shown in the diagram below (taken from Neefjes, 2000:83).[69] This discussion and reflection of SLF on vulnerability contexts brings a unique and relevant contribution to this study in theology. Theology is also a study that attempts to critically discuss, and reflects to understand God, the current events and the reality of human life contextually. For instance one can apply a theology that camouflages inequality and injustice practiced by those who hold power over poor people and God's creation. For an example, a theology which places emphasis on "the sacramental approach may mask the unequal and corrupted relations of power within existing communities" (Conradie 2009:42).

The next section discusses the components of sustainable livelihood framework in accordance with the diagram below. This diagram is used in this study as a simple plan which is represents an idea whose purpose is to explain how/what is being represented works.

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[69] This is a diagram drawn to show and study the vulnerabilities of environments and livelihoods with strategies for sustainability, according to Neefjes, Koos 2000:83.

3.1.1 Environmental sustainable livelihood framework (SLF) diagram
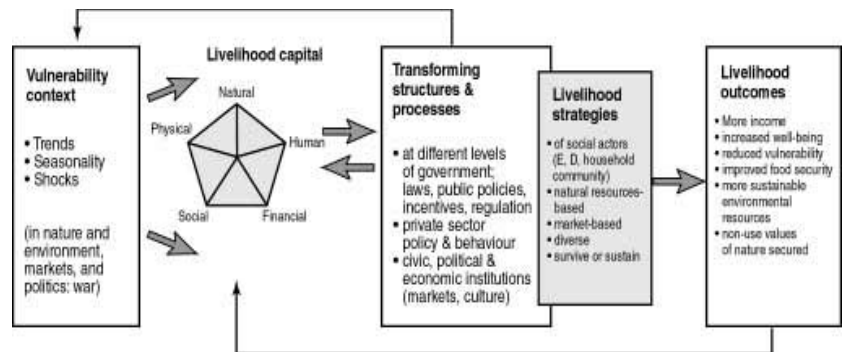
Fig 3: Sustainable Livelihoods Framework Diagram

The sustainable livelihood framework (SLF) diagram shown above presents six important components where five are identified with the headings and the sixth being the arrows that show the linkage between these components. These components include vulnerability context; livelihood assets/capital; transforming structures and processes; livelihood strategies; and livelihood outcomes, and also the relationships with the framework. This diagram plays an important role in terms of showing and explaining the negative impact of these components on environmental matters, social life, and economic situations. Thus, this study has examined each component in relation to this research in the following order.

3.1.2 Ecology and vulnerability context in the city of Nampula

The effects of the environmental crisis on human activities and natural resources can be described in terms of two factors; sensitivity and vulnerability. Sensitivity is the degree to which the system responds to changes in the climatic conditions and, vulnerability indicates the degree to which the system can cope with its impact, since vulnerability does not only depend on what the system is exposed to but also on its capacity to adapt to ecological status change. Some of the

effects of environmental degradation in Nampula are due to the variation of climate in Mozambique. For instance, MICOA has indicated that:

> Mozambique is a country vulnerable to climate change due to its geographic location (about 2,700 kilometres of coastline, at the confluence of many international rivers flowing into the Indian Ocean, and land area that is under sea levels),…The geographic location is one of the key factors that contribute to the country's vulnerability to extreme events since some of the tropical cyclones and depressions that are formed in the Indian Ocean cross the Mozambique Channel and affect the coastal zone. As global temperatures increase, Mozambique is experiencing increases in the frequency and severity of droughts in the interior and floods in coastal regions (MICOA 2007).

Speaking from personal experience, ecological vulnerability in the city of Nampula, specifically can be caused by weak drainage and sanitation systems. Pollution created by deforestation also contributes; in this regard, it needs to have in place some ways to respond to the ecological problems. This could involve adaptation and mobilization of human and financial resources. This adaptation is a set of necessary proactive actions such as adequate systems of dumping the litter and recycling the waste processes. It also means adjusting the reactive actions to deal with the consequences of ecological crisis and climate change. Having discussed the ecological vulnerability context, the next section discusses the vulnerability context. The importance here is to learn external factors that sometimes may impact on social and economic matters.

3.1.3 Vulnerability context

Vulnerability context is one part of the SLF. This part describes external outcomes or factors that impact on both social lives and livelihood. These factors can be helpful or prejudicial toward the process of human livelihoods. Neefjes has pointed out that "some factors are outside the immediate control or influence of people who pursue their livelihood. Changes in this vulnerability context can happen in three different ways: trends, seasonality, and shocks" (Neefjes 2000:92). For example, factors such as war, cyclones and floods, drought, famine, volcanic eruptions and earthquakes cannot be predicted with any certainty. Vulnerability context in this research points out that trends, shocks and seasonality need to be considered and dealt with carefully, otherwise they may threaten ecology care. For an example, if one of the vulnerability contexts such as shocks and seasonality hit on the people's life, undoubtedly it will

greatly affect crop production and clean water supply. Thus, before proceeding to the next section, let me briefly discuss the three elements of trends, shocks and seasonality:

3.1.4 Shocks

Shocks constitute external factors that occur in an unexpected manner and inflict a great deal of damage on the people's livelihoods. This damage includes disruption of people's health, food production, clean water supply, economic balance and nutrition. According to Kalonga, (2005:50) shocks "include human health shocks like sickness, injury or death in the family; nature shocks like floods and fire; economic shocks like rapid shifts in exchange rates or terms of trade;…". Moreover, shocks "can destroy assets directly (in the case of floods, storms, civil conflict, etc.). They can also force people to abandon their home areas and dispose of assets (such as land) prematurely as part of coping strategies" (DFID 1999). As a consequence of such shocks, studies learnt that "Mozambican households are extremely vulnerable to shocks such as the loss of an income or crop failure due to droughts or floods. Seasonal fluctuations can temporarily push households above and below the poverty line" (UNICEF 2011:5).

In addition, these shocks also affect ecological degradation. For example, cyclones, floods and droughts constitute the most devastating shocks. These natural calamities often occur in Nampula. The consequences of these occurrences are enormous. For instance, during floods and cyclones ecological degradation increases and outbreaks of epidemics (cholera, malaria, dysentery and nutritional deficiencies) increase the rate of mortality. Furthermore, these phenomena put people in precarious living conditions.

In the same vein, MICOA (2007)[70] argued that "the most hazardous extreme events are drought, floods and tropical cyclones. Other environmental problems that affect the country[71] include epidemics, plagues, slash and burn practices, industrial accidents and erosion" (MICOA 2007).

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[70]MICOA stands for Ministry for Co-ordination of Environmental Affairs in Mozambique. It is a governmental entity or body that deals with environment matters Enquiries can be accessed from the web bellow:http://unfccc.int/resource/docs/napa/moz01.pdf.
[71] It refers to the country of Mozambique.

Therefore, unless there is a clear trade policy and human rights are observed seriously the damage of these external factors will long persist.

3.1.5 Trends

Trends constitute "…predictable factors although there is little that can be done about them. These trends could have either a positive or negative effects on the livelihoods. It includes such things as trends in population, technology, government, social services, economic opportunity, and urbanization" (Kalonga 2005:50). It seems that some of these trends can be manageable because they are planned and made by humankind. They are not natural trends like shocks. Neefjes correctly argued that "trends are gradual changes, partly predictable; examples are demographic trends, economic and technological developments, trends in resource use and degradation, and also gradual political changes, for example becoming more democratic or…authoritative" (Neefjes 2000:92).

Therefore, trends are likely to shift for the benefit of the people, earth and animals if they are challenged. The city of Nampula has a number of challenges resulting from trends such as population growth, lack of technology, and ineffective government policies. It faces problems of public service delivery, economic imbalance/opportunity, and unplanned urbanization. These trends somehow contribute to environmental degradation, and therefore, there is an urgent need to reform these trends so that the destruction of people's livelihoods/assets can be prevented. Seasonality constitutes another vulnerability context as it is discussed below.

3.1.6 Seasonality

This third element or factor in the vulnerability context "occurs in the production of crops and food prices, in health…and also in employment opportunities, i.e. in labour markets" (Neefjes 2000:92). Seasonality is concerned with shifts in things like prices, human health conditions and ecological management. High prices and health problems are factors that make ordinary people vulnerable. It is necessary to identify these factors which often dehumanise people and the ecology. For instance, the frequent occurrences of cholera and malaria in the city of Nampula

may have their roots in the bucket system of sewage collection, mainly in informal and uncontrolled established settlements. Another root may be that of the unsafe water as the consequence of bucket toilets, specifically in informal settlements where resources are much lower than in formal settlements.

According to De Gruchy (2004:5), "starting with vulnerability context is an immediate recognition that we are dealing with people who are at risk, not because they are stupid or lazy, but because their livelihoods are subject to a range of influences that prescribe and determine the opportunities and choices that they have for their livelihood strategies". This signifies that when people's assets are destroyed by different factors, the poor are the first victims. Thus, it is important to learn and identify these factors so that one can determine the causes and consequences of environmental degradation. In doing so, it may allow one to propose the strategies for alleviation of ecological pressures on the planet.

Further, it is observed that "the factors that make up the vulnerability context are important because they have a direct impact upon people's asset status and the options that are open to them in pursuit of beneficial livelihood outcomes" (DFID 1999). Thus, the section above discussed vulnerability context and its challenging elements. This vulnerability context is useful for this research because people should gain awareness from it about the consequences. The next section examines livelihood assets or people's capability in accessing their natural resources without discrimination.

3.2 Livelihood assets

Livelihood refers to humankind's capacity to access resources in order to live a long life. Butterbery (2001) and Ellis (1998) have the same view in defining livelihood as "the capabilities, assets (including both material and social resources) and activities required for a means of living." Furthermore, a "livelihood depends on the capabilities, assets… and activities which are all required for a means of living…" (Neefjes 2000:82). These definitions show that when people are unable to access resources, when they cannot manage to recuperate from their struggles arising from stresses and shocks, and when they cannot improve their capabilities in order to

sustain life now and in the future without compromising the ecology, then, it indicates that there will be no livelihood.

This is because the livelihood assets or capital take account of "natural resources, infrastructure, money, social capital, and above all their own labour, skills and knowledge" (Neefjes 2000:86). If such capital is assured to the poor, powerless and marginalised people, then there will be a radical change in social life. This change will empower people to deal properly with environmental matters. However, these capitals seem to be under threat or compromised at Nampula, for an example when people are unaware of human resources, unskilled and when there is no financial investment to the poor. Thus, these capitals should be revitalised for the benefit of the poor when they are transformed into people's commodity. Types of capital are grouped into five categories as follows: human capital; social capital; natural capital; physical capital and financial capital.

These capitals represent the essence of human dignity and development. If people find themselves unable, ungifted or unskilled they cannot deal with the care of the environment which consequently leads to a continuous degradation of our cities. It is as if there is no networking between households and communities which constitutes a key for social capital indispensable for a suitable urban and rural environment. Financial capital plays a complementary role to other livelihood capitals to curb the environmental crisis. This study therefore now analyses each of five categories presented above.

3.2.1 Human capital

Human capital or assets are those found within people's ability, from what they know, what they have and can do. It includes the state of people's health. According to Kretzman & McKnight (1993) it shows that any community has "individual assets for development. Such assets include skills, gifts and financial resources; associational assets represented by churches, clubs and local organisations". Human capital designates "skills, knowledge, ability and potential to labour, and good health; which together enable people to pursue a different livelihood strategy" (Neefjes 2000:88). The human capital is important as it helps people to sustain their livelihoods. In

Nampula for instance, an important facet of human capital includes the accessibility of basic primary and secondary education; hospitals; land, roads and people resources. In this regard, if people are educated about ecology from their earliest education onwards; people will in turn be healthy; the land will be used for good purposes and will be accessible to everyone and roads will be kept in a good state, leading to a decrease in the environmental crisis.

In my observation, these assets are often not explored and used to empower people in a way that could improve their standard of living. Without proper education towards ecological impacts, good health and safe environmental conditions, people's ability to realise their livelihood strategies are compromised, since they are unable to work for their income. Thus, the Mozambican government needs to continue building schools in urban and rural areas as well as to improve good education. In addition, it has to continue to make universities accessible to all people by lessening tuition costs.

According to Farrington et al (2002: 20) "…financial capital, in terms of access to employment and earnings, is strongly dependent on adequate human capital. In turn, human capital is highly dependent on adequate nutrition, health care, safe environmental conditions, and education."[72] For example, in Nampula, the accessibility of health care is limited due to the people's low income. Health service delivery to the ordinary patient in the hospitals often differs between households, depending on the household income. Sometimes, this low income is due to unemployment, low salaries and low level of productivity in agriculture which contribute to malnutrition, therefore weakening the human capital.

This shows that human capital needs to be managed adequately in a way that enables people to work, earn money and take care of God's creation. This cannot really be done as individuals but only through joint efforts which implies networking.

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[72]This information is taken from Farrington, John et al 2002, a working paper from 162 Results of ODI research presented in preliminary form for discussion and critical comment. See detailed address in the bibliography/reference list

3.2.2 Social capital

Social capital is a key asset for both urban and rural poor communities. According to Neefjes, social capital constitutes "social resources upon which people draw in pursuit of livelihood objectives including networks, membership of groups, and relationships of trust…" (Neefjes 2000:88). Furthermore, "Social capital refers to networks of mutual support that exist within and between households, extended family, and communities, which people can mobilize to access, for example, loans, childcare, food, accommodation and information about employment and opportunities" (Moser (1996); Dersham & Gzirishvilli, (1998) quoted in Farrington et al (2002:24).

Social capital can also have both positive and negative inferences depending on how it is interpreted. For example, Kalonga (2005:51) interprets social capital as something which "helps people to work together; but hierarchical or coercive relationships and exclusion can also erode people's livelihoods". Further it is pointed out that "social capital is a valuable and critical resource for poor urban households, especially during times of crisis and socio-economic change..." (Moser; Dersham and Gzirishvilli in Farington 2002: 24).

In relation to Nampula, the concept of social capital is reflected in social networks, family structures and decision-making processes. Socially, the Nampula community is mainly "characterized by a matrilineal system" (Paulo 2010:42), whereby according to Tvedten the uncle, the mother's first brother, plays an important role in the family (Tvedten at al 2006:50). The networks include neighbourhood, church members, associations, traditional leaders, and NGO's.

The majority of people in Nampula practice rudimentary agriculture. Due to Nampula tradition being based on a matrilineal society, women rarely participate in men's meetings. However, they play an important role within the family. The majority of the people of Nampula are members of four different religious faith groups: Christianity, Islam, Hinduism, and traditional healers. Even with religious diversities, the neighbourhood plays a key role in socialisation. For example, in

the Makhua community, when something happens, almost every person is ready to assist their neighbour unconditionally.

Thus, social capital functions not as a private thing rather as a "…network of mutual support…" (Farrington et al, 2002:24) where people can come and work together. Also it constitutes a problem when people do not understand that social capital is about "… networks, membership of groups, and relationships of trust…" (Neefjes 2000:88). Additionally, though social capital is an important asset for the poor, other factors such as migration and urbanisation in the Nampula weaken and compromise the management of ecology preservation. That is why this research intends to reduce this misunderstanding through mobilising and training people in the value of joint efforts and working together. In doing so, people will be able to make better use of the land, water, forestry and environment as some of their natural resources given by God.

3.2.3 Natural capital

Natural capital designates what is usually called natural resource stocks, which are accessible to people for the pursuit of positive livelihoods. According to Farrington, "natural capital refers to environmental assets such as land, and common property resources (with communal management and traditional systems determining access and types of use) or 'free' (open access) natural resources such as water forests or grazing land" (Farington 2002:21). For instance Kalonga said that natural capital consists of "intangible public goods such as the atmospheres and biodiversity to direct resources used for production such as trees, plants and land" (Kalonga 2005:51). Additionally, "natural resources stocks from which resources flows are derived that are useful for livelihood" (Neefjes 2000:89).

Thus, in Nampula, land constitutes one of the most useful and an important asset for the majority of people since it represents their sustainability. Land in Nampula plays a role for agricultural production for the majority of the population to secure food. For instance, it is observed that "families farm more than one plot … and this is distributed within the household as plots for parents, and for children … Land partition amongst the siblings is a strategy to ensure security

over a larger area, and to allow diversification of crops" (Nhantumbo et al 2003).[73] This land is also good and favourable for planting trees as a defense against erosion. As natural capital, the city of Nampula has plenty of typical trees for greening the city.

However, due to lack of awareness that the people of Nampula apparently have in relation to the value of such natural assets, the consequences are currently often visible. These resources are under-utilised to prevent soil erosion, to reduce the power of cyclones and the destruction of floods. To the contrary, people use natural resources in an uncontrolled manner and when it rains the fields and other important economic infrastructures are defenseless against destruction. For example "some natural resources [which] are routinely used by poor urban residents, e.g. rivers that may be used for washing and even drinking" (Farrington 2002:21) become contaminated. Informal houses are easily destroyed due to lack of protection from torrential rains. The following section will discuss the tools and other equipment that humans own as their physical properties.

3.2.4 Physical capital

Physical capital consists of the basic infrastructure and material goods that sustain livelihoods. Infrastructure consists of changes made to the physical environment that facilitate people's ability to meet their basic needs and to be more productive. Neefjes argues that "physical capital ranges from chemical inputs into production processes to infrastructure such as factories, roads, and water-supply systems. It also includes pastures planted with monocultured grass, supplied with a drainage system, and maintained by people…" (Neefjes 2000:89). In addition, Moser (1998) quoted in Farrington (2002:21-22) indicates that "physical capital includes assets such as housing, tools and equipment that people own, rent or use and public infrastructure that they have access to. Housing is normally one of the most important assets for poor urban households as it is used both for shelter and reproductive purposes and for productive or income-generating purposes…"

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[73]This information was taken from a research paper conducted by Isilda Nhantumbo, et al 2003, on Sustainable Livelihoods in Southern Africa: Institutions, Governance and Policy Processes. Additional information can be accessed through the following website: http://www.ids.ac.uk/slsa.

The city of Nampula for example, has little value for the physical capital of its citizens. Many factories that benefited people have inexplicably closed down. For example, Texmoque was the greatest factory in the north of Mozambique, constructed for textile production, but its future is uncertain since it has been closed down for more than ten years now. "Texmoque closed in 1994. At that time it was under state management. Multiplier acquired it in 1996, but proved incapable of re-launching production…"[74] Since it was abandoned a long time ago, the area has become extremely degraded, endangering the people around it. The source above tells that "Mohammed Enterprises Tanzania Ltd (METL), one of East Africa's largest conglomerates, has bought the former state-owned Texmoque textile factory in Mozambique."[75]

The two Sogere factories located at Avenida de Trabalho in the city of Nampula were the greatest asset for a variety of cool drink productions. Due to unforeseen circumstances both were also closed down about ten years ago. Today the Sogere premises serves as a dumping place where all waste in town is thrown away. At one time, it was a beautiful working place and a great supplier of cool drinks to the whole northern region of Mozambique. However, nowadays its service and beauty has been forgotten. In the inner city, the roads are manageable but there is still more to be done to repair deteriorated roads, and sanitation. In the peripheries of town, waste accumulation along markets and neighbourhoods is endless, endangering people's health.

Further, taking cognisance that physical capitals include all infrastructures humans possess including the environment itself, it is therefore important that people should not overlook the environment and infrastructure because they have a direct relationship. This relationship implies that one cannot build infrastructure in a deteriorated environment. Hence, it is understandable that where there are no financial resources, it can be difficult to maintain a good environment.

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[74]Texmoque stands for Mozambique Textile Industry. It is the biggest textile industry in northern Mozambique. Information about this failure can be seen in Mozambique News Agency AIM Reports.
www.poptel.org.uk/mozambique news/newsletter/aim328.html - 33k
[75] Ibid

3.2.5 Financial capital

Without money or something that can create regular income, it is difficult to meet any human beings' needs. Financial capital refers to resources that empower people to realize their dreams. Financial capital is defined as "financial resources that people use to achieve their livelihood outcomes. These are resources in the form of available stocks and regular inflows of money (for example, livestock and the related flow of income)."[76] In addition, financial capital constitutes "the financial resources that are available to people in pursuit of their livelihoods, including savings and credit. This includes cash flow as well as stocks, and it can contribute to consumption as well as production" (Neefjes 2000:90). This definition shows that to cope and sustain their lives, people must have financial capital such as money or something that will bring in money - for example farm or domestic animals (cattle, sheep, pigs, chickens, etc) - or be engaged in other activities that generate an income.

Therefore, financial capital play a key role for livelihoods because without it there will be no sustainability. However, it is important to note that such capital cannot be isolated from other forces such as policies, processes and institutions. These forces play a paramount role for sustainability of financial capital. They constitute an asset since they have power to influence decision-making for the functionality of any activity.

> "This means that the sheer existence of a capital, whether social, human, physical, financial, or natural capital, is not enough even if its quality is high. Legal rights to capitals are important, but in themselves are not sufficient to ensure improved livelihood strategies either. Individual people, households, and certain groups or classes of poor and vulnerable women and men must actually access capitals in order to turn 'endowments into real livelihoods and environmental entitlements' through their knowledge, skills, and in particular the social institutions that mediate their claims" (Neefjes 2000:90).

In addition, political participation constitutes capital because it bears power and capacity to persuade "political decision-making through formal and informal participation and/or access to political processes. It therefore includes the ability to represent oneself or others, the freedom and capacity to become collectively organised to claim rights and to negotiate access to resources

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[76]This information was taken from Sustainable Livelihood Approach through the following website. *www.poverty-wellbeing.net/media/sla/docs/3-3.htm - 14k -*

and services. It also extends to the right to hold government and service providers accountable for quality and access."[77]

The five categories of livelihoods capital are important for this study. If they are not in place - specifically human; natural and financial capitals to support the battle of environmental degradation, then it will not be eradicated even by or after 2015 as the Millennium Development Goals intended. Therefore, it is important for the purpose of contextualisation to discuss the past background of the environmental situation in the city of Nampula.

3.3 Historical background of the environmental crisis in Nampula

The historical background of the environmental crisis in Nampula cannot be separated from that of the Mozambican context as a whole. The "...successive waves of destruction as a consequence of the 10-year war for independence and the 16-year civil war, which the young country experienced...this history resulted in the situation that at the end of the war Mozambique was considered one of the poorest countries of the world, with an external debt of almost 200% of its Gross Domestic Product, with a level of poverty above 80% and a level of inflation of almost 50%" (Guebuza 2010:6). Naturally, these wars triggered migration from rural to the urban areas around the country. This exodus to urban locales for safety and economic reasons aggravated the environmental crisis.

Concerning the economic demands, Filipe Lucio[78], quoted in Muhongo et al (2009:5)[79] who discussed environmental and climate changes in Mozambique, considered how it significantly affects living organisms and day-to-day socio-economic development at regional, local and household levels. He gave evidence of environmental and climate changes as the consequence of "increasing surface temperatures and rising sea levels; increased frequency and intensity of extreme weather events; increased variation in wind and rainfall patterns; and increasing risks of

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[77]Ibid

[78]Filipe Lucio is a representative for the World Meteorological Organisation based in Mozambique. This information is the result of his report which he presented at the 29th ICSU General Assembly held in Mozambique on 13-24 October 2008, on the *climate and environmental changes* perspective.

[79]Sospeter Muhongo is a professor and director of ICSU and he is the editor of these reports presented at the 29th ICSU General Assembly in 2008. ICSU stands for International Council for Science Union and for further information can be accessed at www.icsu-africa.org

hazards and disasters". Filipe Lucio in Muhongo et al (2009:5) underlined the impact of environmental and climate change "…on the degradation of freshwater resources and fragile ecosystems, groundwater recharge, agricultural production, human health and population displacements".

In light of the attraction and trend to migrate to the urban area of Nampula, it is foreseeable that in the times to come more than half of the population will be urbanized. Factors such as modernisation of living conditions will most likely contribute to population growth and further settlement expansion. The vicinity of Nampula will continue to grow in an uncontrolled manner with informal settlements proliferating on the outskirts of all urban centres. Currently, housing in these areas provide just basic shelter and are overcrowded and poorly serviced.

3.3.1 Indigenous knowledge on environmental management

The traditional belief system has continued to inform much of the life and activities of the people of Nampula. Their common beliefs in traditions of avenging spirits are still critical in maintaining a moral, virtuous society, especially in the countrysides where traditions are still seriously observed. One belief system has the "taboo" which in the mother language (Makhuwa) is known as *maxintta* or *rukwa*. Maxintta or rukwa are terms which mean magic or witchcraft. This kind of taboo constitutes fencing property using *rukwa* so that no one can destroy or steal any property which can include a wife/husband. In the same way, this magic can be used in Makhwa context to protect a specific area of land, trees, and water on demand of spirits. So, though using magic in some contexts is an acceptable thing, in somehow it helps to keep ecology. It is due that after people know that such area is witched they fear to destroy.

This shows that indigenous people have their own knowledge affecting environmental conservation. Though indigenous people lack sophisticated material, they use convenient traditional techniques to prevent soil erosion and maintain sanitation. These methods include putting sand into sacks or planting grasses and trees and piles of stones to prevent soil erosion. All these things are done without any technique being applied. This lack of specific awareness could be due to the absence of adequate research and documentation in this field of study. It has

been observed that "very few empirical models combine scientific and indigenous knowledge in the EEPCs"[80] (Da Conceisão 2006:48).

According to Robitoille, et al (2002), the Southern African Development Community (SADC) nations strongly support traditional approaches towards natural preservation. The experts above observe that the decentralization of power in decision-making processes and indigenous awareness of the environment are key players. It is believed that in doing so the process of environmental education and crises eradication will be eased and achieved.

While researchers and environmentalists may recognize that centralization and bureaucracy of power is a barrier against development, the lack of recognition of the indigenous community leaders is also a failure for ecological conservation. In this regard they could play an important role as conservation programme promoters. They interact directly and constantly with the community, therefore they should not be forgotten. According to Riley & Riley (1994) "many old people desire to be recognized as productive members of the society and continue to contribute to society". Thus, old people in the society form an important and intermediary asset to the community, and can assist in training youth for ecological management.

Community-based conservation strategy towards environmental management calls for great commitment and responsibility in education and training of all classes and ages of peoples. It also requires respect and cultural understanding of a particular society. If the education process remains centralized for planning and implementing environmental education programmes, and if ignorance remains high, then environmental conservation will not occur, as is currently still the case in Nampula. Berkes rightly argued that "it has become increasingly important to incorporate the dynamic interaction between society and natural systems into models, rather than viewing people as stressors" (Berkes 2004).

The foregoing emphasizes that in order to solve environmental crises, it is necessary that indigenous scientific knowledge dialogues with, and forms part of the partnership between poor communities, business communities, scientists, managers and policy-making agencies.

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[80] EEPCs, stands for Environmental Education Programmes Campaigns

According to Da Conceisão (2006:56) "these are different groups with different knowledge systems. Once environmental consciousness is raised among these groups, the two systems of knowledge can easily be integrated and new strategies and technologies will be developed to solve environment problems".

In addition, the New Partnership for Africa's Development (NEPAD) recognizes environmental management and knowledge of ordinary people on environmental issues as a crucial element for attaining the Millennium Development Goals towards sustainable development and poverty eradication. This is because, "the state of the environment is a major determinant of the growth and development of any country. It has a pervasive effect on the safety and standard of living of the population" (NEPAD 2002:52-53). This means that any environmental management process which does not educate and involve local communities may not have the intended impact.

3.3.2 The urban environmental problems

The technical capacity within the urban environment differs from municipality to municipality. It depends on the presence or lack of qualified staff. In Mozambique, the number of qualified staff with a university degree especially on the environmental field is limited. Those who have a degree tend to look for jobs in Maputo, where living conditions look favourable to them. DANIDA (2000) quoted in Da Conceisão (2006:25) observed that "environmental awareness is lacking in Mozambique, not only among the population and private enterprises, but also among the staff employed by the central administration and local authorities" .

In this regard, few environmental professionals exist in each municipality in Nampula. However, there is little attention given toward ecological management. In addition, "the question of technical capacity is key. Most municipalities have only few professionals and are lacking basic working conditions such as transport, equipment and not least funds to implement the interventions" (Eskemose 2004). This research agrees with Da Conceisao (2006:25) as he states that the presence of qualified staff "…will ensure that environment considerations are respected during the implementation of many industrial projects". To expand on Da Conceisão's argument I submit that environmental consideration should be mainstreamed in all sectors.

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If Nampula is taken as a case study, environmental consideration should not only be limited to industrial projects. Instead, it should include addressing inadequate sanitary conditions and the general practice of defecating in the open air; insufficient collection and treatment of solid waste; lack of access to water in sufficient quantity and quality; lack of drainage causing floods and erosion; and unplanned settlements located in inappropriate areas.

To me these problems could be the result of a lack of technological knowledge. Da Conceisao said that many Mozambicans "still rely largely on their indigenous knowledge systems and practices" (Da Conceisão 2006:19). Although, people may have their own knowledge about ecological conservation, they still need advanced information on how to use the resources available to them in a manner that prevents environmental vulnerability. Further, although the indigenous knowledge is one of the resources which could assist to prevent the earth from degradation, the high illiteracy and poverty that people experience obstructs its efficacy in preventing environmental problems. One of the reasons for this is "the rural communities depend mostly on subsistence agriculture, fishing and exploitation of forest products" (USAID 2000). Hence, they overuse the earth without giving thought to conservation. Therefore, it is important and an urgent need for the government and environmentalists to develop this indigenous knowledge for better environmental intervention.

While there continues to be persistent unwillingness from those who are in a position to address the congestion and needs of the urban population and environment, ecological problems will continue long before they are resolved. The government could work together with the local communities to design settlements where basic needs like roads, schools, markets, sport and recreation facilities and gardens are located in an orderly manner. Those who hold power should seriously prohibit the establishment of disorganised settlements, informal markets and tuck shops in front of houses and roads as these degrade the environment. It should not allow any business developments in areas that are incongruous because of environmental vulnerability to disasters. Also, the government could solve the congestion by properly expanding urbanisation.

In other words the government should have a comprehensive urban plan that recognises the inevitable attraction of the people to come to the city, and the trend toward urbanisation. Such a

plan would allow for expansion of the city in an ordered fashion, providing infrastructure and rendering services to the inhabitants of the city. In such an urban expansion plan the government should act to reduce congestion in the inner city and urban environments. It could also include creation and preservation of public facilities, like parks and other public spaces with social and cultural value.

3.4 Socio-cultural and religious context

From a social and cultural perspective, the Mozambican people are not socially and structural unified due to their diverse socio-cultural and religious backgrounds. According to Arnaldo, "Mozambique is culturally heterogeneous with both patrilineal and matrilineal systems of social organisation represented" (Arnaldo undated). This is so because people of Mozambique have diverse socio-cultural and religious backgrounds. In the northern region of Mozambique, the majority of people constitute the Makhua tribe who practise a matriarchal system. In the south and some parts of the central regions, the tradition is patriarchal. In the "North of Zambezi, the main ethnic groupings among the African population, which belongs to the cultural division of Central Bantu, are Makhua groups, who form the principal ethno-linguistic subdivisions of Mozambique and are believed to comprise about 40% of the population" (Pelissier 2006:793). The Makhua ethnic group is predominantly in the Nampula province and the majority of people in this province speak Makhua as their mother tongue. In relation to the marriage issue, there are different ways of getting married. For instance, Brandon stressed that:

> A patrilineal marriage involves permanent incorporation of a woman in her husband's lineage and complete transfer of her reproductive power to her husband's family through payment of bride wealth. Under such circumstances, divorce is more difficult because the bride-wealth would have to be returned and the woman would be separated from her children. In contrast, in a matrilineal marriage, the rights of the woman's reproductive abilities remain with her lineage so that the duration of the marriage depends on the couple's individual attributes (Brandon 1990:151).

However, it is observed that "intermarriage among sub-groups and even some main groups as well as racial inter-relatedness, common cultures and values, lessens some of ideas of rigid separation to which strict classification perhaps gives rise" (Henriksen 1987:247). Still the people of Mozambique observe their traditional systems of marriage through matriarchal and

patriarchal systems. For example, "peoples north of the Zambezi generally trace descent by a matrilineal method…" (Henriksen 1987:247).

However, Nampula alone enjoys no less than five methods of marriage namely, "the traditional matriarchal system, the traditional patriarchal system '*lobolo*', the Islamic system, Christian marriages and civil marriages. Each of these systems has its own ceremonies and each creates its own patterns of family relations" (Sachs & Welch 1990:66). It is important to observe that these systems have occurred in specific locations due to practical reasons. For example, traditional and Islamic marriage systems are more adhered to in the rural areas, where the law and modern norms are less understood than in the cities. While the Christian and civil marriages are believed to offer security, they are also an option for the urban people. However, the matters of both matriarchal and patriarchal traditions still remain strong depending on the regional settings.

This research discusses only matriarchal, patriarchal, Christian and civil marriage systems. In fact, since these systems are linked with power, they sometimes can contribute or prejudice the environmental care depending on how they are applied in each society. For instance, in the main Nampula society, men have power over women. Men's decision-making can influence women and youth against or in favour of earth care. Accordingly, Neefjes (2000:100) stressed that "there is a total amount of power in a given society; it can neither decrease nor grow, but groups of people and individuals fight, negotiate, and struggle over it. Power is exercised over social processes and social groups. Power is the object that everybody tries to get hold of, for example through participation in political decision-making processes".

3.4.1 The matriarchal tradition

This tradition of family and marriage is practiced in the provinces of Nampula, Zambezia, Tete, Niassa and Cabo Delgado. Traditionally, the purpose of this marital system is to assure and protect success in the family and secure rights and duties. Thus, it is not a woman that goes to a man, but it is the man who goes to join the wife's lineage. Family and children, land, and social matters will be dealt with through the wife's mother's lineage. For example, "when a marriage takes place, the woman stays on in the homestead or locality of her parents, while the man leaves

his parental home to live in the homestead of the family of his bride" (Sachs & Welch 1990:66). It is important to know that "within these systems there are specific roles and statuses, patterns of interaction, as well as groups and institutions with certain functions" (De Beer 1998:67).

Thus, analysing community structures and organization is essential as it helps one to learn the contribution or disadvantage it can offers for environmental care. In relation to this study, this system may give responsibility to women as householders on how to design roles for their children in environmental care. In patriarchal systems men may lead for the same purpose as well. In the tradition of matriarchal marriages, "women do not rule in matrilineal societies. Woman's children belong to the female line and frequently adopt the surname of the mother, but it is not she who exercises parental power so much as her uncles, brothers or cousins" (Sachs & Welch 1990:67). Although women in this marriage tradition have the role of furthering generations, she nonetheless remains powerless. "...persons who exercise a dominant role both in respect of internal relationships and in respect of relations between her families…are her male kin" (Sachs & Welch 1990:67).

Further, though women do not have power, they are more respected and protected. In this tradition, there is no practice of *lobolo*.[81] In Makhua society, good behaviour for a man and the willingness to work hard plays a paramount role in the ability to marry someone's daughter. Traditionally, a man proposes to a girl through her parents or guardians, and the response takes time because they have to go secretly to a man's neighbourhood to assess his moral life. The findings will determine if he can be accepted or not. After a man has been accepted, then he can now pay a symbolic *lobolo*.

For instance, Sachs and Welch (1990:67) commented that "the young man proposes marriage by paying the girl or her aunt or grandmother the symbolical sum of twenty-five meticais[82] (less than one US dollar.) If he gets half back, he knows he has been accepted. If all is returned, he has been rejected [sic]". It is therefore rare that there is a direct monetary sum as a "payment" for

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[81] Lobolo is a culture practiced in many parts of Mozambique. Normally, in these parts, when a young man reaches his time to marry he first has to pay lobolo. It can be paid by money, cattle, cloth and other valuable goods. In some families if one does not pay lobolo, it is believed you are likely to not have children. It constitutes a recognition of the value of a girl before her parents.

[82] Meticais/Metical is a plural and singular designation of Mozambican currency.

the girl. What used to happen is that if a man is accepted he moves to the girl's parents' home and there he is expected to perform well in a variety of ways such as house building, opening an agricultural farm, hunting activities and fishing for the family. These activities constitute a test to prove if he is a real man to have in the home.

From a social point of view there is ultimately no negative impact in this practice although in some cases it can increase poverty for the new couple. It is because the new couple, when moved from the father-in-laws' yard, loses some of his possessions previously shared. With regard to the environment, some duties expected of the son-in-law such as hunting activities which involve veldt-burning can cause environmental crisis. The next section discusses a patriarchal marriage system.

3.4.2 Patriarchal marriage system

This system is mainly observed in the southern region of Mozambique (Inhambane, Gaza and Maputo) provinces and in some parts of the central region (Sofala and Manica provinces). In these regions, the "family line is traced through the father rather than the mother. Normally this system is patrilocal [sic] in that it is the woman who leaves her family group to live with and 'belong to' the family of the husband" (Sachs & Welch 1990:68). In these regions *lobolo* is practiced and traditionally paid in cattle. Sachs & Welch (1990:68) said that the practice of *lobolo* "to the bride's parents served to compensate them for the labour expended on their daughter's upbringing and for loss of her productive and reproductive capacity…lobolo served additionally to stabilise relations between the new couple, since the wife would not lightly run away from her husband knowing that her family would as a result be obliged to restore the lobolo".

In this regard the practice of lobolo in Mozambican patriarchal societies plays a double role i.e. compensation and protection. However, in Christian and civil marriages the understanding differs from the two previous one. Hence, this practice has some impact on environmental conservation. The two terms 'compensation' and 'protection' here can also be implied in ecological matters. For example, if lobolo practices compensate the woman parent's investment

in their daughter, people should also take care to honour God as the creator. This protection teaches people to take care and protect the environment.

3.4.3 The Christian and civil marriage systems

The majority of Mozambicans believe that a Christian and civil marriage system offers greater security, as it is tied into biblical and civil law principles. For these reasons, people opt to marry through Christian rituals and civil law. It is believed that Christian marriage does not devalue civil marriage rather it requires that both be done. For instance, the "marriage officers of the different denominations insist that the couple first celebrate their marriage in the civil registry before marrying in Church" (Sachs & Welch 1990:69).

The civil marriage is believed, for many Mozambicans, to be suitable since it protects the rights of couples. For example, it is observed that after independence, "less than ten per cent of all new unions are registered today. Each year, relatively few people who marry see any advantage in registering their marriage" (Sachs & Welch 1990:69). This is because though there is no prohibition of polygamy, the law generally celebrates monogamous civil marriage, as linked with the Christian tradition. However, this does not devalue other marriage systems. It is also not to deny that in Christian and civil marriage systems there are disadvantages such as breakdowns, parents' influences, divorces, poverty and immorality.

3.4.4 The advantages and disadvantages of the above marriage systems

Culture is a societal way of living and because of that, there is no superior culture. Thus, one can assume that matriarchal marriage systems enjoy some advantages and disadvantages. The advantage of the matrilineal marriage system is that women feel protected since it is not them who leave the parent's house; rather it is men who come to women. Women enjoy their brother's, uncle's and their own children's protection. Though in a matriarchal system women have little power, they play some important roles i.e. women are the administrators of the household. However, one of the weaknesses of this type of marriage involves damage to children and prejudice as explained here below.

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Since the marriage is matrilineal, the husbands cannot fully exercise the responsibilities of parenthood. It is the brothers-in-law or the wife's older brother who decide the destiny of the children. In this regard, many children in families from a matrilineal tradition cannot enjoy adequate education. Some uncles cannot afford to pay double school fees of their own children and their nephews. As a result, girls from a matriarchal tradition often find themselves getting married at an early age before completing secondary school studies. They have no choice, as their uncles hold power to decide for them concerning their future.

In patriarchal communities, some children are well-educated since the responsibility is shared between the parents. Parents play a full role regarding their children, for all kinds of education. In these societies, people are more educated and economically well-off than that of matriarchal communities. The weakness of the patriarchal system is that most people understand that after lobolo has been paid, women usually become home workers.

Another disadvantage is that women married through a lobolo payment, are not free to marry a man from another family group if her husband has died. She can only remain unmarried, and under the supervision of the dead husband's relative. She can only remarry if it is to a man from the previous husband's family line. Furthermore, since the expenses to pay lobolo remain high, many women cannot get married easily. Consequently, there are numerous fatherless children, and the risk of the spread of HIV and AIDS remains high.

Christian and civil marriages attempt to protect women and children from abuse. The Christian system of marriage guarantees that "…any problem that might arise would first go to the family council, then to the relevant Church structures, and only if no solution could be found would they be taken by one or other of the parties to court" (Sachs & Welch 1990:69). Furthermore, Christian marriage is characterised by monogamy, and is undertaken with vows made in the presence of the believers, priests or ministers. The advantages of both Christian and civil marriage methods are in the value and protection ascribed to families. The goods and possessions belong to all rather than to one person as in traditional and Islamic marriage.

Therefore, both matriarchal and patriarchal systems have different characteristics. According to Sachs & Welch (1990:67) "matrilineality is a characteristic of agricultural societies, in which the family field acts as the main source of family, wealth, while patrilineality is a characteristic of pastoral societies in which cattle constitute the primary source of wealth".

3.4.5 Culture and religion

Before independence, the dominant religion practiced publicly in Mozambique was Roman Catholicism, primarily because it was linked with the previous Portuguese colonial state. However, political matters occupied a separate realm. It is argued that "during the late 1970s and 1980s in newly independent Mozambique there were many studies of the emergence and development of political consciousness and of the armed liberation struggle" (Cruz e Silva 2008:161). However, because of the state's ideology[83] toward religion there was little focus on theological training or even any religious discussion of political matters.

The consequence of the separation of religion and state is still there. Even today, the majority of Mozambique's population, including the state, pays little tribute in relation to the role of religion in political and social transformation. For example, Cruz e Silva (2008:161) argued that in the "Mozambican educational tradition, theological and religious studies were undertaken mainly in Christian seminaries…Hence, little was known about religion in contemporary Mozambique and still less about its interaction with politics" . Hence, I submit that it should not continue in the same way. The church plays an important role in society. However, the church itself needs to be in public arena to show that it is God's ambassador to promote freedom, justice and peace for God's creation.

From the periods of conquest, "around 1895, until the transition to independence in 1974, however, Protestants had a very difficult relationship with the Portuguese authorities. They were

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[83] Before independence, usually the Roman Catholic Church was the only officially recognised religion and was used mainly just to "civilise" natives. The leaders 'priest' were considered as 'gods'. After independence in 1975, perhaps because of how previous religious leaders and colonial power rulers oppressed the natives by using religion, Christianity was overlooked. Then, the country was regarded as having a pluralistic religion. To confess Christianity and even to study theology was regarded as "crazy". Consequently, some Mozambican peoples' ideology is that"religion", mainly Christianity, is for poor or crazy people!

suspected first of working for the political interests of their countries of origin against the Portuguese, and later of helping to form a nucleus of African opposition to colonial domination" (Cruz e Silva 2008:162-163). If one takes into consideration the foregoing, one can say that due to this religious distance vis-à-vis public issues including suspicion these are perhaps further reasons why many issues such as the environment, poverty, human rights, peace, and oppression remain unchallenged.

However, the Roman Catholic Church was successful in influencing policy at some points in time in Mozambique. For example, the "government policy on social issues, education, and 'assimilation' of the indigenous African population reflected the state's adoption of Catholic moral principle" (2008:163). It is through this strategy of assimilation that the Catholic Church expanded its mission. This Church lost its control and relationship with the state after independence in 1975. This disconnection of relationship between the Catholic Church and the state worsened as the government "nationalized social services, land and rented properties" (Hanlon 1991:11-12).

This nationalization gave local people the opportunity to become local Catholic priests since white priests left the country and "the subsequent indigenization of the priesthood occurred in this context of political marginalization and alienation" (Cruz e Silva 2008:164). It was through this new phase of independence that other churches such as Protestants started delighting in their new-found religious freedom. Thus, "after 1974 more churches joined the CCM and through this Council they developed programmes of cooperation with the government for national reconstruction" (Morier-Genoud quoted in Cruz 2008:164), and "many Protestants using private channels, managed to communicate and to establish a relationship with Frelimo" (Vines & Wilson quoted in Cruz 2008:164).

However, this religious freedom faced new challenges when "between 1977 and 1981, Frelimo introduced new policies in order to socialise and modernise the country. These were accompanied by open hostility to religion" (Silva e Cruz 2008:164). For instance, even after independence many churches were not free to worship their God. The country went through

political civil war which, somehow impacted negatively on the country as many basic facilities were destroyed and the environmental crisis worsened.

Therefore, these diverse estranged relationships between the Catholic Church, Protestants and state, and the diversity of educational, biblical training, cultural and societal backgrounds resulted in a lack of integration between Church and state and even among churches. For instance, one can notice that there is "often some distance between discourse and practice, and thus a distance between leaders and members… hierarchical forms of many churches can function as a means of domination, leading to the emergence of authoritarian leadership" (Cruz e Silva 2008:187).

This shows that there is often a tendency for the churches to exercise oppressive power over their adherents. So, given that the church leaders largely lack basic and formal education and come from diverse cultural backgrounds "the churches as such do not enjoy representation in parliament, and their only form of political participation can be through political parties" (Cruz e Silva 2008:187). As a result, this does not give the church opportunities for effective engagement and contribution in matters of national interest, as also applies to the majority of the citizens who are excluded from exercising their democratic rights in decision-making.

In this manner, the church still finds itself far from dealing with ecological matters hence some churches perceive that the issue of environment is only for the government. This is why this research is trying to elaborate a comprehensive, holistic and transformational teaching that does not overlook the care of God's creation. Further, "...this means that all the parts of life fit together into one piece like the woven design of a piece of cloth. Life is not divided into separate and unrelated parts. All the parts together form a beautiful picture called life" (O'Donovan 1996:4).

Since African society views life holistically the church has no room to hide one part of human life and just to keep on preaching only spiritual repentance. That is why this research seeks to contribute to a theology that challenges the church to speak a prophetic message against issues like exclusion, injustice and violence towards God's creation. If these issues are addressed, it

may stimulate a quicker recovery from ecological degradation and the socio-economic situation in Mozambique.

3.4.6 Mozambique's socio-economic situation

Before and after independence, agriculture remains the main sector for Mozambique's economy. The majority of the population relies on soil cultivation for their sustainability. Cravinho stated that, "…More than 80% of the total working population was engaged in agriculture. Since independence, agricultural production has been adversely affected by the scarcity of skilled labour following the post-independence exodus by the Portuguese, the internal conflict which prevented nearly 3 million Mozambicans from farming the land, and drought, flooding, cyclones and insect pests…" (Cravinho 2006:800).

In addition, Pitcher observed that "in the urban and peri-urban areas, since manufacturing depended on agriculture to supply about half of its raw materials, industrial output was naturally affected by the troubles in the rural areas… A lack of management experience [of recent government], a shortage of skilled workers, financial difficulties and the paradoxes of centralized planning also had a negative impact on output" (Pitcher 2006:92). Besides agriculture, Mozambique's economy is supported by mining, petroleum and gas, with hydroelectric power being the main component through the power-generating industry of the Cahora Bassa Dam. Industry is important, (although there are only limited industries in Maputo), as are transport (railways, roads, ports, air), telecommunications, tourism, and trade.

Research conducted in Mozambique has pointed out that "Mozambique's post-independence economy has suffered the damaging effects of a guerrilla war, drought, floods, famine, the displacement of population, and a severe scarcity of skilled workers and foreign exchange. These difficulties have been compounded by a large visible trade deficit, with export earnings covering less than one-third of import costs and high levels of debt repayments" (Cravinho 2006:799). These difficulties led the country to be burdened with international debt. Consequently, this debt apparently may contribute to environmental degradation as there will likely be funding scarcity to address adequately ecological care.

Another issue associated with economic problems is "the post-1975 implementation of socialist policies, a protracted and low intensity civil war, and the more recent commitment to privatise state assets" (Pitcher 1998:115). Indications of economic recovery were observed in "1987 when the government initiated an economic recovery programme (PRE), which was supported by the IMF and which aimed to increase economic efficiency and to reduce internal and external deficits, by a liberalisation of the economy" (Cravinho 2006:799).

With reference to the economy, the very first resource base for sustainability for the majority of the Nampula population is the fertility of agricultural land. Nampula also has other resources such as gold and iron in the districts of Moma and Murrupula. Cashew nuts play an important role as the main product for export in Mozambique at large. Even with these resources, Nampula still stands poorer because it has only a small number of qualified people and lacks equipment for extraction, processing and adequate distribution of such a resource base. Economic distribution in Mozambique is influenced by politics since the governing system is centralised and controlled externally. In other words, in Mozambique most matters are decided at the national level since the country depends on foreign aid. Since economic distribution is centrally concentrated, the grass roots population does not benefit and the poor cities such as Nampula cannot adequately address their ecological problems.

Soderbaum has argued that "to solve environmental problems, neo-classical economists therefore usually make the recommendation that externalities should be internalized" (Soderbaum 2000:10). This expert added that "ecological sustainability is a value of primary importance. This kind of sustainability cannot be achieved without considering the various social and monetary implications" (Soderbaum 2000:xii). Internalizing economic systems as well as valuing ecological sustainability and monetary implications, will give significant power to the local authorities, and civil society, to fight against environmental degradation, because they will have access to resources.

Soderbaum's argument gives one insights into the interrelatedness of conservation with power, economy and political decentralization theories. Where, for instance, decentralization becomes a tool, local communities find capabilities to curb their ecological crisis and other challenges.

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Hence, UNICEF argued that "decentralization is considered to be a driver for poverty reduction, as it encourages democracy, popular participation, responsiveness, accountability and equity at the local level" (UNICEF 2011:32). Therefore absolute poverty is when people have no voice about their resources and when they are too dependent only on central government decisions. UNICEF further observed that "economic theory tells us that there is a strong link between changes in wealth and the sustainability of development: if a household is running down its assets, it is not on a sustainable path" (2011:208). This is the economic situation in Mozambique as discussed in the following section.

3.4.7 Demographic and socio-economic context

Mozambique's official population figures and projections are elaborated by the National Institute of Statistics and are based on national census data. UNICEF pointed out that "the most recent census was conducted in 2007, and results reveal that the total population of Mozambique increased by 28 per cent between 1997 and 2007, equivalent to an annual increase rate of 2.4 per cent...The population of Mozambique is overwhelmingly young. In 2007, of a total population of 20.5 million, half were children under the age of eighteen years..." (UNICEF 2011:29).

Concerning economic context, the research indicated that "Mozambique is a low-income economy, with per capita Gross Domestic Product (GDP) estimated at $US 453 million in 2009. It is observed that "dependency ratios were estimated in 2006 at 72 per cent and 92 per cent for urban and rural areas respectively, with an overall national ratio of 85 per cent" (UNICEF 2011:29). However, since the signing of the General Peace Agreement in 1992, there is a political and government effort to lessen absolute poverty in Mozambique given that the "GDP growth averaged an impressive eight per cent annually during the period 1993-2009... Economic growth has been accompanied by the development of a reasonably stable and predictable microeconomic environment" (UNICEF 2011:29).

However, these figures do not mean that the economic context is stable. Many people are starving everyday as most Mozambicans, specifically women and youth are unemployed. According to my personal experience unemployment for these specific groups of people is due

mainly to the lack of job opportunities and the qualifications required for key jobs. Consequently women and youth mainly end up working in informal businesses which cannot guarantee them sustainable income. In this regard, as the matter of employment is linked with economic issues, it is important to discuss the economic context in Mozambique.

3.4.8 Statistics regarding economic context

Economically, it seems that people are not really free. Accordingly, "Mozambique is still one of the poorest countries of the world... more than half of its population lives below the poverty line;[84] Mozambicans are vulnerable to drought and floods...more than 40% of the State Budget still depends on external assistance; the AIDS epidemic continues to be a threat to development... (Guebuza 2010:6). These natural threats constituted the major causes of poverty in Mozambique since independence in 1975. Guebuza pointed out that until 1990 studies revealed that people living below the poverty line were estimated to be 80% of the population (Guebuza 2010:9). However, continues Guebuza, if government effort to reduce poverty is taken into consideration "the incidence of poverty in 2008/09 is estimated at 54.7% of the population at national level" (Guebuza 2010:9). A simple comparison shows that there is a big improvement in relation to the poverty reduction.

For me, this progress is an indication that the government has engaged in the improvement of the living conditions of the population. This effort is shown by the massive investment in high and professional education, health and the supply of safe drinking water. Also, "the decentralization of resources to the districts and the consequent creation of the District Fund represent the Government's effort in strengthening the districts as poles of development" (Guebuza 2010:15).

The 1997 poulation census data shows that "in 1997 the economically active population in Mozambique was about 5.6 million people, the majority of whom were self-employed workers (52%) and unpaid family workers (33.7%); 11.1% were employed, of whom 4.1% in the public

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[84] Some experts like Hagenaars and Praag have defined the poverty line by saying that: "if the poverty line is higher in countries with higher median income...the poverty line is said to be relative; if the poverty line does not vary with median income, it is said to be absolute. The poverty line definition suggested appears to be a generalization of almost all well-known poverty line definitions". (http://www1.fee.uva.nl) – Leyden University, Center for Research in Public Economics

sector and 7% in the private sector. However, in 2005 the rate of unemployment calculated through the Labour Force Survey, carried out in 2004/2005, was 18.7%" (Guebuza 2010:15). In relation to the previous data indicators, there is an encouraging sign of an annual employment increase. For instance it showed that "...in the 2005 to 2009 period a total of 924,168 new jobs were created" (Guebuza 2010:16), this seems to indicate some positive progress. This rate of employment could improve more if the socio-political context remains stable.

3.4.9 Socio-political context

In the current political context since the Peace Accord was established in 1992, the country is enjoying a peaceful democracy. There are a number of political parties which contribute to the maintenance of democracy. Politically, it is not to say that everything is going well in Mozambique. There are some disagreements between opposition and ruling parties. Economically, people are still not really free because there are many threats like annual natural disasters and the persistence of the AIDS epidemic. In terms of free expression and public participation in government decision-making processes, people are still uncertain.

For instance, Salomao (2002:11) argued that, "Mozambican law does not include any procedural guidelines for community participation in wildlife and forestry management, which represents a major gap in the existing framework". Additionally, "in Mozambique the government retains substantial powers over defining the types of resource use communities may undertake and where they can exercise them" (Salomao 2002:12).

I agree with Salomao that by silencing the community it dismisses the "Mozambican law that establishes that communities must be involved in the design of management plans for wildlife management, including management plans for national parks and reserves" (Salomao 2002:13) as well as urban areas. Law must give power to the people. Law should serve to regulate, guide, and empower people by liberating them from stress rather than making them silent. In urban systems also the powers should have the same purpose of legitimatizing the citizens. The socio-political context has an important role in this study because everything is designed and practiced

under the regulation of law. So the challenge is how the lawmakers should work to benefit ecological sustainability.

3.5 Urban systems/powers

Urban systems/powers are evident worldwide; the effective development of all kinds of these systems of course is dependent on the context, nationally and at local levels. For instance Germond pointed out that:

> Development practice is enabled and constrained by the context in which it operates the complex of intersecting socio-capital networks of economic, political, military and ideological power. To fully understand development practice in any given context, the networks of power that contribute to that very context must be rigorously apprehended. If development practice is to have any effective agency, if it is to be powerful in itself, it has to come to terms with the power configurations that shape its potentials (Germond 2001:21).

In this perspective, Germond (2001:22) presents two kinds of power - relational and intentional, and non-relational and unintentional powers. These dimensions of power are inseparable from a theology of development. In the Nampula context for example, whether it is theological or social, power functions in each case, from one context to another. In the churches for example, people have power that they use over someone else. The church can exercise power over a person, or impose its power on another person to compel them to do something even when such person is unwilling to do so.

Another form of exercising power is that observed in some leaders. They use power to prevent someone from achieving success. This kind of power occurs also in the churches. For instance, "religions at times have used and continue to use coercion to achieve their ends. But the unique counters of religions' power are not to be found in the exercise of coercive power" (Germond 2001:23). However, it comes through personal power of faith in God, which follows obedience to him. This is because people are not forced to confess their own wrongdoing. It occurs through personal choice made consciously. For that, no external power could be added to someone's faith. Otherwise, the key biblical concept of salvation by grace will be undermined.

Urban systems and powers therefore contribute to the environmental crisis when the authorities give no attention to this need. Otherwise, urban systems and powers are the key players for ecological preservation. It is because they have all the resources to mobilise human and financial materials to solve ecological problems. This depends on whether the local authorities are willing to do so. Having discussed urban systems, the next section analyses policy and structures that either block or help urban environmental management.

3.6 Urban System, Powers and Structures of Environmental Management

Environmental management in Nampula is one of the priorities of the provincial government. These priorities include those defined in the national environmental Management Programme stated and approved in 1995 by MICOA:

> Responsibility for the co-ordination of the environment component of the Local Government Reform Programme concluded in 1999; Establishment of a Sustainable Development Centre in Nampula with responsibility for the formulation of a strategy for urban environmental management in Mozambique; Technical assistance to the urban environmental management pilot projects in Mocuba and Quelimane and Ilha de Mozambique ; Surveys of the environmental problems of more than 23 cities and towns in Mozambique (Eskemose 2004).

The same source indicated that in 1999 the Ministry decided to embark on a comprehensive Urban Environmental Programme for Mozambique. At the same time, the Danida organization[85] linked with urban environmental assistance intended to provide practical experience for the formulation of a national urban environmental management policy. Simultaneously, it tackles priority problems and works to increase operational capacity at the local level. The question of technical capacity is the key. According to my point of view, these structures try to do something as a way of mitigating the environmental crisis in the city of Nampula. To substantiate this argument the World Bank wrote:

> Nampula City has benefited from a number of studies and projects conducted under CDS. Among the studies was the preparation of PROGAU – Program for Urban Environment Management for Nampula City and District, which was supplemented later on by FURA – Fund for Environmental Rehabilitation. Studies conducted include environmental, health,

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[85]Danida is a non-government organization, working in various African nations for environmental issues through financial and skill training provision.

socio-economic and demographic profiles of Nampula City and District. Under PROGAU and FURA additional studies and projects have been developed, notably urban rehabilitation roads, market places, gardens, sewages, sanitation, solid waste and urbanisation (World Bank 2000:32).

However, though these structures seem well-committed in fulfilling their mandate with regard to environmental care, one can see that there are some weaknesses in terms of ecological management. Though the law attempts to empower the private sector, there is still a lack of community inclusion and interest from the decision-makers. For instance, Salomao said that "the Mozambican law presents ambiguous wording in this regard. Article 3 on principles for wildlife and forestry management, encourages private sector involvement in order to add value to and promote development of local communities. Strategies for this to be put into practice, however are absent from the law" (Salomao 2002:15).

3.7 Livelihood strategy and outcomes

The section above discussed the policy and structures towards urban environmental crisis. This section deals with livelihoods strategies as well as possible outcomes. Neefjes said "environmental-resource sustainability can thus be seen as essential intergenerational equity and as genuine outcome Neefjes (2000:85)". He adds that "outcomes represent the ultimate changes that people, citizens' group, governments, and development organisations want to achieve, which prompts the word impact. Impact is the lasting and significant change that is achieved and that can be attributed to the people themselves…" (Neefjes 2000:86).

This shows that there will be no livelihood strategy when the existing natural resources are not well-managed. In the context of Nampula, one of the natural resources includes land which constitutes the main livelihood strategy for the income of the majority of people. It is through the land that people are assured of food and income for their survival, and for this to happen, people need to take seriously the care of the environment. Neefjes added "well-being, income, food security, resilience… and social equity should improve, for both present and future generations… However, the achievement of sustainability, perceived as the maintenance of welfare…is ultimately possible only if what cannot be substituted or created is protected" (Neefjes 2000:84-85).

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Land and agriculture form the main livelihood strategy because the majority of people in Nampula have no formal jobs. For these people of Nampula the land constitutes their main asset for sustainability. Furthermore, "people can use what is accessible in their immediate environments…Their choices depend on their degrees of vulnerability and poverty, and on the assets or capitals that they can access. The strategy may be one of survival, or it may be one of sustaining and improving what they already have and do" (Neefjes 2000:86).

However, to "have" something without also having direct access to it, means nothing. Consequently, people's right and choices can be compromised. In other words, people will find it difficult to take care of God's creation while they have limited access to this basic resource. Environmental degradation should not be looked at in isolation without considering the land. Land degradation apparently can mean land abuse where powerful people own and sell land for high prices motivated by self-interest. The last section now concludes what has been discussed in this third chapter.

3.8 Conclusion

Chapter three discussed and analysed the environmental crisis within the sustainable livelihood framework approach. One of the objectives of the chapter was to assess the livelihood capitals, structures, processes, livelihood strategies and establish the relationship between people, their livelihoods and environments. It is indicated that SLF "is essentially people-centred and aims to explain...the relationships between people, their livelihoods and their environments, policies and all kind of institutions" (Neefjes 2000:82).

This study used the SLF because it plays an important role in such a way that it sometimes is able to provide guidance in building a comprehensive theoretical model for both environmental mitigation and developmental reflection. It is observed that one of the significances of the SLF is a method to "...facilitate the identification of practical priorities for actions that are based on the views and interests of those concerned" (DFID 1999:1). As shown in the diagram, this study has analysed the components of the SLF. The main reason for analysing the SLF approach diagram was basically to explain the negative impact of such components in relation to the

environmental, social and economic matters. The analysis of these components indicated that the environmental degradation in the urban and rural areas has a negative effect on both human activities and natural resources.

This chapter also discovered two factors: sensitivity and vulnerability. Sensitivity constitutes the level at which the system responds to the enhancement of climatic condition changes, while the vulnerability designates the degree by which the method can handle its impact, given that such vulnerability does not only depend on what the system is exposed to, but also on its capacity to adapt to the ecological changes.

Further, this chapter identified and analysed two categories of SLF capital. These include human, social, natural, physical and financial capitals as shown on the SLF diagram. In my analysis I learnt that human dignity, social development and ecological conservation can occur adequately when such capitals are addressed accurately and when the community and individuals have access to these capitals. Kretzman and McKnight (1993) and Neefjes (2000:88) said that human capitals are those identified within people's ability which includes skills... knowledge... and good health care. It includes also safe ecological conditions and education (Farrington et al 2002:20).

Furthermore, this chapter analysed in depth the sustainable livelihood framework approach and realised that economic activity has a great impact on environmental and urban management. Thus, in any society economic imbalance becomes a source of urban environmental vulnerability. Accordingly, scholars like Douglas (1998), and Katepa-Kalala (1997) cited in Meikle, et al (2001:6) considered that urban economies are part of a wider economic system and are affected by national and international macro policy. In other words, economic imbalance and the ecological crisis have negative impacts on human health.

In short, the sustainable livelihood framework approach, helped us understand that the urban poor, living in inadequate overcrowded shelters…suffer from disease and injuries resulting from proximity to toxic and hazardous wastes, lack of clean water and sanitation and water, air and noise pollution…They are particularly vulnerable to typhoid, diahorreal diseases, cholera and intestinal worms from contaminated water and food as well as diseases associated with poor

drainage and garbage collection, such as malaria.[Satterthwaite (1997) and Wratten, (1995) quoted in Meikle et al (2001:7)]. It is important to underline that the "economy" refers to physical materials which includes financial capital. Thus, it would be accurate to indicate that while urban persons depend on higher incomes to survive, for rural persons their economy depends on agricultural practices. Moreover, this chapter discovered that poor people from urban areas therefore need higher cash incomes to survive, unlike their rural counterparts who may rely more heavily on subsistence agriculture.

Chapter Four
Narrative Accounts of the Environmental Crisis in the City of Nampula

4. Introduction

In chapter three this study investigated the Sustainable Livelihood Framework (SLF) as a strategy of understanding environmental sustainable livelihoods based on literature. This chapter tables and describes the fieldwork findings. By means of interviews the objective of this chapter was together the views and experiences of the members of the Union Baptist Church on:

- The Environmental crises in Nampula
- Their theology of environment
- The strategic possibilities of reducing the earth degradation

In what follows, the interview process is outlined and the responses of the interviewees are presented. Four groups participated in this research namely the youth group, the women's group, Church leaders group, and the municipal director for environmental affairs in Nampula.

4.1 The interview process

A total of 20 participants were interviewed during the month of September 2009 using an unstructured interview. These participants were divided into four groups in the following order: 1) five young people (both male and female) of ages 18 -30 years, 2) seven church women of ages 30-60 years, 3) seven male church leaders of ages 40-75 years, and 4) a Municipal director of environmental affairs in Nampula of 45 years old. These groups were divided into these categories in order for every member to feel comfortable to talk openly and without fear, since culturally, in some Makhua societies, young people and Women rarely talk openly before men and elders.

The questions were administered in the Portuguese and Makhua[86] languages. The selection of the participants was facilitated by the church leaders through announcements during their Sunday services and my personal conversations. The criterion used was to look for active and willing participants aged from 18 years and older. Before the interviews began I presented the plan and explained the purpose of fieldwork to the provincial superintendent, elders and deacons of the Union Baptist Church. Afterwards, as a form of welcoming me and accepting my interview programme the church leaders provided me with a guest house where the interviews were conducted.

The interviews were conducted on different days and times according to the availability of the people. The purpose of the study was explained to the participants and after this each participant signed a consent form confirming their willingness to participate in this study. The youth were the first group to be interviewed. Women were the second group whereby the researcher had the opportunity to attend their Thursday meeting. The third group was church leaders. Due to the internal dynamics of the organisation and unexplained reasons, the men's group which was supposed to be the fourth group did not come to the venue and so they were not interviewed there. The allegation was that their chairperson did not give them approval to come for interviews. Then, I followed up with those individual male leaders who were available.

However, to complete the twenty interviews scheduled for this study, the researcher interviewed the Municipal director for environmental affairs in Nampula, Mr. C. A. Miguel who in effect replaced the men's group. The Municipal director provided more information, as he is directly working on environmental affairs. The interviews were organised in four sections: firstly, the environmental crises as a social problem; secondly, policy/laws/institutions as the determinants' elements for development or poverty; thirdly, God and the environment; and fourthly, church theology for the environment and the city.

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[86]Makhua is a local language spoken in Nampula and other northern provinces of Mozambique. In this study this language was used to accommodate those who have difficulty in expressing themselves in Portuguese.

4.1.1 Specific groups' interview

Group interviews took place on 7, 9, 10 and 11 September 2009. Although the groups were interviewed separately, the data is presented according to each question for all groups in succession. For example, the responses of the young people's group to question one, followed by responses of the womens' group to question one.

People interviewed included five young people, namely Rijone A. do Rosario; Castro Baptista Elias; Esmirna F. Viegas; Onofio J. das Flores and Mingas Tiago. There were more than fifteen women gathered for the interview in the guest house room. However, only seven were selected and interviewed namely: Henriqueta Namucoio; Alcinda Matos; Maria Araújo; Lidia Motiua; Ana Ramos; Luisa Imuili; and Deolinda Roberto. The group of church leaders was constituted by: Serafim Silva (the provincial superintendent of IUBM) and pastors, Rodriguês Faustino Pirilau, Ernesto Inviua, Ernesto Araújo, António Nihaua, Fernando Cardoso Andre, and Augusto José Cornelio.

Instead of five interviewees in each group, I ended up having seven interviewees in the womens' as well as church leaders' groups. The reason for this change was due to the fact that the men's group did not confirm their participation. Thus, I had to replace them by selecting two women and two more church leaders, while the Men's group was substituted for by the Municipal director, Mr Miguel. The questions addressed were the same to all three groups, except for the Municipal director, Mr. Miguel. Questions to Mr. Miguel were adjusted to allow the expression of a government voice on the matter At the end, it turned out to benefit this research as, it really helped to hear and assess both church and government voices.

4.1.2 Section 1 - Environmental crisis as a social problem:

This section will focus on the environmental crisis as a social problem. The reason for this focus is to show that when the environment deteriorates it affects almost everything. For instance, economic infrastructures like farms, roads, bridges, school and hospital buildings are affected. The environmental crisis is also a social problem because it creates poverty and affects the health

system resulting in sickness and sometimes death. In addition, Ghai commented that "the social consequences of environmental degradation are pervasive and wide-ranging extending from death to pauperization, from hunger to ill-health, from community disruption to family break-ups, from massive migration to inhuman workloads for women and from local conflicts to national and regional wars" (Ghai 1992:7).

In this section I consider what is understood by the term environment in order to determine the perceptions and meanings the respondents have of the environment. I have also asked questions about the kinds of environmental problems facing the respondents' families and community. The participants recognized the existence of environmental problems like soil erosion, pollution, lack of proper sewage management and they highlighted the fact that there is less church commitment on the matter. In essence, these questions aimed at helping people to develop their understanding of the term and kinds of environment, also to be able to identify the frequent disasters that create environmental problems and the possible ways of curbing these problems. Other questions in this section were asked in order to deepen their knowledge.

Q: What do you understand by the term "environment"? What kind of environmental problems do you face and how do they affect your family or community?

Regarding these questions, some of the youth group participants (i.e.Rijone, Tiago & Baptista (07/09/2009) had the same understanding about the term environment. They agreed that *environment is a space where human and non-human beings live*. It is a collection/entity formed by human beings, plants as well as animals. *Environment is all the surroundings. It includes plants, animals and people*. However, Esmirna (07/09/2009) said, *Environment can be distinguished in two groups such as good and bad vicinity*." Flores responded that "*our space in the city of Nampula is sick due to the fact that people do not conserve it properly, for example many people urinate and defecate in the open air* (07/09/2009). Moreover, she said that:

> Torrential rains, cyclones and sometimes floods constitute the main causes of erosion and environmental problems in the peripheries of our city. Consequently, houses built in precarious conditions and other infrastructures get destroyed. Other problems of the environmental crisis include inadequate dumping places of waste materials which sometimes cause pathological problems in society.
>
> (Esmirna, 07/09/2009)

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The youth agreed that *unplanned urbanisation also has a negative impact, causing environmental degradation in Nampula. Such unfinished, abandoned residential and business buildings, as well as road destruction, all contribute to environmental chaos in the city of Nampula*, (Esmirna & Baptista, 07/09/2009).

Q: You have said something about open air defecation. Would you explain why people have to urinate along roads, along rivers and in the open air?

One of the participants of the youth group said "*It is because the city of Nampula does not have public toilet facilities where people could relieve themselves when they are in town. Even some families do not have such facilities due to lack of space on pieces of land they occupy to build houses*" (Esmirna, 07/09/2009). *Expounding on the same issue* Baptista (07/09/2009) said "*often, people opt to go and urinate in the open places like behind the trees, in the corners of walls and roads. As a result of this, health and economy get compromised since human workers sometimes easily get sick and die as well*".

This question was not asked of other groups as it was posed to clarify the comment made by one of the members of the youth group.

Concerning the first question about 'understanding the term environment, its problem and effects in family', the following women's group participants responded in ways similar to the view held by the youth. They said; *environment is the space where people live. This environment includes our residential and working places, animals, plants and people themselves* (Namucoio, Matos, Araújo, Motiua and Ramos, 09/09/2009).

Meanwhile, four respondents from the church leader's group also held the same view that *environment includes all the surroundings. It is a space, land, plants and human beings. The environment includes also all that makes part of natural and mineral resources like oceans, rivers, mountains, energy, gas, and petroleum* (Cornelio, Inviua, Pirilau and Silva 10/09/2009); the other three respondents did not respond.

Q: What disasters occur frequently in the city of Nampula and how do they affect your environment?

Only three youth group participants responded to this question stating in agreement that *the city of Nampula is located in plateau zones. So, it helps to avoid some natural disasters like floods. However, the notorious and frequent calamities in this province are torrential rains, cyclones, droughts, and sometimes earthquakes* (Rijone, Baptista, and Esmirna, 07/09/2009). On this question, some women's group interviewees answered saying *soil erosion, air pollution, poor sanitation contributed to the open-air defecation attitude and are some of the major ecological problems we face, these problems affect our health* (Namucoio & Ramos, 09/09/2009). One of them pointed out that *during the rainy season children and women die in numbers because of cholera, malaria and diarrhoea* (Ramos, 09/09/2009).

Church leaders' group responded that, *the city of Nampula often faces natural disasters. These disasters include cyclones and torrential rains. Although the rain helps for agricultural activities, it also provokes erosion and infrastructure demolition and some families lose their belongings* (Cornelio, Pirilau and Inviua, 10/09/2009). Two of them added that *these calamities destroy the crops and plants, resources which benefit our communities. The incapacity of the residents of Nampula city in preventing these calamities constitutes a major preoccupation. As people are unprepared to deal with them, the ecological crisis will worsen in our city* (Inviua & Cornelio, 10/09/2009).

Q: What can you say about the causes of environmental decline? Then, what are the effects it has on the people, the economy and the land?

The young people answered these questions in the following manner:

> As we know that when one talks about environmental degradation, it refers to the instability of normal life to abnormal. Thus, frequent environmental degradation is often caused by heavy rain, cyclones, climate change, and deforestation. Therefore, these natural calamities provoke serious consequences like: vehicle circulation difficulties, housing destruction and disease problems. In short, environmental degradation creates social and economic instability. Soil degradation and soil erosion destabilise people's living conditions. In the same way, land destruction compromises economic development.
>
> (Baptista &Tiago, 07/09/2009).

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Other participants agreed that *if we do not adequately manage the waste materials which we produce, then people's health and economy will get affected as the working force can get sick and die* (Flores & Esmirna, 07/09/2009). Another participant from the youth group answered that *economic instability results when the land which secures agriculture as the main source for Mozambique's economy get destroyed. Among these external factors, the government is forced to find solutions from somewhere else in order to help affected people to live. This process of allocating people for shelter and food provision is expensive* (Rijone, 07/09/2009).

Some in the women's group responded to these questions agreeing that *environmental degradation begins from home and working places caused by people's own misbehaviour and misunderstanding towards the environment* (Imuili and Araujo, 09/092009). Further, on the same question Imuili (09/09/2009) gave an example that *people do not want to dump the litter we produce. They throw the litter along the way and anywhere. Then, the effects are enormous such as cholera, coughs, flu and tuberculosis*. In addition, Matos argued that:

> Environmental degradation is due to the massive exodus of people who moved from their home lands to the cities because of the civil war. When people moved to the city it became full, then the environmental degradation began. Some people who moved from rural areas into the city were not prepared for the demand of city life. Consequently, it affects people's health, economy and land. With degradation and diseases our natural resources get destroyed and human labour becomes victimised.
>
> (Matos, 09/09/2009)

Another participant said that *environmental degradation is caused by government negligence. For example, in our urban area, there is no drainage system that would prevent the rain water from running and accumulating along the roads during the rainy season. The government also lacks the ability to reinforce the law so that people can be responsible in waste management* (Roberto, 07/09/2009). Motiua adds, *such ability would include awareness and material investment in the local communities. It would enable them to reduce some diseases that occur in our city due to the deficiency of hygiene and sanitation systems. In Nampula, we have many small rivers which are used as dumping places while people get water from the very same rivers for their daily use. This attitude puts people's health*at risk. (Motiua, 09/09/2009).

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The ecological crisis in Nampula *is due to the poor management by the black elite after the colonial regime was changed. Some black people responsible for the city of Nampula are misleading and ethically dishonest. Before independence, the city of Nampula was a 'paradise' where people from the different parts of the country desired to come and see its beauty* (Araujo 09/09/2009). At that time, the city of Nampula was *under white administration. After independence some of the current black managers did not run it the way urban systems should function, perhaps they lacked technical knowledge. As a result, they undermine the moral values and original tradition of the city* (Matos, 09/09/2009).

Furthermore, *the major problem concerning ecological degradation is ignorance and apathy of society itself. This can be proved through our own cultural backgrounds and attitudes which lead us to suffer. We do not want to listen and learn from others about what can be beneficial for all* (Ramos, 09/09/2009). A participant, who responded anonymously for this specific question, added that, *apathy is a big matter. For example, in my area my husband and I try to clean our yard, but afterwards, some neighbours send their children to defecate. For me the difficulty is when we talk to them, they do not show interest or even concern about it*" (Anonymous, 09/09/ 2009). Further, Namucoio advised that:

> We have to be committed and courageous about this matter. We must take advantage to learn from these interviews in the sense that afterwards we can do something better for our city. In the near future we should have a discussion with the Municipal authorities about the environmental situation in our city. The content of our conversation should be to manifest the church women's responsibility to the Municipality on the subject of the ecological crisis, explain our willingness and ask for support to begin cleaning up some roads, rivers, markets, and other public areas in order to keep our city free of litter. It is true that we black people are characterized by poor management and lack of resources. However, we must know that we have capacity and ability to work to change our city.
>
> (Namucoio, 09/09/2009)

Responding to these questions, some of church leader's group members said: *In fact, I think that there are causes and consequences. What happens is that, it is possible to see in our days a massive deforestation. In the peripheries and city of Nampula for example, there were many trees, but now they are cut down without reason and there are no plans for reforestation (Cornelio, 10/09/2009).* In the same vein Nihaua remembered that *the first time I came to this city, there were many trees around but now you cannot find them. Truly, trees are very important because they produce oxygen for people's own health, plants and animals as well (Nihaua,*

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10/09/2009). Another participant said; *social consequences of the ecological crisis include the heat that discourages people to work as a result of randomly cutting down trees and leaving areas grassless (Andre, 10/09/2009).*

With regard to the economy, Inviua and Pirilau, (10/09/2009) agree that *the consequences of the environmental degradation includes erosion within the city in Nampula which creates difficulty for the circulation of vehicles and people. Also, after accumulating litter and water the mosquitoes find their home in the eroded areas.* One of the participants of the same group had named among some consequences; *diseases like malaria, diarrhoea and cholera that kill human (labour) and affect the economy in short periods of time. When land gets destroyed by erosion, the economy is compromised and creates habitation problems* (Andre, 10/09/2009).

Q: In your opinion, what kinds of responsibilities do you have in caring for the environment?

Human beings have an obligation to responsibly care for the environment. It is in this environment where human beings live, explore and realise their dreams. Therefore, regardless of gender, race, and age, as humans we have a duty to treat and care for the environment. The duty and care for the environment are individual responsibilities as well as a group's (Rijone, 07/09/ 2009).

Q: Why is it individual?

In relation to this clarification question, Rijone explained; *it is individual because each one has certain and particular way of seeing things. We live in different worldviews, cultures, and communities. If I cannot afford to control my own domestic sanitation then, I will be risking my own life and that of my neighbours. To avoid such distress, I must have responsibility for how to treat my own area of living* (Rijone, 07/09/2009).

Yet on the question of humans' responsibility in caring for the environment, the participants added that *each person must be responsible for cleaning up his/her own yard. It does not mean*

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that we cannot work together, but it is a case of individual responsibility. So, if all of us do the same work either individually or collectively the environmental crisis will decrease in a short period of time (Flores, 07/09/2009). Moreover, *to reduce land degradation people must begin to be aware about the importance of it. They also must play a significant role to protect the soil, waste management and stop urinating in the open areas* (Baptista, 07/09/2009). The question above was asked of the youth group interviewees only for clarity. Hence, women and church leader's groups were not asked this particular question.

Concerning the question related to responsibilities in caring for the environment, two women answered that *since the environment benefits everyone, all people should take care of it by treating it seriously, and teaching others to do so* (Araujo and Roberto 09/09/2009). Other ladies preferred not to answer the question. On this question, the church leaders' group argued that:

> Men and women have the capacity to prevent environmental degradation. It is because God has given human beings the power to dominate and manage his creation. People have the responsibility to manage what God created and left in our stewardship. I am talking about managing all creatures (animals, plants, land, humans and all things around us - as it is for our own benefit. In order to have effective and participative environmental management, as a church we should work towards influencing others for transformation. We should not continue in isolation. Changes cannot take place when we work alone. We need one another including politicians, business people, academics and religious partners. Sometimes we complain against injustice but we do not do anything ourselves to make our voice heard out there as a church. So, we must change our attitudes.
>
> (Cornelio, 10/09/2009)

In doing so, adds Nihaua;

> It would strengthen us to have a voice to control the massive and disorderly exportation of our resources. Specifically, when illegal exporters come into our country to destroy and exploit our trees (wealth) without benefitting the local people, we should know how to avoid such kind of neo-colonialism. If we react in a planned and participative manner, we should be benefiting our own local development.
>
> (Nihaua, 10/09/2009)

Andre cautioned that *there is a major challenge which requires collective participation of the entire society to eradicate the degradation of our environment. We need to join hands and learn from one another about the methodologies on how to improve our city. Without this it is impossible for us to do something better. Hence, we need to stop human negligence and accept to practice advice related to environmental conservation*, (Andre 10/09/2009).

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Q: How can individuals be encouraged to work towards sustainable development of the environment in the present and the future?

There are better ways of encouraging people to begin working for preservation of the present and future environment, Rijone named; *organising civic education, dramas, workshops, community involvement and awareness* (Rijone, 07/09/2009). Because continues Rijone; *many people in Nampula do not know how to keep their space healthy. Our society here does not have a culture of growing trees and grasses around us, which are good for health* (Rijone, 07/09/2009). In the same vein and considering the magnitude of the problem as it relates to economic threat, Esmirna suggests *it would be necessary to make some excursions that would directly help to encourage people not to degrade the land, since it is a source for their survival* (Esmirna, 07/09/2009).

The following three questions were asked particularly of the youth group interviewees only for the purpose of clarity. Thus, such questions were not addressed to the women and church leader's groups.

Q: Who would do such excursions?

Esmirna thinks *it should be done by those who work directly for environmental issues* (Esmirna, 07/09/2009). Flores & Baptista (07/09/2009) thinks the promotion of civic education about nature conservation is relevant. *The government also could look attentively at the issue of urbanisation. In partnership, the private sector and civil society should work together for people's awareness towards nature conservation. I believe that if humans begin accepting the relevance of land, then the nature crisis will be reduced".*

Q: What do you mean by NGOs, where is the church and what should it do for environmental awareness?

Baptista (07/09/2009) responded that *I refer to youth as strong instruments for change. To me it does not necessarily amount to a political party. Concerning the church, I must say that so far*

there is nothing which deserves to be commented in relation to church involvement. With particular reference to the UBCN, there is no yet any agenda for environmental issues.

Q: Could you please explain more about the urbanisation issue in Nampula?

Flores states:

> Without a doubt, the urbanisation in the city of Nampula needs to be reformed. Currently it does not merit being claimed as the third biggest city in Mozambique. People build their houses in a disorderly way that does not give dignity. Sometimes people get a piece of land in an illegal manner. For those who get the land legally the government cares little to ensure supervision. Therefore, since everyone builds houses in a way he/she wants and can even resell the piece of land to other people informally, it become difficult for environmental management.
>
> (Flores, 07/09/2009).

(Flores, 07/09/2009) continues that, *some public places reserved for recreation are occupied unlawfully. Even roads have become so narrow to the point where it affects the flow of traffic because people occupy and build informal tuck-shops along the roads. In some instances it is difficult to drive a vehicle and sometimes even a bicycle.*

With reference to the question '*how can individuals be encouraged to work towards sustainable development of the environment?*' only three church group participants answered by saying *as we learnt today, I will try to organise a small pilot project focused on environmental issues. They must be 'conscientised'; if we do not care for our land, we will end up destroying the resources for the coming generation. In fact, it is possible to encourage people individually because all of us have small pieces of land where we live. Then, we need some skills to keep our environment healthy by planting trees to prevent erosion. We need to be more practical than just talking without any action*" (Cornelio, Inviua & Andre10/09/2009).

In addition, *individuals can be encouraged through creating empowerment campaign programmes for skills training that would be available to the local people* (Inviua, 10/09/2009). Andre adds; *I think also the church can create a plan by organising a seminar and inviting environmental experts to come and talk to our church members* (Andre, 10/09/2009).

4.1.3 Summary of key inputs from section 1

In this section of the interviews, five questions were asked of the youth, women and church leaders' groups. On the subject of 'the environmental crisis as a social problem', the participants of three groups came up with almost similar understandings. They understand that not taking care of creation affects living and non-living beings. Thus, some of key inputs raised along these five questions are as follows:

Q: What do you understand by the term "environment"? What kind of environmental problems do you face? How do they affect your family or community?		
Youth group	**Women group**	**Church leader**
• *Includes all surroundings* • *Working/living place* • *Creates soil erosion* • *Creates water pollution* • *Accelerates erosion* • *Results in health problems.*	• *Working/living place* • *Includes animals & plants* • *Includes people* • *Experience climate change* • *Affects air pollution* • *Incites economic growth*	• *Includes natural/mineral resources* • *Includes all surroundings* • *Experience climate change* • *Provoke deforestation* • *Affects social life*
Q: What disasters occur frequently in Nampula and how do they affect your environment?		
• *Droughts* • *Earthquakes* • *Climate change* • *Floods* • *Torrential rains* • *Cyclones* • *Deforestation* • *Affect people's health* • *Social/economic flux* • *Incites human exodus*	• *Floods* • *Climate change* • *Affects air pollution* • *Poor sanitation* • *Cholera* • *Malaria* • *There are diarrhoea* • *Provoke tuberculosis* • *Affects economy* • *Affects hygiene*	• *Climate change* • *Deforestation* • *Incites loss of goods* • *Provokes crop/plants destruction* • *Litter accumulation* • *Malaria* • *Diarrhoea* • *Incites cholera* • *Results in poor hygiene*
Q: What can you say about the causes of environmental decline? Then, what are the effects it has on the people, the economy and the land?		
• *Lack of responsibility* • *Different worldviews* • *Through culture* • *Through urination* • *Open air defecation* • *Social/economic flux* • *Incites diseases*	• *People's attitude* • *Through ignorance* • *Through culture* • *Lack of hygiene* • *Provokes soil ruin* • *Malaria & cholera*	• *Local power* • *Poor policy execution* • *Dominion* • *Poor management* • *Leads to many illnesses* • *Economic imbalance*
Q: In your opinion, what kinds of responsibilities do you have in caring for the environment		
• *Taking care* • *Education through dramas* • *Giving education*	• *Promoting seminars* • *Teaching* • *Cleaning activities* • *Giving awareness*	• *Empowerment* • *Getting skill training* • *Caring for creation* • *Assuring stewardship*

• *Getting involved*		
Q: How can individuals get encouraged to work towards sustainable development of the environment in the present and the future?		
• *Receiving civic education* • *Developing awareness*	• *Having legal access to fund pilot projects*	• *Economic balance* • *Ecology policy access*
Major issues raised in section 1*: Includes all surroundings, living & working places and mineral/natural resources. Stimulates soil erosion. Creates air & water pollution. Creates health problems and experiences climate change. Provokes deforestation; destroys natural & mineral resources. There are droughts; earthquakes; floods and cyclones. Causes diseases like malaria; cholera and diarrhoea. It is a result of poor sanitation stimulated by open air defecation & urination. Devalues people's culture. It promotes poor management; carelessness; and stewardship. Incites economic growth. Requires training, awareness and empowerment, through dramas; workshop and funding pilot projects.*		

4.1.4 Section 2 – Policy/institutions/processes as determinant tools for development or poverty

In the previous section I discussed the environmental crisis as a social problem because it affects all social sectors. We now consider the policy/institutions as determinant tools for development or poverty. Sometimes policies are made without public consultation and concern. Consequently, people are unaware about matters around them. Institutions like culture and religion can somehow facilitate or obstruct developmental process. For the purpose of determining people's perception towards powers/institutions, I have asked the following questions stipulated below.

Q: What can you say about the following structures and how they impact people's livelihoods, 1) local and central authority, 2) public service delivery, 3) legislation and policy formulation and their implementation in regard to the environment?

Baptista and Esmirna had similar views about this question:

> Yes! There are institutions which can promote development or poverty. For example in the local and central authority there are laws which can be enforced to reduce ecological degradation but at the same time it becomes a problem in the way such laws are applied. Our laws are known only at central level and lack public participation and debate. Legislation and policies are supposed to be guiding people, but in the context of Mozambique I think they serve only the minority and not the poor.
>
> (Baptista &Esmirna, 07/09/2009).

In relation to the same question, some of the women's group participants expressed that *structures can be helpful or harmful. They are helpful in the sense they serve to regulate and*

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guide people's everyday lives. However, they can also play a detrimental role when they deny people rights, justice and freedom which consequently can lead people ending up in poverty and harmful circumstances (Mario, 09/09/2009). Furthermore, Ramos & Araujo answered that *there is little public service delivery to the local people, and this is against the laws and policies for environmental care. Indeed, these structures can have negative and positive impacts on people's livelihoods, especially for the women* (Ramos &Araújo, 09/09/2009).

All 3 groups (youth, women's group and leaders) argued that these structures could on the one hand help and on the other they may harm, some interviewees of the leaders' group commented that *the government has good laws and policies intended to address many issues. Such issues include poverty eradication, environmental conservation, and community empowerment, protection of children and women. However, the problem is these laws and policies are approved and promulgated in the national parliament and end there. They fail to mobilise civil society participation* (Cornelio 10/09/2009).

Pirilau adds that *as a result the existing laws and policies sometimes become meaningless because they are written without being shared in terms of information with the people in their contexts*(Pirilau 10/09/2009). Moreover, *even after promulgation, the laws are not interpreted neither translated into vernacular languages. Hence they remain inaccessible by the local people as they fail to know and understand the use of a particular given law*" (Andre, 10/09/2009). In the same vein, another interviewee added that *it becomes difficult for people to assert themselves to become an instrument of environmental defence when they do not know what a particular law is made for. Sometimes we learn about a particular given law from a foreign person but our own government does not make the laws accessible to the people* (Silva, 10/09/2009). In addition, Cornelio says:

> We have laws, policies, and programmes, but they are in storerooms. Then, the civil society has no access to the existing laws because there is no disclosure, no information sharing, no education, no public discussion about the purpose and functionality of these laws. To me, it seems wrong because any local socio-economic development should begin from the local level. It is there where people start looking and knowing about the existing resources and opportunities which will allow them to draw any plan to reduce certain difficulties. Thus, when things are drawn from the top to bottom it becomes more complicated for its management.

> (Cornelio, 10/09/2009)

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On the side of the church, Inviua responded that "*ah…*[87] *we as church leaders must change also our way of understanding things. We must begin making a public presence in the elaboration, implementation, assessment and moderation of such policies. In doing so, we can better understand and see if things are done well or not*" (Inviua 10/09/2009). In support of this view, Cornelio stated:

> In fact, while there is no civil society involvement and the church is not making itself available to the government, we will continue in absolute poverty and be affected by environmental degradation. However, in order to avoid these, we as a church and part of civil society, must work towards new challenges. We must be committed to fighting for political, institutional, traditional and social behavioural reforms. By doing so, the struggle of the poor people and oppressed, and issues of land degradation would be heard by policy makers. The civil society would be integrated into developmental programmes since they are the key to develop their own community, province and country.
>
> (Cornelio, 10/09/2009)

4.1.5 Summary of key inputs from section 2

In section 2, one question was asked of the youth, women and church leaders groups. On the issues of policy/institutions/processes as determinant tools for development or poverty, the participants of three groups raised up the following key themes as shown on the table below.

Q: What can you say about the following structures and how they impact people's livelihoods, 1) local and central authority, 2) public service delivery, 3) legislation and policy formulation and their implementation in regard to the environment?		
Youth group	**Women's group**	**Church leader's group**
• *Help facilitate development or* • *Breed poverty*	• *Care for nature* • *Practicing justice for God's creation* • *Expressing freedom* • *Stimulates Poverty eradication* • *Care for nature*	• *Poor policies do not help* • *Poor Laws stimulate the nature crisis* • *Implementing laws helps nature protection* • *Assessment is needed* • *Moderation is urgent*
Major issues raised in section two: *Help facilitate development or breed poverty; Care for nature; practicing justice for God's creation; expressing freedom; stimulate poverty eradication. Care for nature; Poor policies do not help; poor laws stimulate the nature crisis; implementing laws helps for nature protection; assessment is needed and moderation is urgent.*		

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[87]Ah… I saw that the participant wanted to say something important, but was uncertain. I think it is because he felt that expressing himself openly as a leader, others would think that he is crazy.

4.1.6 Section 3 – God and the Environment

In this section my attention is on God and the environment. The purpose is to learn how the Nampula community understands who God is and where he can be found. If God is omnipresent, then the environment should not be violated since God is present in creation. The following questions were asked of the youth, women and church leaders' groups: Who is and where is God*?* How can God be in heaven and at the same time everywhere? Then, why do people urinate in the presence of God? Where and what do we learn about God and creation? Who has ownership, rights and control over nature?

Q: Who is and where is God*?*

According to Baptista and Esmirna (07/09/2009); *God is our father and he is in heaven and everywhere*. In relation to this question, the women's group responded also by describing God as *their father, creator who is found everywhere. They said God can be found in dumping places, polluted and degraded areas too* (Namucoio, Matos, et al 09/09/2009). In the same vein, the church leaders' group understood God as their heavenly father who is present everywhere, (Araujo, Nihaua et al, 10/09/2009).The following three questions here below, were raised for clarification of some issues which came from the youth and church leaders' groups and helped the researcher to learn more.

Q: What do you mean by all over or everywhere? How can God be in heaven and at the same time present everywhere?

To Baptista; *all over means that God lives in us and in the environment where we are. Even where people urinate, God is present there as well* (Baptista 07/09/2009). In addition, Nihaua said *everywhere means God is in my presence and in my heart. Even in degraded places God is there too* (Nihaua 10/09/2009). According to Cornelio, *God is everywhere, because he sees and knows everything. God being everywhere does not mean that he is happy to live in the environment like this which we treat in an irresponsible manner. He is a holy God, so he deserves to be in a place that is clean and environmentally sound* (Cornelio 10/09/2009). For this

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reason, Araújo (10/09/2009) said *people would obey God by keeping his commandments, including observing government laws, respecting and loving our neighbours*. Furthermore, Nihaua clarified the term 'God's commandment' that *it includes the prohibition of wrongdoings such as having other gods, stealing, committing adultery, deceiving others etc* (Nihaua, 10/09/2009).

Q: Then, why do people urinate in the presence of God?

Baptista and Esmirna said; w*ell, we are not told that the church has a duty toward the environment. Also it is because God himself is the one who made both good and bad things. Besides that, illiteracy and poverty play an important role in letting people to do things in an uncontrolled manner* (Baptista & Esmirna 07/09/2009).

Q: Are you suggesting that it is God who incites bad things into human hearts?

Baptista responded that "*no. I am saying something along the line that sometimes God allows things to happen. For example, he allows bad people to lead us and also permits poverty. However, the duty for ecological care still remains our responsibility as his children*" (Baptista, 07/09/2009).

Q: Where and what do we learn about God and creation?

All youth, women and church leaders' group participants agreed that they learn about God and creation at church and in institutions. *The church teaches that God is the creator of everything that exists. God is powerful and he gave people the work of taking care of the environment. In doing so, people are expected to live in obedience to God. In addition, God is omnipresent and omniscient. At church, we learn to believe, and respect God through reading of his word in the Bible* (Baptista, and Namucoio 10/09/2009).

Q: Who has the ownership, rights and control over nature?

Rijone & Baptista responded; *human beings have power and authority to be good stewards of the environment, because God made man as a pillar to look after everything he has created. Human beings are related to God and nature. They are creatures created by God and they live on and through the abundant provision of the earth* (Rijone and Baptista 07/09/2009). For this reason, the group agreed that *every person has the responsibility and must continue to manage what God had created. He said there is both individual and collective responsibility to take care of the earth. People must be informed through teaching and campaigns of mobilisation* (Rijone and Esmirna 07/09/2009).

With regard to this question, almost all women and church leaders' groups expressed that *all human beings have the ownership, rights and control of protecting nature. In the same way, they recognise that human beings should not destroy what God has created, because humans have no power to sustain the nature* (Namucoio, et al 10/09/2009).

Q: Is there a relationship between God, humans and nature? If so, describe this relationship.

Almost all youth group participants answering this question said; the *existing relationship is grounded in a sense that God is the creator of nature and people. God created human beings from the soil as well. In this regard, our relationship between God, humans and nature can also be summarised into God's love*, (Esmirna, Rijone and Baptista 07/09/2009).

On this question, the womens' group response is in agreement with the youth stating; *yes, there is a relationship between the three elements, given that human beings are made/created from the soil and God is still with his people all the time. When God created everything, he gave human beings the responsibility to look after the creation* (Imuili, Matos, Ramos, at al, 09/09/2009). Another relation, continues Matos, is that "*human beings are created in the image of God. They were given life and responsibility over creation. Another linkage is that which is found in Jesus'*

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death. Jesus came to the earth to give hope and bring back the entire society to God (Matos, 09/09/2009). Church leader's group said:

> Though history holds that when human beings sinned there was separation because God was angry, we can say that yes, there is a strong relationship. God made a plan to bring back the lost relationship. Such relationship exists now through Jesus Christ's death and resurrection. Therefore, we have a relationship with God himself. This relationship makes us free to talk to our God everywhere and anytime. However, we cannot have a good relationship with God while we hate his entire creation.
>
> (Cornelio, Araujo, at et al 10/09/2009).

Q: What is the significance of the Garden of Eden to humans?

According to Namucoio the Garden of Eden *symbolises the entire land, the whole world. Adam and Eve symbolised the chosens people of God at that time. Today they represent the church of Christ by whom God speaks and gives the responsibility to take care of creation. This church includes all believers who live in the garden which is our land today* (Namucoio, 09/09/2009). Furthermore, Matos and Mario agreed that *at that time, the Garden of Eden represented the paradise of humanity. As the result of sin, human beings lost their right to live and enjoy the fruit of that paradise. However, this loss was re-established by God himself through Jesus' death so that our relationship with God and nature must continue*" (Matos and Mario, 09/09/2009).

For the church leaders' group, the *Garden of Eden is a picture which represents the entire land. It signifies the land or space where we live. This land where we live is our garden. In other words, the city of Nampula is our garden given by God. It is here where God created and placed us*" (Inviua, Andre, Pirilau, 10/09/2009). Moreover, *the Garden of Eden is where we live today. The Bible also teaches us that on the earth we are preparing for the New Jerusalem for believers* (Araujo, 10/09/2009). Likewise, *the Garden of Eden was the beginning of God's creation work while symbolising the whole universe* (Silva & Cornelio, 10/09/2009).*The Garden of Eden indicates paradise* (Nihaua, 10/09/2009).

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Q: What do you mean by "paradise"?[88] Where is it?

This was a clarification question about paradise. It was clarified that *paradise is a holy place prepared by God where he and Jesus live. Paradise is in heaven* (Mario, 09/09/2009). Some participants of church leader's group explained that *paradise is a place where those who obey God will live after death* (Nihaua and Andre 10/09/2009). However, the researcher was forced to ask another clarification question following up on this explanation.

Q: So, if they do not die, where do they live?

In response to this question, (Nihaua, 10/09/2009) said *they live on the earth*.

Q: Is God still creating the universe or not?

Invuia says; *God has not yet finished creating the universe. God's continuous creation work includes people and their surroundings. I think without people and their environment, there is no universe. For this reason, God is still creating the world since people are still being born* (Inviua, 10/09/2009). Furthermore, *God is still creating the world. We can see it through the development and new technology that takes place. This development, in part calls people to recognise God's existence, creation, power and love. At the same time it makes people deny God's power* (Andre, 10/09/2009). Nihaua adds; *new birth in Christ is also part of God's continuous creation of the world. It includes both spiritual and physical realms. God sends his people to preach his good news to the world, so that those who believe become new creatures* (Nihaua 10/09/2009).

Q: How should human beings declare God's glory to the world?

In regard to this question, Esmirna and Baptista answered that, *God's glory can be shown to the world by obeying and doing God's will. It will be possible also when we pray asking God's grace because by ourselves we have no power to do so. We also need to understand that Adam*

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[88]Paradise here means or points to "heaven"

and Eve were given responsibility of taking care of the Garden of Eden. Thus, if we hold that principle as our forefathers did, I am sure that God's glory will be seen through us (Esmirna and Baptista, 07/09/2009).

With regard to the question above, some women's group participants stated that *our unity, love for one another, and working together will show God's glory to the world* (Deolinda, Matos and Ramos, 09/09/2009). Araujo contends that *through our faith and good deeds, God can manifest himself to the world. In other words, God's glory can be shown when we start cleaning up our space, city and community where we live. In addition, removing accumulated rubbish along the roads does not only show God's glory, but also it stops criminals from hiding in these places at night* (Araujo, 09/09/2009). Motiua expands; *one day my son was attacked in these places coming back from school. He was left half dead as he could not run away due to the amount of rubbish built up on the road* (Araujo, 09/09/2009). Motiua et al said:

> Accumulation of waste materials is a serious problem in our city. In some instances the blame can go to the municipal authorities because they do not empower local communities to be aware of the effects of this tragic situation affecting human life. This is because in many concentrated public areas, such as train stations and markets there are mountains of uncontrolled litter and one can see people selling their fresh foods and other goods around it. The government sees and knows this, but does little to correct the problem. In other instances, the church can also be blamed because it never says anything about taking care of the environment. The church also never makes itself available to attend some environmental programmes.
>
> (Motiua, Matos & Imuili, 09/09/2009)

On this question, Inviua responded; *since God is holy we could declare God's glory to the world by becoming holy too. We declare God's glory through working justly in this city in order that people should know that we are truly God's people not only in what we are, but also through what we do. As a church we must work without borders* (Inviua 10/09/2009). Silva adds; *it is through treating our city and land decently that we can show God's glory to the world, rather than selecting preferential places to work* (Silva 10/09/2009). To emphasise this view Araujo stated that people *can show God's glory to the world through love to one another as we do for ourselves. It can happen, when people keep God's law and are not committing adultery* (Araujo, 10/09/2009).

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Q: Can you please explain what you mean by "adultery" here?

For this clarification question, Araujo unpacked; *adultery is to be envious of someone's things with a wrong motive. Adultery comes from our inner heart as the result of our bad behaviour leading someone to destroy something like the earth* (Araujo, 10/09/2009). Moreover, *another way of presenting God's glory to the world is through respecting one another, doing good things to our neighbours and particularly by treating and protecting God's creation* (Andre, 10/09/2009).

Q: Is it likely to present God's glory to the world in the middle of waste, and air pollution?

Some church leader's group participants said; *it is possible, but by doing so we are dishonouring our Creator* (Cornelio 10/09/2009). Andre adds; *we need to repent from all our wrong doing which is not necessarily spiritual, but also physical, mental, and emotional. If we can manage to dispose of and dump our rubbish properly, it will be possible to clean our spiritual life"* (Andre, 10/09/2009). Another participant said:

> It is not to God's glory when believers refuse to repent from their wrongdoing, also when they refuse to take care of the earth. For example, Jesus was praised by the angels because he refused to practice wrongdoing. He obeyed God in all manners. This shows that we need to do the same, so that people around us may see us as God's people. We cannot be living a Christian life when we neglect God's creation.
>
> (Nihaua 10/09/2009).

One of the womens' group participants added that *since culturally we cannot host or welcome a very important person like a community leader in our homes when we are dirty, in the same way we should not do it to our God. We should not be preoccupied to clean only our spiritual home (heart) when in reality things look bad around us* (Namucoio, 09/09/2009).

4.1.7 Summary of key inputs from Section 3

In this section focusing on 'God and the environment', the interviewees were asked and responded to thirteen questions. The participants see God as God the father, creator, omniscient, omnipresent and holy. For them, God is the head of his creation and church. The people are

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stewards for such creation. Though God loves his creatures, he hates sin, poverty, injustice and all kinds of oppression. The following table provides a summary of key themes raised in this section:

Q: Who is and where is God?		
Youth group	**Women's group**	**Church leader's group**
• God is the Father • God is Omnipresent • People are Illiterate • Poverty stimulates nature degradation	• God is the Father • God is the Creator • God is Omnipresent • Disobedience is sin	• God is the Father • God is Omnipresent • God is Omniscient • God is Holy
Q: Where and what do we learn about God and creation?		
• Learned in Church • God is Powerful • Obedience to God in all matters including nature conservation	• Learned in Church • God is Powerful • People learn obedience to God including nature care	• Learned in Church • God is Powerful • People learn obedience to God including nature care.
Q: Who has the ownership, rights and control over nature?		
• God has ownership • People, the caretaker	• God has ownership • Government should facilitate and regulate care of nature	• God, the owner • People, the caretaker
Q: Is there a relationship between God, humans and nature? If so, describe this relationship		
• God is the Creator • God is Love • God is the Sustainer	• The people are made in the image of God • Jesus' death brings hope • Hope to live	• Jesus' death brings hope • Resurrection of Jesus • Freedom to God
Q: What is the significance of the Garden of Eden to humans?		
• God is in heaven	• Our land must be cared for • God needs a holy place • This land is our paradise	• Our land must be taken care of • New Jerusalem • Paradise is for believers
Q: Is God still creating the universe or not?		
	• God is Love • Preach the good news • Good news is the gospel of Jesus	• Development is a change of situation • Technology helps development • Creation belongs to God • New creatures are those who believe in Jesus

Q: How should human beings declare God's glory to the world?		
Youth group	Womens' group	Church leaders' group
• Obedience to God • Prayer to God • The care of earth is people's responsibility	• God's glory must be shown by the church • The love of God • Faith in Jesus	• Care for nature • God is holy • Justice for the earth • God is love

• God loves the city	• God is holy	• Adultery is sin
Q: Is it convincing to present God's glory to the world in the midst of waste and air pollution?		
	• Sin is disobedience	• People need repentance • Sin is disobedience • People are careless
Major issues raised in section three: God is the creator; father; omnipotent; omnipresent; omniscient and holy. *People are illiterate; poverty stimulates nature degradation. Sin is* disobedience; God's power; loving nature; people are made in the image of God; promoting hope, justice and freedom; preaching the good news; taking care; praying for the oppressed; having faith; repenting from the destruction of the earth.		

4.1.8 Section 4 – The Church's theology toward the environment and the city

Q: What does it mean to be a church?

For Imuili, church is all about *friendship; love one another, unity and understanding each other. It includes also helping the poor, orphans, oppressed and powerless people* (Imuili, 09/09/2009). Matos and Namucoio, hold the same understanding about the church. They share the same view that the *church is a temple where many people gather to work and worship together. It is called church when there are people who gather together. A temple without people is not a church. The church is all of us called Christians* (Matos and Namucoio, 09/09/2009). Meanwhile, Deolinda and Ramos share the view that the *church is that which works without borders. The church should not select special places or groups of people to work and walk with. If the church cannot deal with God's entire creation responsibly, then it should not be considered the church where Christ is the head* (Deolinda and Ramos, 09/09/2009).

Some church leaders had some similarities in their responses with that of the women's group. For instance, Nihaua & Cornelio (10/09/2009) share the same view that *the church is constituted by people who go to the temple. In other words, the church is God's people"*. Andre & Araujo (10/09/2009) hold the same idea that *the church is the temple where many people come and gather to worship and ask forgiveness from God*". Furthermore, Pirilau stated that the *church is a place prepared and sanctified by God. People who go to that place should be healed and know God, then become a church* (Pirilau, 10/09/2009). According to Inviua, *the church is the saints - God's people. This is what church is then, that the church (believers) build the temple for worship* (Inviua 10/09/2009).

Q: What is the main focus of UBCN's mission?

Matos states; *I am a member of this church for many years, but I do not know what the mission and vision of UBCN are, therefore I have nothing to say about the mission of the church* (Matos, 09/09/2009). According to Namucoio:

> There is a mission when the leader of a certain institution has something to give and tell others, about what, why and how to do things. Mission is set up by the leader who is able to draw a plan/programme to be executed by him/her or others. A mission is not a complex of buildings without a leader who can give orders and draw programmes to be achieved. In our times we had good leaders who when missionaries were coming to Mozambique knew how to mobilize church members. They knew how to distribute tasks to the different familie, and people in the church. Thus, when leaders have no plans there is also no mission and vision, because mission is about tasks to be achieved.
>
> (Namucoio, 09/09/2009)

The church leader's group responded that *the mission of church is to preach the gospel for spiritual repentance. This is what we were taught by the first missionaries. We thought that by doing so our responsibilities were accomplished. However, now we know that preaching all this time we only did half of the job since we forgot to value God's entire creation*". (Augusto, Andre, Silva, et al, 10/09/2009).

Q: What is the role of the church in the city?

Nihaua responded; *it is to teach the word of God. It is to preach to the people as Jonah was sent to Nineveh,… for us to show the church's role is to preach God's word and love one another* (Nihaua, 10/09/2009). Further, Andre said; *the role of the church in the city is to evangelise all the people without distinction, however, it includes working together, cleaning up our cities and protecting the environment from destruction* (Andre 10/09/2009). In addition, Inviua and Araujo agreed that *the church's role in the city is to reflect God's glory, by showing justice, teaching the truth without reserve and always seeking to lead men and women to know God as one who helps them against powerlessness and oppression* (Inviua and Araujo, 10/09/2009). Silva elaborates that:

> Such a kind of preaching must not focus only on the spiritual side, but must also touch on the physical environment. This means that in our sermons we must talk about the importance of our land. We must mobilise our adherents to begin treating their spaces of living with dignity.

If we go to those degraded places and clean up, it becomes another approach of preaching the gospel.

(Silva, 10/09/2009).

Concerning the place, Silva said; *this work can be done everywhere i.e. in the restaurants, bars, prisons, on the bus, beach, market and workplaces. We can go and preach the gospel everywhere and to everyone because there is no limit regarding gender, race, colour, class and language* (Silva, 10/09/2009). Pirilau and Araujo, agreed that *all kinds of people have the right to hear the gospel so that they can receive repentance and knowledge of their God, the creator. There is no exclusion as far as who should hear Jesus' Good News is concerned* (Pirilau and Araujo, 10/09/2009).

Nihaua and Andre lamented that *we never go to such places. It is not easy to go there. We are not strategically equipped enough to do so. There you find some people drunk and it is hard to speak to them, so it needs courage, a good plan and strategy to reach such specific groups of people* (Nihaua & Andre, 10/09/2009).Additionally, Nihaua argued that *sometimes I feel afraid of my church leader as we are not allowed to pass near those places* (Nihaua 10/09/2009).

Meanwhile Inviua commented that *we are not afraid of Jesus, but we are afraid of the behaviour of human beings. If someone sees you coming from such places, they will think you went there to drink beer too. People are too suspicious of one another, but it is not important. From now on we will be going there to preach the word. By doing so, people will get to hear the good news. Then, it may help them in taking care of God's creation. The church will also contribute towards improved ecological awareness, and love for one another*" (Inviua, 10/09/2009).

Q: What contribution can the UBCN make to reverse the current ecological crisis in Nampula?

One of the church leaders responded; *… firstly we did not know this issue of environment is part of the church's work. Secondly, we have never attended any workshop about environmental issues. Now for me it is a new lesson and challenge to learn that this matter can be found in the Bible* (Andre, 10/09/2009). Silva adds that; *the UBCN can contribute to ecological protection by organising awareness campaigns, and participating in workshops in order to learn some*

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techniques on this matter. It is also important to mobilise and give awareness to people and begin to work positively, so that they can be able to manage the environment (Silva, 10/09/2009).According to Pirilau,

> We can contribute to environmental preservation starting where we are. We are building our temple while our churchyard is too much degraded. We need to clean it up so that the community around us must learn by example. We need to work by implementing the experiences we have learnt here. We need to plant trees, grass and clean up the space where we worship the Lord. We cannot teach something which we don't practice.
>
> (Pirilau, 10/09/2009)

The womens' group agreed that *it is important that our campaign for environmental recovery starts here, by doing concrete actions. We need to go to the roads and stop soil erosion, by planting trees and cleaning up degraded areas. Thus, the church needs also to organise a strategic plan and help to raise awareness on how people should use their space in a healthy manner* (Matos, Imwili and Roberto et al, 09/09/2009).

Q: Should environmental preservation be considered a missions priority? Explain.

The interviewees responded in different ways. Cornelio said:

> …the church and people are in the environment. So we have the responsibility to manage the land. The church as a Christian institution should ask itself why the earth is getting degraded while it is on this planet. In fact, we should maintain this land in good condition so that we could not be seen as bad managers. We have learnt that God created the Garden of Eden which was so beautiful, and was given to the humans. There were no problems like what we face in our days. Hence, our duty should be to manage the land well, to exploit the resources available and to know how to keep them perfect. In this regard, we should also try to bring back those values which God gave there in the beginning. If we do not do so, very soon the incoming generations will find nothing alive.
>
> (Cornelio, 10/09/2009).

For some womens' group participants they said; *yes, it is a priority. However, we are not yet prepared for such challenges because we need some techniques that can help us to correct such degradation for long term measures/purposes. Sometimes it is not because we want it to be in this way, but also because we lack the resources* (Motiua & Matos, 09/09/2009).

In addition, Imuili states; *environmental degradation should be a mission priority for the church, given that we are given the land by God. However, we do not value this gift because we are not managing it adequately in the way it should be. So, environmental conservation should be*

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considered a church's mission priority targeted to ecological recovery from crisis (Imuili, 09/09/2009). Baptista argued that:

> Ecological degradation and conservation should not be seen or considered as a priority or important for the church's mission. To me, we need to do God's work, which basically involves evangelism and loving one another as Christ showed us on the cross. On the cross Jesus died to forgive us from our sins and to save us. This is what we need to focus and preach on, rather than other things like land degradation.
>
> (Baptista, 07/09/2009).

Q: Was Jesus' death only to save humans beings? What about other non-human beings?

Hesitantly Nihau said; *Umm…*[89]*Other non-human beings cannot confess* (Nihaua, 10/09/2009). *When we talk about land degradation, it also shows that human beings who are made from the soil are degraded too. So, Jesus' death is important. It gives hope for salvation from our spiritual degradation, so we may be holy before God* (Pirilau, 10/09/2009).

Q: What actions or initiatives does the UBCN use to promote awareness among its members about environmental conservation in the city?

One of the church leaders' participants said that:

> This is an important and necessary issue for all human beings to understand. On my farm I have cashew nuts or cashew nut-trees. For these trees to survive the destruction of fire, I have to work hard by cleaning up the grass around them. When fire comes my cashew nut-trees remain untouched. So, when people see what I do, they learn from it. Thus, the process of cleaning up the grass constitutes my method of educating other people about how to prevent the destruction caused by fire. In my home, I plant various trees and grass too, and I put manure around the trees to maintain them nutritionally. This is also another method that I could use to educate my children, community and church members. We cannot start educating people outside while we are disorganised. We need to correct ourselves first and go out there, so that those who are close to us can see what we are doing.
>
> (Inviua, 10/09/2009).

The womens' group shared the same understanding that *we need courage and persistence if we want to do excellent work of preserving land from crisis. The need to mobilise and teach people is not an easy task given the fact that there are various worldviews on how they see things* (Ramos and Araujo, 09/09/2009). In addition, youth group participants, Tiago and Esmirna,

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[89]Umm…yeah – the interviewee was uncertain about this question. For him it was difficult to say "yes" or "no" However, he ended up saying that Jesus died for people and nothing else.

stated; *we need to consider elements of culture and education. We need to be well prepared, equipped, and objective if we want to curb the ecological crisis successfully* (Tiago and Esmirna 07/09/2009). Baptista added:

> I learnt now that the purpose of Jesus' death was to restore God's love, justice, peace, hope and salvation to everybody and everything. So, I think we need to utilise and interpret the Bible in a manner which liberates the oppressed and powerless - for example, teaching people to know that God's love and salvation extends to the entire creation. In this regard, humans should now start utilising the resources responsibly that God has entrusted to us.

<div align="right">(Baptista, 07/09/2009)</div>

4.1.9 Summary of key inputs from section 4

This section of interviews focused on 'the Church's theology toward the environment and the city'. The participants were posed nine questions. They responded to almost all questions. They understood the church as an institution where love, peace, unity, freedom and forgiveness should be promoted. In this regard, the following key themes were identified along this section.

Youth group	Women's group	Church leader's group
Q: What does it mean to be a church?		
	• *A friendship network* • *Living out in Love* • *People need fellowship* • *The church must show peace* • *The church exists for worship to God* • *Saints, refer to all*	• *People, must save nature* • *Worship belong to God* • *People need forgiveness* • *The church is a healing institution* • *Who believe in Jesus*
Q: What is the main focus of UBCN's mission?		
		• *Preaching the Gospel* • *Gospel is the Good News for salvation*
Q: What is the role of the church in the city?		
	• *Protection against nature violation* • *The church must advocate & teach the powerless*	• *Preaching the Gospel* • *Love to one another* • *Evangelism to the lost*
Q: What contribution can the UBCN make to reverse the current ecological crisis in Nampula?		
	• *People need awareness for nature conservation* • *Mobilization for nature conservation* • *Planting trees in the city*	• *Planting trees in the city* • *Confession will contribute to reducing the ecological crisis*
Q: Was Jesus' death only to save humans beings? What about other non-human beings?		
	• *Jesus' death impacted all*	• *To give hope to all creation*

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	of God's creation • To make holy his damaged creation	• Salvation of the sinners and degraded world

Major issues identified in section four: Loving God's creation; creating unity and making friendship; worshiping God; forgiving others; healing; sanctifying from sin; preaching the good news; protection; advocating the hopeless; teaching illiterate people; promoting awareness and mobilization for ecological management; encouraging confession; giving hope to the oppressed world, proclaiming God's holiness and leading humans and nature to salvation.

4.2 Interview with the municipal director

Caetano Amade Miguel, the Municipal director for environmental affairs in Nampula was interviewed on the 11 September 2009 in his office. Parts of the questions addressed to Miguel were not the same as those applied to the church groups, because, Caetano Amade Miguel at the time was not a member of any church. He did work basically for Government Environmental Department and it may have been difficult for him to understand the context of some questions posed from a theological perspective. Thankfully, he was open to listen and answer the questions asked of him.

Q: What do you understand by the term "environment"?

Miguel said; *the environment begins with his own life, house and at work, as well as all public places* (Miguel 11/09/2009). He said also that *although my office is too hot, we are in the environment. In other words, the environment can be any space whether it is good or not* (Miguel, 11/09/2009).

Q: Can you tell me what you think would be the main problems of Environmental degradation?

He said; *yes, I think we have five distinct problems of environmental degradation in the city of Nampula: erosion, inadequate water supply system; land occupation disorder (explosion), low levels of space for habitation, and inadequate dumping systems* (Miguel 11/09/2009).

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Q: As you mentioned, what could be the cause of erosion in Nampula?

Miguel pointed out that:

> The erosion problem in the city of Nampula is due to the geographical location of the city. The city of Nampula is on the hills and this should help avoid floods, however, since the drainage system is not working properly, when the rainy season comes parts of the city are destroyed. In other words, the main cause of erosion is due to the torrential rain and poor drainage system. The consequences of erosion in Nampula are innumerable. They include economic infrastructures destruction such as farms, roads, schools, electrical posts and residential buildings. Therefore, to repair what has been destroyed can require the additional allocation of funds. This, it seems, the government is not yet prepared to do.
>
> (Miguel 11/09/2009)

Q: What do you mean by 'inadequate water supply'?

Miguel responded that:

> It means that the city of Nampula does not have enough water for all. The water that we have is also unclean because the system that makes it clean and safe for consumption is now in a precarious condition. Since Mozambique achieved independence in 1975, the water supply system has not worked properly. The sixteen years of civil war aggravated the situation. For instance, since independence until today, only 47% of the population of the city of Nampula have access to clean water. We cannot talk about environmental care without dealing with the water issue.
>
> (Miguel, 11/09/2009)

Q: So, what are the government's plans to reverse the situation of water in Nampula?

Miguel explains; *Now, I think the government, through the Investment Fund and Patrimony of Water Supply (FIPAG), will work to renew the system in order to solve the problem of unclean water. The government also works to extend the system of water supply to the majority of Nampula citizens. The problem of unclean water in Nampula is caused by torrential rains, air pollution, soil erosion, and waste accumulation* (Miguel, 11/09/2009).

Q: Can you tell me about land occupation and habitation disorder?

Miguel said:

> The civil war moved people from their own countryside into the cities. This caused urban disorder. The inner city is also degraded because more people now live there than were originally expected. This move into the city aggravated the insufficiency of the water supply and sanitation systems. In the peripheries of the city, people occupy the existing small plots of land and build houses in an uncontrolled manner.
>
> (Miguel, 11/09/2009)

Q: What is behind land occupation and habitation disorder?

Miguel stated his view by saying:

> I think it is because people feel that it is a more complex and expensive process to occupy land lawfully. The issue here is that, although it is compulsory for new land requests to adhere to the law, it is not legally required for existing rights acquired through customary occupation. However, there is a government plan to move people from disordered areas and relocate them to new suburbs. The government realised that the current state of urbanisation does not offer proper, healthy and dignified lifestyle.
>
> (Miguel, 11/09/2009)

Q: Mr Miguel, would you like to talk about sanitation in Nampula?

He said:

> When one talks about the environmental crisis, I think it mainly refers to the problem of sanitation. When there is a problem in managing waste in a good way, it is a sign of environmental degradation. So, the municipality of the city of Nampula is poorly equipped in its dumping system. Usually, the municipality dumps its sewage in inappropriate areas. This is because the municipality has no material and financial resources to collect such sewage in the city. There is also low sensibility among people due to the culture which also plays a difficult role. In this regard, ecological degradation finds itself immersed into too many systems, such as the lack of drainage and dumping systems.
>
> (Miguel, 11/09/2009)

In relation to sanitation, *there is also a problem of defecation in the open areas. It is linked to the influx of population in the inner city and the peripheries of the city. This influx is caused by political conflicts in many African countries. This situation constitutes a serious problem for environmental degradation* (Miguel 11/09/2009). Miguel exemplified that *the people who moved from their own homelands into the city of Nampula brought their own rural customs and applied*

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them in settled environments. Those who are unable to build basic toilets are forced to use the open areas (Miguel 11/09/2009).

Miguel continues that *the consequences of this behaviour are enormous namely…… In order to avoid the alarming problems, the government provides the community with about three thousand new toilets each year. Furthermore, the government organises workshops, promotes play shows and traditional dances, sport and uses radio to create awareness* (Miguel, 11/09/2009).

4.2.1 Summary of key inputs from Miguel, the municipal expert in environmental conservation in Nampula

This last section encompassed nine questions on the subject of 'environmental degradation in the city of Nampula'. The questions were all asked of the Municipal director of the city of Nampula.

Q: What do you understand by the term "environment"?			
Youth group	**Womens' group**	**Church leaders' group**	**Expert's group**
			• *Environment is about my life* • *Environment is a house in which we live* • *Environment includes workplace*
Q: Can you tell me what do you think would be the main problems of environmental degradation?			
			• *Erosion incites the ecological crisis* • *Preventing poor water supply system* • *Harmful land use and occupation* • *Poor dumping system*
Q: As you mentioned, what could be the cause of erosion in Nampula?			
			• *Failure to improve the poor drainage system* • *Results of torrential rain* • *Effects of the civil war*
Q: What do you mean by 'inadequate water supply'?			
			• *Unclean water*
Q: So, what are the government's plans to reverse the water situation in Nampula?			
			• *To reduce air pollution,* • *To solve soil erosion,* • *Resolving waste accumulation*

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> *Major issues noted in Mr Miguel's section are:* Environment is about my life including the house we live in and including the workplace. Erosion incites the ecological crisis, preventing an improved water supply system. Destructive land use and occupation; correcting the dumping system; solving soil erosion. To improve the poor drainage system incited by torrential rain; to avoid civil war. To reduce air pollution, to solve soil erosion, and resolving waste accumulation in the city.

These four sections comprised in total more than thirty questions. The interview was conducted with youth, women, church leaders and an expert from the Department of the Environment in Nampula. It was a great experience and opportunity to meet people. I have learnt important issues that were raised by the participants. Such issues enrich this study and are analysed in chapter five. It is also important to highlight that these issues are closely related issues and some cut across the four sections focused on in this study as shown in the following lines.

4.2.2 Closely related issues from all four sections

1. Issues arose under what 'environment' is:

> Surrounds, work and living places, animal, plants, people, natural and mineral resources, house, and life

2. Things which are closely related under 'environmental crisis' include:

> Erosion, pollution, climate change, deforestation, poor sanitation, water supply system, land occupation, inadequate dumping system, poor drainage system, waste build up & unclean water.

3. Matters raised under 'disasters that occur frequently in the city of Nampula', are as follows:

> Drought, earthquakes, floods, heavy rains, cyclones,

4. Issues that arose under the 'causes of environmental decline', are:

> Irresponsibility, worldview, culture, attitude, urination, defecation, poor management, ignorance, lack of education, lack of hygiene, power, dominion, poor ecological policy and people's exodus.

5. Themes that arose under 'effects of environmental crisis on the people's life' include:

> Health, diseases such as malaria, cholera, diarrhoea and tuberculosis, death

6. Issues under 'effects of environmental crisis on the economy' are:

> Economic instability, economic growth, poverty, social life, loss of belonging, crop/plant/soil destruction.

7. Issues under 'responsibilities and actions humans have to do in caring for the environment' category:

> Involvement, care, dramas, teaching, skill training, stewardship, workshops, awareness, pilot project funding, civil education and empowerment

8. Issues raised under 'structures: local authority; public service delivery, and law formulation' are:

> Power, rights, justice, freedom, policies, poor law implementation, government

9. Matters raised on 'God, and his relationship to humans and environment':

> Father, creator, omnipresent, omniscient, holy, powerful, love, 'sustainer', ownership, God's image

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10. Issues raised from the 'significance of the Garden of Eden to humans', are as follows:
Heaven, our land, holy place, paradise, new Jerusalem, hope

11. Themes identified from on 'how humans should declare God's glory to the world' are:
Obedience, prayer, worship, repentance, forgiveness

12. Matters raised under 'the meaning of the church and its theology towards ecology':
Saved people, saints, unity, friendship, understanding, healing, preaching, evangelism, advocacy, mobilization, friendship, hope protection & salvation

4.3 Conclusion

This chapter tabled the findings from twenty interviewees. One of the major objectives was to listen and gather narrative accounts of environmental crises and learn from Nampula residents' experience. It was also to find out the strategic possibilities of reducing the environmental degradation in Nampula. It is believed that this interview attempted to construct a comprehensive theology that the members of the Union Baptist Church as the target group of this study may use for the training of their adherents. The specific elements of this theology incorporates wholeness i.e. the gospel that does not focus one-sidedly only on human life. I referred to theology that ensures hope, love, repentance and forgiveness, obedience to God and advocacy.

The participants contributed substantially to this study through their responses. They agreed to start working for environmental conservation. Hence, the four groups interviewed showed remorse that they are not doing enough to manage creation, while God entrusted them to do so. The next chapter assesses the findings and theological themes collected from the field.

Chapter five
Analysis of the major themes emerging from the data

5. Introduction

In line with the presentation of data in chapter four, the twelve issues that emerged from the data are grouped into five categories i.e. 1) Matters related to understanding what the environment is and its management, 2) Matters related to causes of the environmental crisis, 3) Impacts of the environmental crisis on society, 4) Caring for the environment, 5) Matters to consider for the development of a practical biblical theology of the environment in Nampula.

The objective of this chapter five focuses on the analysis and discussion of data. In order to analyse the data, a qualitative research was undertaken in this chapter. Furthermore, in this chapter I tried to understand the reason for each argument expressed during interviews. Similarly, it looked at the content of the interviews and difficulties encountered along the process. The interviews were conducted in Portuguese as an official language of Mozambique, sometimes in Makhua for those who understood but were unable to express themselves in the Portuguese language. The queries and answers in Makhua were directly transcribed into Portuguese and the transcribed version was confirmed by the participant. The fieldwork data collected was important in understanding the current status of the environmental degradation in the city of Nampula.

As it is argued by Kelly that interviews"…give us an opportunity to get to know people quite intimately…how they think and feel" (Kelly 2006:297), about certain situations they find themselves in. For this reason, it is commendable that though some of the participants have little knowledge about environmental issues, they understand the benefits of it and the consequences when it is not protected. Otherwise, this study would have been incomplete if the research was limited only to a literature review.

5.1 Data analysis

According to Marshall and Rossman, data analysis constitutes a "process of bringing order, structure and meaning to the mass of collected data" (Marshall & Rossman 1995:111). Blanch and Kelly adds; "data analysis involves reading through your data repeatedly, and engaging in activities of breaking the data down…and building it up again in novel ways…" (Blanch & Kelly 2006:322). The first technique for data collection of this study was an interview. The focus was on human conditions and interactions with the ecological issues. It looked also at the social factors that cause the ecological crisis, the societal impacts and efforts to solve those problems.

Furthermore, considerable attention is paid to the social processes by which certain environmental conditions become socially defined as problems. The role of the church towards the environment was a major preoccupation in this analysis. About twenty people, male and female, aged from eighteen years and older, were interviewed. In this regard, this analysis falls into five categories mentioned below.

5.1.1 Matters related to understanding what the environment is and its management
The youth group data analysis and the importance for youth participation

Rijone, Baptista, Esmirna, Flores and Tiago, voluntarily participated in this research with the permission of the local church pastor.

The participation of the youth was very important because they are the future environment stewards or managers. Although the youth group interviewed was not involved in the government environmental campaign programmes, they already understood the risks that environmental degradation brings to people and the economy. For example, some risks mentioned included "*soil erosion, health problems and especially when littering and sewage are unmanageable*" (Esmirna& Flores 07/09/2009). The study found that what is lacking amongst the youth is linked with issues like encouragement, engagement and empowerment through skills training on environmental issues.

5.1.2 Encouragement, engagement and empowerment

These are crucial themes that emerged from the data collected. The youth are an active asset in any society. However, they need encouragement by their parents, church or community leaders in taking action. If they are not encouraged to neither attend workshops nor be part of environmental campaigns they will therefore not be interested to work for transformation. After encouragement they need be engaged in the group with other peers. When youth are encouraged and engaged then it will probably help them to be empowered. However, through this research I learnt that the church often ignores them. For instance, the information for the youth to participate in this study was not even shared even though I communicated through the youth leader. He preferred to exercise his power by not sharing this potentially vital information. I think the probable reason for this behaviour could be the complexity and fear of association if anything went wrong later. Fortunately, when the young people learnt that this study was for their interest as most of them were University students, they came to attend. Under this category the youth emphasized the lack of support and training.

5.1.3 Support and training

Support and training are the other themes that emerged in this youth group. The study learned that the church does not help enough in giving them an opportunity to exercise their necessary skills and spiritual gifts. For example, one participant said "…*there are times our church leaders understand us and times they do n*ot" (Tiago, 09/09/2009).This participant argued lamenting that "*though the youth cannot solve the problem of environmental degradation especially caused by natural disasters, due to their economic incapacity, we can help to solve ecological problems provoked by human behaviours. The youth have the potential to mobilise others to reverse the current environmental crisis in Nampula through teaching*" (Esmirna and Rijone 07/09/2009).

However, they need support. The support here does not necessarily mean financial resources. A word of encouragement and giving them a chance to exercise their ability will make a great input. The youth named some issues that damage the environment in Nampula such as urination and defecation in the open air, lack of dumping sites and drainage systems.

5.1.4 Urination and defecation in the open air

Yet, in the same category mentioned above, the youth lamented the attitude of some people in Nampula towards urination and defecation. They practice this attitude in the peripheries of Nampula city along the roads. The allegation according to Baptista, is that "*this activity is because there are no public facilities for people to urinate. The danger becomes real when people practice this inhuman behaviour along the roads, railways and small rivers*" (Baptista 07/09/2009).

The risks of this attitude are various such as in the rainy season people get chronic diseases like cholera and acute diarrhea. Theologically, this theme is also God's mandate for human responsibility towards his creation. God created people and placed them in the Garden so that they could cultivate and live through it and also protect that beautiful Garden. In this regard it is believed that the youth can play an important role to curb this situation by mobilising others. On the same category of understanding the environment, the youth said expressed about poverty, illiteracy and geographical challenges.

5.1.5 Poverty, illiteracy and geographical changes

These themes are linked with other challenging factors against ecological degradation in Nampula mentioned by youth. To me these themes reflect the current condition of the environment in the city of Nampula. After hearing the youth, I spent days walking in the peripheries of the city in order to confirm and prove these findings. The youth group findings can be compared with that of some of the scholars indicated in the secondary data collection. For example, it is argued that:

> The present condition of natural resources in the province is linked to the political restrictions, economic, social and demographic shiftings. It also commented that the socio-economic situation in Mozambique at large is in general degraded, not only by war, but also by the abandonment of important infrastructure… Since population growth intensified evidently after the civil war even in the urban areas such as in the city of Nampula, and in rural areas, driven by programmes of resettlement of populations…the environmental degradation also increased. (Muagerene 2000:12).

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In addition, the causes of environmental deprivation in the city of Nampula are linked to the "economic and demographic change" (Goldblatt 1996:1). Some of changes are linked to the disorder of urban settlements in the city of Nampula.

5.1.6 Disorder, informal settlements in the urban areas and demographic shift

Most cities in Mozambique are characterized by informal settlements which make our environments ugly. Concerning disorder in the pattern of human settlement, it is stated that besides the "lack of urban planning legislation, there is limited technical capacity for planning…Even Maputo as the capital, with a stronger fiscal and political base than any other urban area, has only 3 planners, all recently graduated from the university and with no specific training or experience… (Jenkins 2001:14, 15) Consequently, "…the population lives in a semi- or non-urbanised neighbourhood, in traditional houses with rudimentary infrastructure. Most peri-urban areas are occupied spontaneously, often in inadequate areas subject to erosion or floods," (Eskemose 2004:112).

In this way where there is little political attention in favour of formal settlements, this study realised that the private agencies including the church should play their role. Although homelessness is an ongoing challenge the city should not just continue to grow spontaneously because it will end up with inadequate buildings. In the same way, the government authorities should help people by facilitating the process of accessing the land and licensing buildings. In doing so, it should discourage people from building and settling in disorderly ways.

5.1.7 Other faults observed by participants

The youth commented that the research led to the conclusion that the issue of the environment in Nampula is everyones' problem including that of the politicians. The participants argued that it is senseless and embarrassing because every four years there are municipal elections. It is an embarrassment because according to the interviewee, "in *every electoral manifesto, the politicians promise good service delivery but after they get into power the situation remains untouchable and worse*" (Baptista 07/09/2009). For this interviewee it is a disgusting situation

because you cannot talk about good service delivery in a situation where there 'are no public toilets and people urinate like animals'.

5.1.8 Lack of dumping and drainage systems

Dumping and drainage systems are crucial themes raised and concerned by the participants. It was hard to reflect on the youth responses towards lack of dumping spaces, drainage systems and uncontrolled urbanisation because it seems that people live in a lawless manner. It is an offence to the earth when you can see in the parks waste replacing normal grass. The parks which naturally were designed for people's recreation and joy are misused. It is dishonouring for the city when you see eroded areas becoming 'hotels for criminals', and running water along the roads forming 'swimming pools' for mosquitoes.

However, when I reflected on these issues, I observed that though it is easy to blame the government, in some instances these problems are worsened by public attitudes. People themselves also forget that they form part of the government. The church watches this scenario everyday but has never taken the opportunity to act in order to correct this evil. Regardless of whether they know the law or not, people should act conscientiously rather than merely continuing to blame and cry without taking responsibility.

5.1.9 Blaming the government and people's worldview

These themes were also raised by youth. According to Baptista, the blame here is based on the view that the government holds power, financial and human resources. The government is also a policymaker. For this reason the government should not let the environment deteriorate as it does currently. The government could provide funds and facilitate the environmental agencies to work without complications. People should, however, not just keep blaming the government while they do nothing themselves. Sometimes the government can allocate funds for certain activity but it ends up without implementation.

Sometimes the government promotes environmental campaign programmes and people do not do what they were supposed to do. However, civil society and the government need to both work together rather than blaming one another as it will not help anybody.

Worldview is another theme which plays an important role among many Nampula residents. Worldview constitutes a key paradigm for the good and may also be at the root of bad environmental management in the city of Nampula. The worldview in this context is how people perceive and interpret different matters and relate to them. For example, some church leaders in Nampula see the environment as something that can be dealt with only by the government or rich nations. Some cultures like the Makhua culture is one that seems careless concerning the environment. Thus, due to conflicting interests related to cultural diversification, people who desire to work for change encounter difficulties when they attempt responsible action towards the environment.

Further, sometimes policies and laws delay local community activities, since everything they try to do has to first be approved and decided at a central level. Working under a centralized system sometimes helps the poor very little. Traditionally, policymakers and local community leaders have their own worldviews in implementing their decisions. Another disadvantage is that these policies and laws are formulated without public participation and debate. With regard to institutions, which include religions and churches, it becomes a big dilemma for community development. Some religious leaders are used to doing things only after ceremonial consultations. However, with the technological revolution, some cultures see and do things differently, which sometimes creates an impasse between tradition and modernity, as related to approaches to ecological care.

For these reasons, it is very important to take seriously our responsibility, so that humans may work in a balanced way, without harming the upcoming generation. To address this negative impact, the youth gave some relevant suggestions like promoting civic education, dramas, workshops, awareness and thorough skills training for the local people. This is very important because the majority of the Nampula population is illiterate and uneducated, and they need help in awareness.

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5.1.10 Theological reflections

Concerning the question of who and where is God, the youth came up with some theological themes which describe God as the creator, omnipotent, omnipresent, omniscient, and authoritative in controlling and sustaining everything. In addition, Jesus' death, *hope* and *peace*, as well as humankind as the image of God, form part of the themes related to their understanding about God. Some themes on the questions about the significance of the Garden of Eden and the church's mission include holiness, paradise, God's glory, love for one another, and unity.

Again, when analysing these themes from a Christian perspective, there is no doubt that God is worthy of these attributes and categories. This indicates that if God is the creator and omnipotent, then human beings should not exercise any right to oppress any creature around them. In this regard, humankind's duty should be that of being good stewards, (Genesis 2:15). Moreover, if God is omnipresent and omniscient, then men and women should behave accordingly. They should avoid urinating and defecating in the open air. They should also not destroy the earth and cut trees unnecessarily. As God loves unconditionally, people should also bear in mind that he judges any human wrongdoing without favour. If God is authoritative, then people should be submissive and obedient to him in all aspects of life, rather than only knowing his attributes intellectually, without living them out.

5.2 Matters related to causes of environmental crisis
Analysis of womens' perspective towards nature crisis

Under this category related to the causes of the environmental crisis, the researcher analysed womens' data. On Thursday 9 September 2009 I met the womens' group at the church. It was the official opening day of their weekly prayer meeting after a short break they had. During the meeting, the ladies gave me an opportunity to speak. As a way of preparing my interviewees, my speech was based on Genesis 1-3. My address was on God's creation and humans' responsibility for conservation of nature. After the womens' meeting, I asked them to leave and the seven (7) selected ones to stay. Some of themes raised included: people's attitude towards the environment, deficiencies of people's administration, government's unwillingness and some

people's apathy. Other themes included culture and community irresponsibility, and unhygienic attitudes. The ladies' group also identified within the environmental crisis God still being the father, creator and omnipresent. Here follows the analysis of these themes in separate order:

5.2.1 People's attitude towards the environment

This is one of the themes raised by the interviewees. The participants of this group recognised that the "*environmental problems sometimes originate through some people's awful behaviour over God's creation*" (Henriqueta, 09/09/2009). One of the participants argued that "*the environmental crisis is also worsened by deficiencies of people's administration, after independence in 1975*" (Matos and Motiua, 09/09/2009). Substantiating this view, one can say that after independence and during civil war, the houses in the city are more crowded than at any time before. In these days, it is possible to find some flats that were designed for three or four people, with more than ten now occupying them. Consequently, the city, houses and all sewage systems become saturated. In this regard, private agencies and governmental intervention for ecological care becomes an urgent need.

5.2.2 Government's unwillingness and some people's apathy

The interviewees' ladies group admitted that ignorance and apathy of some people play a role towards land degradation in the city of Nampula. Some interviewees said that "besides community negligence, the government's unwillingness is also the cause of ecological degradation because there are no efficient drainage and dumping systems in the city of Nampula.

These systems could help to curtail the problem of running water along the roads, and prevent the accumulation of litter. Other themes seen by the participants as the cause of degradation, include government inability, culture, community irresponsibility and unhygienic practices as are discussed bellow.

5.2.3 The government's unwillingness to supervise

This theme was raised by the participants. The government's incapacity to supervise the welfare of the environment is not necessarily due to lack of resources. According to Matos and Ernesto (09/09/2009), certainly, "*it could be associated with poor people's management*". This poor management often results from the misuse of allocated material and financial resources. This includes employing a work force that is not trained for the tasks they are appointed to do.

Moreover, these interviewees argued that "*working in ignorance and misusing the allocated resources by using them for other budgets can easily weaken the management system*" (Matos and Ernesto, 09/09/2009). Hence, if the government is deficient either in resources or in the numbers of the work force, the result may lead to failure of service delivery. Consequently the environmental degradation will never be arrested. Further, if local people are not informed as to how and why they must care for the environment, it may indicate that the government has little interest in the poor's suffering.

5.2.4 Culture and community irresponsibility

These themes were raised up on the basis that the participants observed culture as one of the driving forces for any society. According to Henriqueta, "*besides the government's negligence towards environmental management, sometimes it is important to see that in any community there are those who like to sabotage the goodwill and creativeness of other people*" (Henriqueta 09/09/2009).

In other words, there are cultures which do not allow development in their areas. Also there are cultures which do not like to shift from their traditional way of living. Even in Nampula, there are those who are employed but are not interested in development e.g. some poor people do not welcome the idea of shifting oppressive systems. Some of them fear persecution or reprisal. Therefore, the community itself lacks creativity on how to organise itself in order to start solving their own problems. At the same time it is obvious that where there is little community awareness about many issues, the people totally depend on the government's decisions.

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5.2.5 People's unhygienic attitudes

With regard to the unhygienic situation in the peripheries of Nampula city, one can reflect on the reason for poor public sanitation in town and even in the public places like bus stations, markets, shopping centers and schools. People seem to lack a culture of cleaning up their own and public and public places. It seems that there is no awareness in the community of dangers related to lack of hygiene affecting people's health, which could be the reason for endemic malaria and cholera occurrences every year. In other words, people do not contribute as humans to reverse the environmental crisis. Instead they throw their waste anywhere and it causes serious dangers to health and even the economy.

The government sometimes denies its responsibility in creating drainage and dumping systems that would avoid water and waste accumulation. Other weaknesses on the government side include lack of local community mobilization and education towards ecological preservation. People need to understand the importance of keeping the ecology protected. Therefore, willingness on the side of the government and good behaviour on the community side will help to curb environmental degradation.

5.2.6 The massive exodus

It is important to mention that the massive immigration of people from the rural areas into cities, linked to political intolerance, also contributes to ecological vulnerability. For example, some people who moved into cities were not prepared to live in a flat/apartment. It does not mean that such people do not deserve to live in the urban and flat contexts. However, the demands of living in the urban areas differ from those of the rural ones. The flats and conditions in the cities were originally designed to accommodate a limited number of people.

In Nampula, for example, due to this exodus, today it is normal to find more than five persons living in one room. As a result, the city finds itself in an unstable condition. One can compare this situation with the concept of the town as a favourable place for people's joy and health. For example, "…the concept and purpose of a town is to create an environment as conducive as

possible to good health, happiness, stimulation and satisfaction during their youth and working lives, and contentment and care in their old age" (Gorringe 2005:21). In this view, one can learn that when there are difficulties such as erosion, pollution, settlement disorder and conglomeration of people in the rooms, people will not enjoy freedom, justice and peace.

5.2.7 God as the father, creator and omnipresent

On the question of God and the environment, many of the women shared the same view, seeing God as their father and creator, as well as omnipresent. They said human beings are also created in the image of God. Reflecting on these themes within a Christian point of view, I concur that it is without doubt that God is the father and creator. However, the questions that could be asked according to my analysis should be as follows: If God is a divine father and the creator, then why does humankind not show him a dignified respect? How do they love God who is the source of their existence, without honouring him? How do people talk about hope and peace while they destroy God's creation? How do people talk about salvation in a way that is isolated from what he has made, while Jesus died to rescue God's creation?

Some scholars consider creation as "a special act of God; it is not a routine task or the consequence of any other divine act" (Pulikottil 1998:41). Psalm 104 presents God as the father, where everything depends on him as the owner, rather than human beings. With regard to the church, some scholars observe that "…the church in the city today is faced with enormous challenges and opportunities in its ministry to persons in need…responding to tectonic shifts in the urban social landscape," (Meyers 2000:23).

In relation to the Garden of Eden, there are similar ideas encountered in both my primary data and secondary findings. The secondary data's finding indicates that "this Garden of Eden is a paradigm for an ideal natural environment that is devoid of soil erosion, deforestation, air pollution and unwarranted killing of wildlife" (Gitau 2000:63-64). The primary data from the participants realizes the Garden as a figure which represents their home today, (Matos, 2009). Therefore, during my fieldwork I have observed that, although the women's group responded to the interviews with insight, their responses were not grounded in the above questions.

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Although they are more committed to work for ecological disaster reduction than the mens' group, it seems that some were coached by emotion. In my observation, the women did not interpret or clarify their responses by answering questions such as why and how to take care of the ecology. In most cases they did not respond to the clarification questions. It does not mean that they are ignorant, but in my observation, some doubtful women's responses may be be related to their cultural background. For example women of Nampula mainly stay indoors, and it gives them less opportunity to learn, while males are mainly outdoors thus have more chance to learn than women.

Concerning the meaning of the term church and its role in the community, I observed that there is traditional understanding on this matter. The womens' group sees church as "*a gigantic building with a large number of people gathering there, and a place for the saints and not unholy people*" (Matos, 09/09/2009). So that is why they cannot go out from their buildings to evangelise and preach the gospel of hope. For them, "*evangelism must be done only from the pulpit, and those who come to the church must be holy persons and thus there is no need to go to them*" (Ramos and Imwili, 09/09/2009).

After reflection I understood that the church in this way contradicts and loses its role and purpose of existence. Furthermore, the women raised the most interesting issue concerning mission and the vision of the church. They understand that mission and vision go hand to hand and they must be linked with visionary leadership. For them, where there is no visionary leadership, there will be no mission at all. These were the arguments of the women about the church's silence towards environmental issues as well as its absence within the realm of other issues affecting the public.

5.3 Impacts of the environmental crisis on society

The church leaders' data analysis

With reference to environmental degradation as a social problem, this group demonstrated basic knowledge about the environment, its problems, causes and consequences. They have good intentions toward eradicating the environmental crisis. After the interview, they suggested

starting up environmental pilot projects. Some of them have traditional experiences of combating environmental degradation such as opening places to dump the litter produced in their homes. Others have difficulties in managing their waste because the city of Nampula has no space to dispose of it. Some residents even find it difficult to build basic facilities like toilets due to the lack of space. In my observation, the major problem raised up by this group which constitutes a problem to keep the environment from degradation is the lack of skills and techniques amongst most stakeholders.

Concerning the laws, policies and processes, this group commented that in Mozambique, there are good laws, policies and traditions. However, these are little known by ordinary people. In other words, there is a great deal of ignorance of general knowledge, as well as interpretation of the law. For example, "*... the laws are not interpreted for the local people so that they can know and understand the work of a particular law*" (Cornelio, 10/09/2009). "*It becomes difficult for people to assume themselves as an instrument of environmental defense when they do not know what a particular law is made for*" (Silva, 10/09/2009). Culture and tradition play an important role in their communities, because there are some people willing to keep the environmental orderly while others are just not interested.

For these reasons, the church leaders have shown some understanding about the relationship between *oikos,* the environment and people. In other words, they see that "*oikos* is about economy and household. At the same time there is a link between human daily life and economy, house and the land. There is no doubt that human beings are created from the ground and after death they go back to the ground" (Pirilau, 10/09/2009) too. They failed to engage with this process of becoming fully human, and the process of death also impacted their involvement with the ecology. As humans belong to the earth, they should treat the ecology as they do their own body.

5.3.1 Oikos as God's economy

Though the participants of this study had some perception of the concept of *oikos* as God's economy, there is also a need to understand deeply that this concept comes from the term

oikoumene. For example it is argued that "oikoumene means...all things belong to an all-inclusive form upon which the life of each depends" (Rasmussen 1997:90). If so, human beings need to keep their environment in good condition because their economy and health depends on the outcome of such conservation. For example, it is observed that "the state of health of human beings is determined to a great extent by the properties of the environment in which they live" (Rodda 1991:88). In other words, our good health depends on our good stewardship.

The key issue here seems to be the error of separating the spiritual world to one side and the physical world to another. It is a dichotomy. In another words, the major concern for the church leaders is more on the spiritual side than the "secular" one. They try to make themselves holy without understanding that neglect of the duty they are called to as the overseers of the earth, something like a pig that goes to bath in the mud without knowing it is making itself dirty. The church leaders have neglected to make themselves a presence in public places, thinking if they do so it is like committing sin.

The Union Baptist church in Nampula should remember that their mission on the earth is not only to find and bring the lost to Jesus, but is also to reconcile with the oppressed and degraded ecology rather than focus only on one aspect of life. It is noted that "...our mission is also conscientization... not only proclaiming the message of reconciliation between humanity and God, but also acting out the power of reconciliation in our relationship with nature" (Manohar 1998:206). To contextualise this, one can argue that "...mission is no longer limited to human beings – their spiritual, physical, social, political and economic welfare – but includes nature, which is part of and parcel of God's creation" (Kim 1998:211). It means that the mission of the church is that of unconditionally helping people and the rest of God's creation from darkness to light and from destruction to recovery.

Church leaders should start thinking that Jesus who is holy by nature came to the earth, lived and ate with the sinners because he had the mission of salvation. In the same way, if the church cannot go where people are, the mission of the church on the earth will be unaccomplished. Scott (1993:16) said "...redemption is not the rescue of certain individuals for eternal life in another world but the fulfillment of all humanity in the political and social realities of this world..." Like

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Bishop (2005), I believe that the church should reflect, and understand that "Christianity is neither anthropocentric nor biocentric: it is theocentric. Our solidarity with the rest of the creation should serve to keep us from an oppressive rulership. Dominion is not a dictatorial rulership, we are not to lord it over creation: it is a delegated rulership, a rulership that is accountable".[90]

In addition, Campolo challenged that "the kingdom of God is to be among many other things, a restored creation" (1992:114). Such restoration can be linked with social and non-human beings developmental affairs, since development is a symbol of "freedom that is concerned with enhancing people's lives that leads to the empowerment of peace and justice" (Sen 1999:17). So, the church should embrace this by engaging in "…a holistic approach to her mission in order to achieve her vision of life in its fullness" (Moyes 1999:21). According to Samuel & Sugden, (1981) the "…start point of development" is a biblically based issue and for Rowland "development is freeing people from their limitations" (1990:45).

It is interesting to see that the church leaders have little knowledge about sin. Though they made a list of some sins such as lack of love, injustice, robbery, murder, worshiping other gods and adultery of any kind, still they do not fully understand what sin is. I say this because there are some church leaders who do not understand that if human beings are careless towards God's creation and loveless to one another, it may indicate sin against God. In my observation, people can talk about sin without knowing that they live under sin. This ignorance, to me, can lead people to carelessness towards God's creation. It is easy to assume that you do good things while you do not. In my observation, the church should know that all human beings are sinners and we need God's mercy. In this view, the church cannot isolate itself and watch things deteriorate.

Some other theological themes raised up in the interviews were related to God's purpose in creating humans, and the significance of the Garden including love, peace, joy, and obedience to God. To me this explains the purpose God had in creating humans. This purpose is to obey him

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[90]This idea is taken from a paper prepared by Steve Bishop in 2005. Green theology and deep ecology: New Age or new creation? Hosted by permission on http://www.theologicalstudies.org.uk/

and have joy and peace on the earth. The participants indicated that the Garden is a paradise where God lives. However, these theological themes seem senseless because to me the UBCN leaders do not observe them in obedience to God's command. God commanded human beings to cultivate and guard the Garden, including the entire creation.

5.3.2 Cultivating and guarding the Garden

Furthermore, the analysis indicates that church leaders lacked understanding that the work of cultivation is a kind of employment from God to humans that would contribute to their joy and peace on the earth. It is evident that the structure of the human body, as well as the mind, was never intended by God for a merely contemplative life. Moreover, the guarding task demonstrates people's worship and honour to God. This worship would reveal humanities inner gratitude and obedience to God for his love and gift of the land to the people. Thus, humans' employment, joy, peace, worship, and obedience to God cannot be done in isolation from proper care of his creation. People must never set up their own will against the holy will of God. God's power should lead Christians to care for the surroundings, rather than its destruction.

During the interviews, I observed that some of the participants were openly expressing their views, but some did not find it easy to do so. Especially on the matter of the church making a public presence, I found that the interviewees expressed a willingness to do so only in a figurative way, they know it will not be easy for this to happen, since their tradition does not allow them to work in non-Christian communities. Our church itself knows that it never collaborates with any other church, except between local congregations within the denomination (UBCN). They do so as a way of protecting their church tradition. This is seen in the church leadership's expressions and actions, such as disassociating from networks with the government and other churches around Nampula. For this church, working in isolation from other churches has become a strategy to 'avoid sin', and to protect their membership, preventing them from moving to other denominations.

However, they are not aware that by doing so, people are rendered ineffective and hopeless. The church leaders complained about the government not making the laws available to civil society.

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However, the church also forgets that it does not make its voice heard in society. The church preaches only for spiritual salvation from the pulpit. The church forgets that the government exists through God and for the good of the people. In this regard, the church has a duty and a prophetic voice to challenge the government when there is something wrong.

5.3.3 Repentance

Another theme is repentance, which constitutes the most dominant subject of focus in the churches and in the Scriptures. Though the UBCN leaders showed good intentions towards a commitment to environmental issues, it seems to me that some participants answered the questions just to justify their presence and make me feel good or impressed.

For example, when I questioned whether the environmental crisis could be a priority for the church's mission, the interesting answer was that "*Ecological degradation and conservation could not be seen or considered as priority or important for the church mission. Church mission is to do God's work which involves only evangelism, preaching and love to one another. The purpose of Christ's death is to forgive humans from their sin and save them. Therefore, this is what we need to focus on and preach about, rather than anything else*" (Nihaua, 10/09/2009).

To me, this reflects the reality of the limitation of the church leaders' theology, which is only limited to human repentance from spiritual sin, and salvation, while neglecting other responsibilities that God has entrusted to the church. According to Gundani, the "mission of the church is to proclaim God's will to the world...an integral part of the church mission is to offer moral principles that can help members of society to resolve their problems" (2003:467-502). Otherwise if the church does not practice mission that is inclusive of the land conservation, then it can also fail in its ministry of preaching good news to the world. This is because "when the church fails to communicate this news...it fossilises" (Bacala 2001:61).

These statements teach that the church should not attempt to work only in some areas and thus undermine other parts of creation. Some scholars argued that "ecclesiology should be based on missiology; in other words, mission should be an integral dimension of ecclesiology" (Andria &

Saayman, 2003:503). This source suggests that the mission of the church should not be limited only to narrowly selected things, but include living and non-living beings. In other words, church mission should defend, protect and advocate for the oppressed. The following section attempted to analyse the response of the Director for Environmental affairs in Nampula.

5.4 Caring for the environment

The municipal director data analysis

Caetano Amade Miguel, the Municipal director for environmental affairs in Nampula, was interviewed to enrich the data of this study because he is a professional person who deals with environmental issues. As a government agent, he has experience that would not be found in any person from the church groups. Miguel was interviewed on 11 September 2009 in his office. He contributed a great deal by providing technical and practical information. Miguel requested that his responses should not be recorded nor that a photo be taken of him, for his welfare. The questions addressed to Miguel were not the same as those applied to the church groups' members.

In the beginning of the interview Miguel was not free to talk. I discovered that it was because it was our first time to meet each other. Also, in my introduction to him, I told him that I was a church leader. He was uncertain about my motives, because he did not know if I was going to spy on him or not, but when I explained the purpose of the research and why the church has to be part of environmental management he became more at ease. He congratulated me for the initiative, because according to him the church has been dissociated from many events in the plaza. From that point, he was open to answer the questions posed to him.

5.5 Difficulties encountered during fieldwork

During my research in Nampula I encountered some difficulties that hindered my fieldwork. At church for example, I spoke to the youth leader who granted me permission to meet with the youth at the weekend. However, he did not convey this message to the youth. When I went to the

church to meet the youth, they remarked that they had not been informed. When that leader knew that I was at the church, he did not come. Then, the youth said they would go to consult with him. He promised that I could meet them on Sunday after the service, but it never happened. Some youth who wanted to participate in the interviews - specifically University students - organised themselves and we met. The same story transpired when I was to meet the men's group. The leader was asked to organise five men for interviews and he promised he would come to meet me with his people. Unfortunately, they never came.

Similarly, I went to talk to the leader of the provincial department for environmental issues in Nampula. I asked him about the possibility of conducting interviews there. He said that he was not available, but then he asked me if I had brought a letter of credentials, attesting that I am a student and allowed to do interviews in Nampula. I explained that I did not have such a document. I explained that I am a Nampula citizen, but he said that he would not accept me. I then decided to go to the Municipal director to see if he would accept participation in my interview. He welcomed me without asking me anything. The only thing he did not want was to be recorded during the interview or to have a photograph taken.

Other problems were due to time management and the shortage of money. The participants always arrived thirty minutes later than the scheduled time. Because I did not have enough money, I was forced to travel long distances looking for accommodation and food, since the inner city costs are too high. Beside these difficulties, my fieldwork has been successfully completed.

5.6 Matters to consider for the development of a practical biblical theology of the environment in Nampula

For the development of a practical biblical theology of the environment in Nampula, issues such as God's creation, hope, protection, advocacy and awareness are considered. Bookless (2007:43) considered that "the first pillar of a Christian theology of sustainability is that God is creator and sustainer…the second pillar is that of covenantal stewardship". Recognizing that God is the

creator and sustainer of all his creation leads us to stewardship and action to take care of the earth.

We need such a theology because for the most part, in Christendom we abandoned our role to carry the gospel to the world. Such a gospel should not be preached only inside of the temple. If we do so, the gospel will reach just a few, but the gospel should be preached to save humans and nature. Conradie (2009:45) adds that "one may also argue that the possibility of preventing runaway climate change requires more than providence, it requires redemption. We need to save the planet". In doing so, it would be "…an expression of God's loving care, God's loyalty to and solidarity with God's own beloved creation" (Conradie 2009:44).

Christians must preach the gospel of God's Kingdom not just that which focuses only on going to heaven after death. Hjalmarson understands that "...the Gospel is not that Jesus died on the cross for your sins so you can go to heaven when you die, but that the Gospel that Jesus preached was the Gospel of the Kingdom. When you say this to people they look at you like you're insane. 'Of course the Gospel is that you can go to heaven when you die', they say. But the Gospel isn't a one-time event it's a daily participation with Christ in the Kingdom life" Hjalmarson (n.d). Thinking in this way leads to a discussion about God's providence.

5.7 God's creation

It is very important to note that after God had created everything, he gave humans a sacred trust of being God's stewards. So, tilling and keeping constitute God's ministry by which he expects human beings to respond responsibly. It is stated that:

> The first mandate is the creation mandate, given in Genesis 1:26-28. Men and women are stewards of the creation, and as such are called to "tend the garden," to care for the world God has created. We are all so called to work in God's creation, to become sub-creators under Christ and to provide for our families and for the needy. Work itself is good and Christians must accept God's proclamation of the creation as very good. The incarnation is God's ultimate "Yes" to creation and the physical world, Hjalmarson (n.d.).[91]

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[91]Hjalmarson, Leonard' (n.d). , the information was accessed through the following site: www.nextreformation.com

Additionally, Bookless (2007:44) argues that, "tilling is about working responsibly and includes all human endeavour in managing the earth and using natural resources. Keeping is about doing all of this in a way that today we would call sustainable. It is about restraint and respect, never taking the system of nature beyond their capacity to renew and replace". Tilling and keeping are terms linked to human action for ecological care, it brings hope to God's creation. Biblical practical theology can be evident if the church presents itself as an alternative community to preach hope and peace to the poor and for degraded nature. Christians need to practice theology by providing nutrition and demonstrating a liberating view of the place of the poor in society and towards restoring the degraded earth.

5.7.1 Hope and peace

Bookless (2007:47) states that "sustainability is dependent on hope. Without it, there is no point in struggling to sustain the unsustainable. The Christian paradigm of a world created good, spoiled by humanity, but redeemed by God in Christ offers a hope wider than human activity and that also compels human beings to respond in hopeful action".

5.7.2 Protection, advocacy and awareness

Protection, advocacy and awareness are primary steps and essential for Christian response and action for ecological care. In order to curb the widespread problems of the ecological crisis, pollution, hygiene, sanitation and economic imbalance the following suggested activities need to be considered: the need to work closely with and empower women; the need for technological solutions to be adequate; political and financial frameworks should be observed seriously to assist the local community.

Other practical actions to solve these and other environmental problems include what experts said to: "determine what we can do as individual stewardship; join our efforts with those of others in wider society; make wider society aware of what can be done; where possible, inform, lobby and influence community leaders and policymakers, including representatives of local and

national government" (Stafford & Bryant 2007:165). In taking practical action for environmental sustainability, it is important to consider the poverty issue.

For example if we "take a multi-dimensional approach to tackling poverty and promoting the wellbeing of minorities and vulnerable groups by addressing their health, education, income, decent work, living standards, security, empowerment and resilience. Likewise, extend environmental goals beyond greenhouse gas abatement to address whole ecosystem integrity and functionality, and respect for planetary boundaries. Business, government and civil society should all plan and account for their performance against the same basic framework" (IIED 2014:3) will help to reduce ecological degradation.

5.8 Conclusion

In conclusion it is important to note that there were similarities in the responses between the different groups participating in the interview. They addressed the theological and sociological themes in similar ways. The most significant and unique response is the recognition that environmental degradation is everyone's problem and responsibility. They recognized that beside government's carelessness, the church also is to blame. The church seems to be committed to work until the current ecological crisis will be curbed in Nampula.

Environmental degradation is a social, political, religious and economic problem. The findings have shown that Nampula residents' experience of ecological deterioration is oppressive because it affects them economically, health wise and socially lives. For this reason, the participants have recognised and revealed that people's negative attitude constitutes a driving force for environmental damage. To curb such harmful attitudes there is a challenge for everyone - regardless of race, gender, class, education and language to accept responsibility to fight against the destruction of the earth.

The challenge of acting with responsibility is paramount. People must avoid hiding behind relative poverty but should rather try doing their best through utilizing their local resources. Education itself also does not guarantee behaviour change. Many uneducated people can do

better than educated ones. It is important indeed to acknowledge that there are some natural calamities that cause environmental degradation which human beings do not have the capacity to control. For example, floods, drought, cyclone and torrential rains, are largely beyond the control of human beings.

However, there are those such as waste materials accumulation, urination in the open air, soil pollution, land destruction, cutting the trees unnecessarily and random habitation. These are disasters that cause environmental degradation, which can be avoided. Therefore, the church should not blame the government about these wrongdoings when it is not willing to get involved or be present in the public arena. The church must help the government by preaching against injustice, and the violation of God's laws towards his creation. In this regard, the next chapter serves to progress further towards a biblical view in relation to the creation and ecology.

Chapter six

Biblical view toward ecological conservation

6. Introduction

Chapters four and five discussed the IUBM community's understanding towards the environmental crisis in Nampula. These chapters attempted to capture and unpack the challenges and consequences associated with ecological deterioration experienced by the people of Nampula. Chapter five in particular analysed the interviewees' thoughts on theological and other important themes raised up at the interview by the participants. Chapter five reflected also on who people think is responsible for the environmental crisis and how they plan to curb this situation.

Therefore, in this chapter six I reflected on the interviewees' understanding of ecology. Then, I compared their understanding with God's purpose in creating the earth. Other issues discussed in this chapter include the relationship between God, humans and nature, biblical tradition and the missiological implications of ecological matters. The Scriptures teach that God created the heavens and the earth (Gen 1:1). Afterwards, he created humankind from the dust of the ground and put them the garden (Gen. 2:15). Humankind was given a mission of taking care of what God had created. Land and the entire creation belong to God. Accordingly, "the Torah stresses that the land belongs to God... the gift of the Land to Israel is firmly linked to Israel's status as a holy nation, and in this context, Israel is reminded, that the land belongs to God and has been given to the people sanctified by God for a special purpose" (Marchadour and Neuhaus 2007:24). One can therefore see that as God's holy people who are accountable for God's creation, we should behave as holy people. This holiness should be seen through taking care of the earth and the entire creation.

6.1 The environment phenomenon

This concern for the environment is not new. The understanding about care of the environment is actually ancient. In the Bible this view is based on the argument that "Jewish and Christian

concern for the environment reaches back into the misty past...Noah at God's instruction, acted to save all the species endangered by the flood and to begin repopulating the world" (Beisner 1997:1). Beisner added that "Abraham and Lot worried about what many of today's environmentalists would call the *carrying capacity* of the promised land …at the turn of the third century A.D., to the labours of St Francis of Assisi, on behalf of birds and beasts, to our own times, Jews and Christians have thought, spoken, and acted in awareness of the environment".

God created the heavens and the earth, humans and all that is on earth. He saw that everything was good (Gen 1 – 2). The Garden of Eden was a special place were the first humans were placed (Gen 2:15) as their home, to cultivate and guard. They were given responsibilities to cultivate it because God had given them the earth (Ps 115:6) as their source of sustainability and to guard it in view of the fact that the earth belongs to the Lord (Ps 24:1).

Reflecting on these biblical texts and Beisner's idea, one can see that humans are just stewards of God's earth rather than destructive owners. So, humans should not under any circumstances violate and destroy the earth. Humans should also not just benefit from the land without taking care of it. Accordingly, "it is not enough to have been blessed with land. We must maintain that land and control all that could destroy it. Thus, we need to stop destructive processes like soil erosion and deforestation and must not use chemicals that are harmful to the soil" (Adeyemo 2006:14). In order to maintain and control the destructive aspects against the environment a radical change in humans' behaviour toward nature is needed.

6.2 The Concept and purpose of God's creation

The discussion of creation in the Old Testament is not clearly developed by the biblical writers except that of Genesis 1-2:4; 5:1-5 and Jeremiah 32:17. For these and other scriptural texts, creation is God's mighty work for his own glory. For instance, Pulikottil expressed that "in the Old Testament understanding, creation is considered a special act of God; it is not a routine task or the consequence of any other divine act" (Pulikottil 1998:41). The lack of clarity about the development of God's creation, may perhaps be a consequence of humans knowing nothing about how and why God created the universe, and also perhaps because they were the last

created creatures. For instance, it has been observed that "there was nobody who assisted Yahweh in the act of creating the world" (Pulikottil 1998:44).

Moreover, "in the creation story human beings are certainly the last creatures, but they are the last creatures before the Sabbath and for the Sabbath...the world of human beings lies in God: in God's glory" (Gibellini 1995:127). Drawing from these statements I am in the opinion that the Old Testament (OT) perspective on the theology of creation lies in the nature and relationship to Israel's faith in one God. In other words, Israelites were aware and believed that there was/is one God who is in control and sustains the whole creation and the entire eco-system of the planet earth. For example, in the OT, creation can be understood on the basis of Psalm 104, where God is presented as the father and where everything depends on him as the owner, rather than on the human beings.

In addition, these texts provide a perception that God is not just the creator. For instance it has been stated that "God is not only the creator, but he is the owner of everything he has created…The laws regarding the sale, purchase and maintenance of land explicitly stress the ownership of Yahweh. The prohibition of the perpetual sale of the land is on the ground that it belongs to God" (Pulikottil 1998:45). The scriptures also teach that "...for the land is mine..." (Leviticus 25:23). The prohibition of perpetual sale of the land should therefore be seen in a broader sense. It may perhaps include all mistreatment and violations of the creation order. For example, cutting down the trees and overgrazing the earth unnecessarily; creating pollution and destruction of the earth.

In regard to the violation of God's creation, it is linked to the disobedience of God's law. It is a consequence of human's sin leading to this destruction. It is pointed out that "...if the Torah is violated, the land will be left desolate, and the place of blessing and promise will become an abandoned wasteland" (Marchadour and Neuhaus 2007:25).

6.3 The land as the main source for human sustainability

According to the Psalm 24, the land belongs to God and it cannot be perpetually sold because it is for the use of his people. Humans inherit the land as a gift from God rather than as deserved property. Leviticus 25:23 states that "the land shall not be sold in perpetuity, for the land is mine; with me you are but aliens and tenants".[92] This means that no human being should appropriate the land as it is really everyone's property. It belongs to God and humans are stewards. The text above seems to promise every person has the right to have a portion of land to live on regardless of his/her economic, racial or religious background.

Furthermore, it is noted that "the Jordan River motif points to the land the earth as a communal gift rather than as private property…the land that was conquered was not to become private property. It was a gift from God, it belonged to God" (De Gruchy 2009).[93] The land which God has promised to his people was a fruitful and productive land, but it was occupied by immoral inhabitants. The Canaanites were numerous and powerful, yet they were corrupt people who practiced child sacrifice and gross sexual immorality. So, God had passed judgement on them and had decided to eliminate them, and he appointed the people of Israel as his executors. So he instructed Joshua to enter into the land of Canaan (Joshua 1:1-6) and to completely exterminate the people of the land of all ages.

The sin of the Canaanites made God act justly against them. Though one of God's attributes is omnipresence, sin opens the door for him to move away from his people. God loves sinners but hates sin. It is not God who directly abandons his people, but people themselves start to move away from God due to their wrongdoing. It is argued that "God has not abandoned human beings, but human beings have abandoned the earth and now are being punished by drought, misery and desolation" (Urehlinger,1995:41). Urehlinger's view makes one think that maybe people often are punished as a result of their misbehaviour towards God and nature. For example, the careless use of the earth, the use of atomic bombs and other chemical explosions for

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[92]This text was taken from the New Revised Standard Version (NRSV) Bible with Apocrypha
[93]Steve de Gruchy is a Professor at the School of Religion and Theology, University of KwaZulu-Natal, South Africa. This information is taken from the paper of his address to the World Conference of Theologies of Liberation Belem, Brazil. January 2009.

the sake of economic growth and political interests illustrate humans' wrongdoing. In the Old Testament times, sometimes people's attitude incited God's judgment.

6.4 The rights of land

The biblical tradition teaches that the land also has rights (Lev. 26:34, 43) to rest and enjoy its dignity and regeneration as God's precious creation. The texts show that the land as God's gift to humans for their sustainability would not be treated unfairly. Urehlinger said that:

> Land, cultivated fields and gardens and some cattle, sheep or goats were among the fundamental values of early Palestinian society – the basic necessities which enabled a free farmer to feed his family. For this purpose he needed not only the necessary economic resources, but also a minimal ecological security (Urehlinger 1995:42).

However, both Palestinian and Israelite societies failed to obey God's instruction so the consequences were evident for both communities. As the book of Judges portrays, such consequences include the continued struggle in the land as local tribal warlords dominated Israelites in a way they were no longer able to resist. Judges 2:10-23 notes that whenever Israel went out to fight, the hand of the Lord was against them to defeat them. Rather than sweeping claims of conquest, Judges interprets the failure of the people to take the land as a test from God, either to see if they would remain faithful to God (2:22-23), or to teach the young people who had not yet learned war how to fight (3:1-2). The Israelites' struggle to secure the land was a kind of judgment as they failed to remain faithful to God and allowed the worship of Baal to flourish (2:11-15, 20).

In both the Old and New Testaments, the minimal ecological security was and still is necessary and important since people depend on the land for their survival. It is in this regard that Leviticus 25:1-7 notes that God established the Sabbath of the land law so that it could have rest and a balanced further production for the benefit of the poor and to the other people also. "The regulation that fields should lie fallow in the seventh year, which has pre-Israel roots, is an expression of the awareness of what today we would call ecological balance" (Urehlinger 1995:43). Land is the basic source for God's creatures' benefit therefore, human beings who are rationally superior among creatures should pay consideration to the fact that this earth is

suffering from human and technological aggression, exploitation and misuse. Thus, the biblical texts like Exodus 9:29; Psalms 24:1; 1 Corinthians 10:26-28 portray that the earth is the Lord's and so, it is to be used on his terms and under his law.

In addition, humans should realise that "the land of promise is a gift, a public space, common property. The Sabbath and Jubilee laws draw from this fundamental position, as does the command to care for strangers and aliens. In this understanding of the gift of the land, we see the deep inter-relationship between economy and ecology, the concerns of the poor and the concerns of the earth" (De Gruchy 2009).

However, as humans rely on the land or earth for economic growth, it is therefore, necessary to stop destroying the earth and taking it for granted. The danger is that, when humans mistreat the earth, it will no longer produce food contributing to household health. Mushala argues that "environmental degradation, resulting from misguided land-use practices, leads to low yields" (1992:44). Thus, God's Ten Commandments should be observed faithfully in order to save the earth from degradation given that the Ten Commandments deal also with economic matters for the common good of humankind and the environment.

6.5 The Ten Commandments

De Gruchy (2009) has observed that "the ten commandments – along with the wider Torah- served as a binding legal framework for social life together in the land of promise. There was to be no Free Market, but rather the community had rules to govern and control the economy". The legal rules as mentioned in Deuteronomy 30:19 imply that the purpose was not to control, accumulate and waste, rather it was to serve for the common good of all people and generations. It means for the people to choose life and live. Deuteronomy 30:15-18 pointed out that the choice was between life and prosperity or death and destruction.

Moreover, these rules also served to show people how "to live in harmony with the land and one's neighbours, assist those in needs, honour the wealth of the wider community rather than private wealth, and take responsibility for one's waste…" (De Gruchy 2009). This reminds

everyone to play a role that will help to keep the environment safe for future generations. This responsibility can be a challenge if younger generations are not encouraged to becoming ecology- minded and friendly, such as becoming public servants and activists.

De Gruchy (2009) further commented that "those who believe in freedom have to encourage good people to take up vocations as public servants, scientists, engineers, technicians, public health workers who can provide the leadership and know-how to protect our water and deal with our sewage". It is about training and empowering young people on the importance of conserving the environment so that they may start knowing and valuing it from an early age.

6.6 Environmental degradation and social sin

Why is the environment degraded whilst God created it perfectly? Why do humans fail to control the environment adequately while they are superior among all creatures and also are given responsibility to look after it? Scriptures answer these questions indirectly by stating that humans are created in the image of God and so God trusted them to care for the creation (Gen 1: 26-28). Human beings' failure in caring for the creation is considered scripturally as the consequence of human's sin as it is described in Hosea 4:1-3. Interpreting this text contextually one can say that, land degradation can be understood as the result of humans' lack of truth, and lack of knowledge of God. This lack of knowledge of God tents to manifest itself in social sin.

In my understanding, the social sin is that which provokes both the anger and compassion of God. In the biblical texts the Prophets present the sin of the people of Israel, the chosen people of God, as being the focus of their concern. The vineyard of Yahweh in Isaiah 5: 1-7, and the unfaithful wife of Hosea 2:1-22, both represent the people of Israel. In short, social sin means not just individual sin that has social repercussions, but rather the sin that is linked to a whole society, apart from individual sin.

For instance, it is argued that "social sin has catastrophic consequences in the ecological sphere: the earth fails to yield its produce, and its inhabitants, including animals, therefore perish..." (Urehlinger 1995:47). The book of Jeremiah provides similar accounts concerning the

consequences of sin. For example, Jeremiah 5:20-25:23:10 stresses that the house of Jacob in Judah was guilty for having destroyed the cosmic order and consequently there was no rainfall.

Jeremiah 14:2-9; 19-22 describes how because of Israel's transgression there was no water in Judah and so the land was dry. Zephaniah 1:2-3 and Isaiah 24:1-6 for example, told people that God will not tolerate wickedness or sin as a consequence of political prostitution (Hos 4), or military and social conflicts, since iniquities have created impacts against God. Humans' wrong actions such as "the lack of a knowledge of God, an absence of solidarity, political instability, mistrust and lies resulted in ecological devastation…they reflect concrete historical experience" (Urehlinger 1995:47. Thus, as stated in Genesis 3:17-23, human rebellion results in separation or abandonment from God and consequence expulsion from Garden.

In this regard, the illustration given in these texts should not be overlooked as a mere story or something that happened and belonged only to Judah's community and context. Rather, the texts should serve as a model to help people to learn that God is the God who cares for his creation and so he cannot be served by those who do not care. Hence, theology's purpose is to understand, interpret and engage in current issues such as in poverty, political instability, ecological crisis and other community needs.

> Christian theology needs now to shift its emphasis from the liberal project of defending religious belief in the face of a crisis of cognitive claims to reflecting critically on structures of oppression, and alienation and to participating in the development of redemptive, liberating praxis (Kispert 1996:189).

That is why it is important that the earth which is created for our own benefit demands that every person should use and care for it responsibly. Ecological mistreatment should not be considered only as a spiritual sin, but also as destruction and consequently, the land will give us nothing good. In this manner Hessel (1996:22) states that "humans are intended to be people of the land…we are earth creatures who should value particular places, and treat every land as promised" without degradation. In doing so, it would show and value the relationship between God and his entire creation.

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6.7 The relationship between God, humans and nature

Undoubtedly, it would be irresponsible if God the Creator of the whole universe including living and non-living beings would stand apart from his creatures. Scripturally, there is sufficient evidence of a relationship between God, human beings and the rest of creation. For example, Genesis 1-2 tells us that men and women are created in the image of God, and they were placed in the world. Psalm 24:1 and Genesis 3 have a similar story about humans' placement on the earth.

For example, in Genesis 2:12, Adam and Eve were put in the Garden of Eden with the purpose of cultivating and taking care of the earth. In support of this biblical view Gitau (2000:65) says, "Human's ideal relationship with the environment in the Garden of Eden is described in terms of a blend of work and responsible stewardship." Human beings are more rational than other creatures; God intended them to work for their own survival and at the same time play a caring role for the renewal of nature. Bradley states "the view of relationship between humans and the rest of the world that we derived from the Bible is at odds with the real message of the Scriptures. There is no mention of man's dominion over the rest of creation in the Yahwist story. The image which it projects of human relations with nature is one of companionship and stewardship" (Bradley 1990:14-15).

Furthermore, "…in the second account of beginnings attributed to the Yahwist or J, human life is conceived entirely in terms of agriculture" (Hessel 1996:27) which involves also responsibility, stewardship and care of the environment, rather than ideological domination. Another significance about the relationship between the Creator, humans and nature, adds Hessel (1996:28) "on account of our new ecological sensibilities…the first human, '*adam*' is made from the earth, '*adama,*' and that this relationship is captured in a play on words, '*adam*' from '*adama*". This teaches that dominion is only emphasised in the Priestly creation story rather than in the Yahwist story. For example, it is observed that "…we can hardly ignore the commission to man to exercise dominion over the rest of the earth that occurs in the later Priestly account" (Bradley 1990:15), since this human dominion over the creation is scripturally described for example in the book of Genesis 1:26, 28.

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Even if this dominion is biblically based it does not mean that humans have to abuse this task of dominion. In other words, dominion must not be perceived literally, because creation is God's property as the creator. Hence, I agree with Bradley (1990:16) that "taken as a whole it is quite clear that the dominant theme is not man's dominion over nature but God's total lordship over nature and the cosmos…God alone is in charge". Therefore, as we have seen in this section, one can learn that there is a strong relationship between God, humans and nature, and God is the head and owner of everything. Humans' relationship to nature extends also to other creatures.

6.8 Humans and other creatures

Humans must consider the implications of being created in the image of God, by acting responsibly over the whole creation. This is because according to Bradley (1990:17), "if human beings are uniquely created in God's image then, that surely means that they are made to exercise the virtues which particularly distinguish him…". To be created in the image of God should be understood as an identity that reflects respect and a proper relationship between God, humans and nature. The image of God which humans bear should serve to give us an understanding to work as God's representatives or guards on the earth. Hence, through using his power we must advocate environmental justice and peace, because scripturally, this seems to be what is meant by "dominion".

For Bradley (1990:18), dominion over the creation is not "a matter of someone handing over power to another but of the Lord of all things giving a solemn trust and responsibility to one of his creatures for the welfare and order of the rest". Thus, this instruction seems to teach that if humans are created in the image of God and trusted by him for dominion over creation they must also be committed to defence of the life of all creatures through preservation of the environment. Gudynas (1995:107-108) stressed that:

> Social ecology recognizes the close and continual interrelationship between human and environmental systems. Neither can be separated from the other. This perspective has also been adopted by committed Christians, to help them understand and serve the very poor, while at the same time conserving the environment. Social ecology is also a reaction against an anthropocentric and dominative philosophy.

Theologically, God continues to be the creator, ruler and maintainer of all creation. He continues to have a personal relationship with people created in his image. From this perspective, humans must respect God's relationship to humans and continuously sustain his whole creation by obeying him. This obedience must be applied in using and caring for nature responsibly and with full dependence on God's authority. The humans' responsible care of the earth seems reasonable since scripturally the very first task that God gave to the human beings was to till the garden and keep it (Gen 2:15) including all creation.

By doing so, it demonstrates the idea of the sustainability of God's beautiful garden including the whole creation. Sustainability involves how humanity manages their waste, natural resources and water so that the poor do not die of cholera, malaria and the earth is not destroyed. It will be unsustainable for the Garden of Eden as humanity's earthly home if people do not regenerate the earth.

6.9 The significance of the Garden of Eden to humans

Having discussed the relationship between God, humans and nature, this section is an attempt to reflect on the significance of the Garden for human beings. The previous sections showed that God created humans and placed them into a beautiful environment which they could live in, till and keep as their physical home. "Tilling is about working responsibly and includes all human endeavours in managing the earth and using natural resources..." (Bookless 2007:44).

They have also shown that human beings were made from *adama* meaning dust or ground of the earth. Considering this point of view, one can assume that there is evidence of a relationship between the Garden of Eden and humanity. In addition, "understanding how to balance human and environmental needs for present and future generations is an essential key to sustainable living..." (Hodson 2007:171). The significance between the Garden and humans is grounded on humans' belonging to the earth they were taken from and going back to it as it described in Genesis 4:19.Moreover, "understanding how these relationships are portrayed enables us to uncover the underlying perception of the connection between God, humans and the rest of the material world" (Hodson 2007:171-172).

To substantiate this idea, Hessel (1996:28) commented that since "J writers consistently use the term *'adama'* for arable soil in particular, one realizes that there is an even more precise claim about human life being made here…Humans made from farmland, are destined to farm it in life and to return to it in death" . In addition, De Gruchy (2007) argued that "we belong to the earth rather than the earth belonging to us, and so it is provided for the shared benefit of all, rather than for the private ownership of a few. Now, whilst we are invited to be co-labourers with God on this earth, to work with him in producing the food and materials necessary for life, the Bible also recognises that through sin human labour has become alienated". Furthermore, Gitau states "this Garden of Eden is a paradigm for an ideal natural environment that is devoid of soil erosion, deforestation, air pollution and unwarranted killing of wildlife" (Gitau 2000:63-64).

These references indicate that the Garden of Eden was Adam and Eve's earthly home where they could live, multiply, produce crops and subdue the entire creation responsibly. The Garden of Eden's significance to humanity is based on human beings' responsibility in working and caring for it (Gen 2:15). These caring and working tasks given to Adam and Eve were in God's agenda since the creation. It was not a punishment as a consequence of humans' transgression. To illustrate this Adeyemo (2006:14) commented that the "work did not come with the fall but was part of God's original plan for humankind. God provides, but he holds us responsible for maintaining what he has provided. This principle applies to us today as it applied to Adam". They were in the Garden to live a peaceful and everlasting life together even as we can live today. Living in peace involves also caring and treating ecology justly so that the whole creation can enjoy God's "shalom" (Hebrew for peace).

6.9.1 Shalom and ecology

If one studies carefully the two terms shalom and ecology, it seems there are link between a biblical vision of *shalom* and theological reflection on ecological matters. Thus, this section attempts to discuss these concepts separately and with special emphasis on the biblical vision of *shalom* towards ecology.

6.9.2 The vision of shalom towards ecology

Shalom is a Hebrew word that means peace[94] and in Hebrew *shalom* has a deeper significance with regard to peace. In the Hebrew context, *shalom* does not precisely indicate the absence of war as usually understood, it is more than that. Scholars have analysed the concept of *shalom* significantly. For example, "Shalom at its most critical can function as a theology of hope, a large-scale promissory vision of what will one day surely be. As a vision of an assured future, the substance of *shalom* is crucial, for it can be a resource against both despair and an overly eager settlement for an unfinished system" (Brueggemann 2001:5).

It shows that the term *shalom* is necessarily to indicate or represent unseen things such as love, life, humans' well-being, wholeness, prosperity, and relationship to God and humankind. It can be also taken in account that *shalom* represents or includes material and physical wellbeing; enjoyment of social relationships and moral character. Lastly, *shalom* has a theological dimension as found in the New Testament. Thus, to understand deeply these four elements that comprise a vision of *shalom*, this study attempts to examine them in the following order.

6.9.3 Material and physical well-being

S*halom* refers to wellbeing, prosperity, as well as bodily health. In terms of physical condition the scriptural texts teach that Jacob becomes an example. As the following texts indicate, Jacob sent his son Joseph to seek *shalom* of his brothers and cattle as well, (Gen 37:15-16; Esther 2:11; I Sam 17:17-18). For bodily health, one can consider Psalm 38:3. Furthermore, "*shalom* is marked by the presence of physical well-being and the absence of physical threats like war, diseases and famine…so that those who do not now enjoy material *shalom* and physical well-being can do so" (Yoder 1989:13). The presence of physical well-being must lead to economical and ecological freedom and shalom. The absence of physical threats must also take account of the good management of the earth. The exclusion of good management toward ecology indicates that there will be no *shalom* and people's fellowship.

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*94*Shalom is a Hebrew word that means peace*www.shalom-peace.com/ - 31k*

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6.9.4 Enjoyment of social relationships

To enjoy something, people need to be related to the subject which they are about to celebrate. People enjoy and celebrate their realizations on the earth. For that there is no separation between *shalom* and social relationships. This enjoyment of social relationships should be unconditional for every person on the planet without considering their different economic backgrounds, status, race, colour, gender or nationality. Everybody is called to do something in a just way in order to preserve *shalom*, freedom, rights, and the justice of nature and people. Kalonga sees justice as "the measure of the presence of *shalom* in any given society where liberated people enjoy *shalom* to the fullest…To dwell in *shalom* means that everyone has the responsibility to ensure justice for all by acting justly. It also means to freely enjoy living with God, neighbours, nature and physical surroundings, and enjoying life with oneself" (Kalonga (2005:37), harmoniously.

Shalom without relationships or vice versa is meaningless. It cannot be experienced in isolation. For example, Walterstorff (1983:69-70) has observed that "shalom at its highest is enjoyment in one's relationships and it incorporates the following: right and harmonious relationships to God and delight in his service; right and harmonious relationships to other human beings and delight in human community; and lastly right harmonious relationships to nature and delight in our physical surroundings". There is a permanent relation between shalom and oikos (household) as both words are linked with wholeness and economic matters:

> In the Bible, a steward is one given responsibility for what belongs to another. The Greek word we translate as steward is oikonomos, one who cares for the household or acts as its trustee. The word oikos, meaning household, is used to describe the world as God's household. Christians, then, are to be stewards of the whole household (creation) of God. Oikonomia, "stewardship," is also the root of our word "economics." Oikos, moreover, is the root of our modern word, "ecology." Thus in a broad sense, stewardship, economics, and ecology are, and should be, related. The Old Testament relates these concepts in the vision of shalom. Often translated "peace," the broader meaning of shalom is wholeness. In the Old Testament, shalom is used to characterize the wholeness of a faithful life lived in relationship to God. Shalom is best understood when we experience wholeness and harmony as human beings with God, with others, and with creation itself. The task of the steward is to seek shalom.[95]

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[95] Environmental Stewardship – The United Methodist Church - http://www.umc.org/what-we-believe/environmental-stewardship.

In this perception, *shalom* and enjoyment of social relationship are related and both are grounded on the good management of justice and freedom. Justice becomes a tool for peace which is inclusive from humans to the whole of God's creation. This is also an indication that *shalom* is linked with God's act of salvation from physical, economic and political oppression and from conditions of material suffering such as natural calamities which destroy the earth and poor people. Shalom therefore cannot be disassociated from koinonia as both words have close/similar meanings.

Koinonia, (from the Greek word for fellowship) is therefore linked to the community. In other words, the notion of koinonia is essential as it should characterise the church as a united community. Accordingly, 1 John 1:3, 6-7 states that one of the Gospel's purpose is to lead people to have koinonia with others and then with God. Paul refers to the Christian community as having koinonia with the Holy Spirit, (2 Cor 13:14, Phlp 2:1). Paul in Acts 2:42, teaches the fellowship of believers in every aspect of life and social relationship. In this regard, there would not be shalom when there is no koinonia or relationship between people and God's entire creation. When people truly have peace, they will consequently come together at the same table, to share their ideas and their belongings.

6.9.5 Moral character

In any society, moral and ethical sense are important elements for maintenance of *shalom,* nature and human living. Where these elements are missing *shalom* has no place and nature is obviously challenged or compromised. Though *shalom* does not specifically denote the absence of war, it is evident to note that shalom/peace cannot be associated with immoral acts such as practicing evil and lying. For this reason, it requires that "a person of *shalom* should be someone who is characterised by integrity, honesty, and straightforwardness" (Kalonga 2005:37-38). Scripture gives evidence of this view by demanding that people depart from evil and do what is good, seeking and pursuing peace. (Ps 34:13-14; Zech 8:16) because the Lord hates evildoers.

Hence, the first step to maintain *shalom* and to heal ecological destruction depends on the inner individual and community repentance as a precondition for a structural renewal of any particular

society. For example, prophets called for repentance from evil to seek God. The following texts are marked as evidence for such calls for repentance - Jeremiah 28:11; 29:13-14; Isaiah 1:13-20; Amos 5:14; Joel 2:13. Only a changed person or community can be an alternative for ethical maintenance and ecological rescue from degradation.

6.9.6 Shalom and the church

Yahweh is God of *eirene* (Rom. 15:33; 2 Cor. 13:11) and if that is so, *eirene* belongs to or is founded in Christ according to John 14:27; Philippians 4:7and Colossians 3:15. Consequently, the church as the temple of Jesus Christ should be related to eirene (Greek for peace). Christ dwells in the life of believers as his temple. The coming and dwelling of Christ in his believers' hearts is the assurance of giving them abundant life as in John 10:10; this peace which the believers enjoy is from Christ who is the head of the church.

Therefore, this relationship between the church (believers) and Christ becomes the essence of a vision of *shalom* for the Hebrew and *eirene* for the Greek context. In this regard, the church and other Christian organisations should actively be involved in sustainable programmes that intend to alleviate the suffering of the marginalised and the ecological crisis.

The reason is that, it is "God's mandate…and the church is strategically positioned with power and potential" (Kalonga 2005:45). In other words, it shows that the church's mandate is to preach a prophetic message that promotes *eirene* in its fullness and benefits all creation.

In addition, Onwu writes "the prophetic ministry of the church in this direction is not only to be 'critical' as 'onlookers' but more importantly as 'participants' to build up, to reconstruct, to sensitise, and humanize people's movements and institutions that will recreate the community" (Onwu 1996:40). As the prophets did, the church is expected to do the same.

6.10 The role of humans toward environmental conservation

We need to ask the question whether Christians as human beings should have an extra role to play within their communities apart from that of praying and preaching God's word for human spiritual transformation. Considering that humans have both physical and spiritual life, one can perceive that Christians have wider work to do in the society than only that of praying and preaching from the pulpit. The church has much to offer for ecological care purposes through its practical appearance and teaching in the public and marginalized communities. The word of God preached in the pulpit will bring the significance when we move into those people's settings. In doing so, people will be taught the skills of how to respect and take care of ecology.

Bradley comments that "as part of the human race, we can all do our bit by consuming less energy, going in for organic gardening, recycling our waste paper, bottles and cans and using ozone-friendly aerosols…The Bible portrays humans as occupying a unique place and fulfilling a key role in the working out of God's plan for the whole of his creation" (Bradley 1990:90). The apostle Paul in Romans 8:19-23, has confirmed this by stating that "for the creation waits with eager longing for the revealing of the children of God…that the creation will be set free from its bondage to decay and will obtain the freedom of the glory of the children of God…the whole creation has been groaning in labour pains until now…"

Accordingly, the suffering of God's creation "is as a result of the sin of Adam, God cursed the ground (Gen 3:17), and so the whole creation is frustrated because it is not as perfect as God originally intended it to be. But the day is coming when creation, too, will be set free from its slavery to sin and death, which inevitably result in decay..." (Adeyemo 2006:1363).

This groaning, decay and pain can be reversed and freedom can be achieved only when humans' attitudes over nature are challenged and changed. Human beings who are created in the image of God, and who are inspired with God's Spirit are the key elements for an environmental solution through a deep reflection on the value of being in the image of God. As Bradley comments, this human role for ecological management is "not just standing back and letting wild nature rule… The whole Christian tradition is clear that man is not there simply to worship wild nature. We

stand together with nature as fellow-sufferers in this world of pain and sorrow and we also stand together with God as co-operators in his plan to perfect and complete creation" (Bradley 1990:90-91).

In this regard humans must not behave violently against nature. Human beings are only given the capacity to utilise the earth for their survival as a product of God's love to his people. Theologically, love is very important because, it has been written that God has loved this world vicariously. For instance, John 3:16-17 reads "for God so loved the world that he gave his only Son, so that everyone who believes in him may not perish…but in order that the world might be saved through him".[96] Though the term "world" here mainly indicates people, it can be also be an inclusive term that refers to everything that God has created.

To me, if God's love was not inclusive of the physical world, then this love would be senseless. Hence, I agree that God's love means love of whole creation, since humans live in this physical world. In the same way, Diakonia (2006:25-29) states that "God loves this world and has placed us here that we might live and flourish. We belong to the earth rather than the earth belonging to us, and so it is provided for the shared benefit of all, rather than for the private ownership of a few". So, the role and responsibility of taking care of the environment and saving it from crisis should be for all humankind.

6.11 Jesus and his redemption

Jesus is the Son of God who bears both human and divine natures. Hence, there is an unequivocal link between Jesus' redemption and the environment. Bradley (1990:74) observed that Jesus is linked with nature since "the eastern Orthodox tradition has always regarded Christ in cosmic terms, as the one who by his life sanctified all matter and through his death and resurrection carries up the whole of creation to God". This scholar adds that "redemption is immediately seen to be universal because it provides the remedy for a state of things the presence of everything of disorder which is bound up in the most elemental condition of the universe in the process of creation…" (Bradley 1990:86-87).

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[96] See the NRSV Bible with Apocrypha

Thus, Jesus' birth, death and resurrection were not merely to save humans from sin. It extends also to restore the whole creation that through sin has lost its perfection. In this regard, Jesus' followers need to know this principle and live accordingly by witnessing to others that sin compromised the creation order. Thus, redemption is universal and inclusive. Bradley traces that "we need to proclaim that in becoming incarnate through Jesus God showed his desire to perfect and to draw up into himself not just human beings but the whole of his wonderful creation" (Bradley 1990:87). Of course it would be meaningless if the creator of the universe and everything would offer salvation only to the people and rule out the rest of creation. If Jesus is the creator of the universe then Christians should interpret his vicarious death and resurrection universally and in every respect.

Berdyaev quoted in Bradley (1990:87-88) argued that "when the blood of Christ shed upon Calvary touched the earth, earth became a new thing, and it is only the limitation of receptive faculties which prevent us from seeing it with our very eyes". To me it seems Jesus' blood did not serve only to wash humans spiritually but also the life of the entire creation infected by human beings' sin. Furthermore, since in Christ the restoration and renewal of creation has begun, we wait as agonizing visionaries for that day when God's good future of *shalom* will be fully realised. Krick (2007:5) has stated that:

> As the Church, we are called to join Jesus in his restoration project. It is what the Jews call *takkum allam*, the healing of the world. The call on the Church is to join God in the restoration of all creation. This begins when we let go of our consumeristic ideals and greed and leads us to become a people of hope who tread lightly on God's good earth (Krick 2007:5)"[97].

In this regard, our hope requires action for ecological restoration by stopping human greed against ecology. The hope should be linked to doing mission to rescue our urban contexts when found degraded.

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[97] This was a paper towards a "*Theology of Ecology*" presented by Krick, Matt, 2007. *blogs.myspace.com/index.cfm?fuseaction*

6.12 Hope and a restored creation

There may be several definitions about hope. Hope is the imagination or waiting process about what one does not have at the present moment. One can hope to meet people or something that we have never even known yet. In the environmental context, we must hope that one day the entire created order such as wolves and lambs, mountains and plains, rivers and valleys will be restored and live peacefully and in harmony.

For example, we have seen that the scriptures give us hope toward a whole "new heaven and new earth," in which death, and mourning, and pain shall go away (Rev 21:1, 4), and in which the Son of God receives the treasures of nations who parade into the city of God (Rev. 21:22–26). In other words, we must have hope; hope that is centred on Jesus Christ, the Lord of the whole cosmos that at a certain moment he will rescue the ecology from crisis. As spiritual salvation can only occur after people are reached through the gospel message, so the earth will be restored from degradation when people go out there and reach people through teaching and awareness about the importance of taking care of God's creation.

6.13 Missiology and the ecological crisis

Though missiology is an interdisciplinary study of mission or doing mission from one faith/culture to another, it seems that there is still little contribution to environmental management which gives the sense of understanding and proclaiming the Gospel in its fullness. To substantiate this lack of contribution, *Jenkins* argued that:

> Missiology rarely discusses the significance of earthly context or ecological dynamics for mission theology. For all its attention to culture, missiology seems to have little to say about the landscapes formed by ecology and culture in reciprocal relation. Insofar as missiology remains extraterrestrial, abstracted from geographic context, it struggles to make missional sense of environmental problems or to interpret emerging Christian responses to the challenges of sustainability (*Jenkins, undated*)[98].

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[98]*Willis Jenkins (undated) is the Margaret Farley Assistant Professor of Social Ethics at Yale Divinity School, New Haven, Connecticut. He was a missionary in Uganda (1997–98). This information can be accessed from http://www.internationalbulletin.com/rq=archive/all.*

The understanding of Christian mission can be based on the development and response to issues and questions that arise in living out our faith. This is because theology is not created in emptiness but becomes known in response to existing situations that stimulate study and reflection of current realities. Effa said that "the issues shaping our approach to mission today are different from those our ancestors struggled with and, in all likelihood, will not be cutting-edge concerns sixty years from now. As each new crisis is addressed, however, our perspective on the nature of the Christian mission is enriched and enlarged" (*Effa, undated*)[99]

In addition, "mission is ultimately indefinable, and that the most we can hope for is 'some *approximations*' of what it is all about" (Bosch 1991:9). The mission of the Church according to Habel (1998:32) is that which represents an approach that is largely restricted to evangelism in the sense of what could be called saving disembodied souls. The second dimension of church mission is that which extends the personal spiritual life focus to include…the whole human being as part of a community. Moreover, Walker expressed this well when he called for a new larger evangelism that will "draw together the personal and the social elements of the gospel, seeking at the same time the conversion of men and women and the building of a society fit for people to live in" (Walker 1977:7). Still in the view of Habel the mission of the Church would be also that which constitutes and begins with the call to announce the kingdom of God. Therefore, goes further than the earlier approaches to a broader vision of mission that includes the earth itself, saving, redeeming, and healing it. Bevans and Schroeder argued that "there has not been much reflection on how the preservation of the integrity of creation is linked to the church's mission", and that "there is no question, however, that it is" (Bevans and Schroeder 2005:375).

That position may be changing in any event, in considering an approach to Christian mission in the 21st century. Concerning this, Bosch (1995:55) challenged that "a missiology of Western culture must include an ecological dimension. The time is long past that we can afford to exclude the environment from our missionary agenda". Therefore, a mission towards ecology appears to

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[99]*Allan Effa (undated) is the Ray and Edith DeNeui Professor of Intercultural Studies at Taylor Seminary in Edmonton, Alberta. He served as a missionary in Nigeria from 1982 to 1990. This information can be found in: http://www.internationalbulletin.com.*

be one of the indispensable aspects of a holistic mission response today. In a very reflective sense, the Church, because of the ecological crisis, is in a very public place. It must exercise its duty in the public square, under the watch of the public at large. Even more, it must begin to understand an approach of "mission with" rather than simply "mission to" the community at large. Otherwise, people will not appreciate the work of evangelism and preaching of God's word when they see the carelessness of the church towards the ecological crisis. Consequently, the church can find itself losing the real meaning of being Christ's representative on the earth.

6.14 Conclusion

My own experience shows that the church as a Christian institution becomes an important tool for empowerment through teaching and preaching God's word. The church is an asset for transformation because it has many opportunities to be with the community constantly. The church should start engaging itself in the public arena with the purpose of educating its people about God's concern for the earth. Hence, "it is important for the Church itself, for the integrity of the gospel it proclaims, and for the environmental contribution it is able to make alongside other people of goodwill, even if some are not people of faith. Christians themselves need to be educated, and to that end some structural organization may be required to facilitate participation" (Ayre 2008:3).[100] It must be understood that the development of a unified theology of ecological mission is therefore important. When it is applied in the life of a church, it will include a number of elements operating at different levels. For example, the church at both ecumenical and denominational levels should have environmental policy statements. This will potentially supply a basic direction and a sense of unity on this issue. In addition, ownership of an ecological mission policy at a congregational or local church level is also of critical importance.

Since the environment becomes a theological subject or when it is discussed theologically, the church will need to consider agendas of environmental and eco-theological education envisaged and applied at all levels. In addition, eco-theological implications for Christian mission must resound with a personal and mutual lifestyle that is consistent with those principles of unity. A

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[100]This paper titled *The Church in the Eco-crisis* was presented by Rev Clive Ayre at "Christian Mission in the Public Square" during a conference of the Australian Association for Mission Studies and the Public and Contextual Theology. For more information, it is available at http://www.csu.edu.au/special.

theology of ecological mission will therefore contain its roots in eco-theology, in the biblical mandate for mission rather than only in pragmatism. As the creator of the universe and everything in it, it is God who sustains and controls life, not humans. Thus humans must utilise the earth responsibly in a way that it can be preserved for other generations, considering that human salvation includes also physical and material salvation. In this regard, De Gruchy (2007:3) strengthens this point when he uses the term green agenda which deals with environmental issues and so, the church should become an example. He stated that:

> The green agenda is concerned with the environment…Greens are concerned with saving the whale or the rhino, protecting endemic flowers, removing alien species and preventing urbanization. But beyond the fads of suburban elites, we must acknowledge that the mature green agenda focuses on such things as climate change, access to water, reliance on fossil fuels, erosion of top soil, dumping of toxic waste and deforestation…Any reading of the environmental data will make it unquestionably clear that these are fundamental issues that also strike at the heart of social regeneration, for they are precisely concerned with the sustainability of society into the next generation. And for those who believe that God has created the earth good, and that we human beings hold it in stewardship for the next generations, the green agenda is also of deep significance for Christian believers, (De Gruchy 2007:3).[101]

This assures that to be truly "green", the church must be concerned with the whole of God's creation whether is human and non-human things, physical and spiritual materials. It will happen when the church seriously takes holds of the truth that Yahweh created the universe and everything perfectly and the human beings hold the responsibility of caring for the earth so that the next generation may also benefit from it.

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[101]This information is accessed from Address to the SACC Triennial National Conference by Prof Steve de Gruchy, on *Oikos, God and the Olive Agenda.* Theological Reflections on Economics and Environment, 17 July 2007.

Chapter Seven
Theological Reflection towards Environmental Management

7. Introduction

Chapter six aimed to reflect interviewees' concepts towards ecology and compared with God's reasons and purpose in creating the earth. The relationship between God, humans and nature as well as the theological/missiological implications towards the ecological crisis was discussed. So, chapter seven deals with the church's attitude towards ecological management. The objectives of this chapter aimed to explore strengths and weaknesses in relation to its presence in the city. Chapter seven analyses how the church as an agency for social, physical and spiritual transformation can get involved to save the oppressed. In addition, how can the church advocate freedom, peace, justice and hope to shackle communities, cities and environments. Other objectives include how the church can use the gospel as a tool for healing and liberation.

Thus it is important to think about Genesis 1 towards an unambiguous message concerning human's role in relation to the rest of creation. Substantiating this view, Bishop states that "the opening chapters of Genesis show that humanity's relationship with the rest of creation is ambiguous: we are part of it and we are above it. We are part of the earth and we are to rule over it. We are creatures of God and made in the image of God. It is these truths held in tension that keep Christianity free of the extremes of biocentrism and anthropocentrism (i.e. the reducing of humanity to grass and the deification of humanity" (Bishop 2005:5).

However, as the Christian church our attitude towards the environment should be centered on the one and only God. To validate these views Bishop said that "Christianity is neither anthropocentric nor biocentric: it is theocentric. Our solidarity with the rest of the creation should serve to keep us from an oppressive rulership. Dominion is not a dictatorial rulership, we are not to lord it over creation: it is a delegated rulership, a rulership that is accountable" (Bishop 2005:5).[102]

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[102]This idea is taken from a paper prepared by Steve Bishop in 2005. Green theology and deep ecology: New Age or new creation? Hosted by permission on http://www.theologicalstudies.org.uk/

Based on the belief that the church is a driving force for societal transformation this chapter suggests a foundation for a Christian approach to environmental care, and develops a possible perspective of the green movement from a Christian point of view. Moreover, relevant issues such as the church's theology regarding the environment, the church's mission, responsibility, spirituality and repentance are discussed in this chapter, also the church as a contributing force to solve the environmental crisis in Nampula. It particularly analysed the UBCN community's experience in terms of what they believe an environmental crisis is and who they think is responsible for solutions. This chapter reflects further on some theological, missiological and sociological implications towards the worldwide ecological crisis.

7.1 The Church and the environment

The church and the environment are inseparable institutions. The fact is that the church consists of believers, who in turn are inhabitants of the earth where the church functions. By definition, environment is the area in which something exists or lives. The theological interpretation of the church is that it is the body of Christ represented by believers who gather together and worship their God. If the environment is part of the earth and God's whole creation, then, one can consider that Church and environment are interdependent. USCCB stated that:

> "…in all its being and all its mission, the church refers itself back to Jesus Christ as the source, sense and correction of what its life and its action in society should be…The church is of divine origin and is therefore not to be compared to any other social entity…The church is a community open to all, one that welcomes to its bosom those who belong to various state, governmental, and even military classes" (USCCB 2003).[103]

This indicates that the nature of the church as a divine institution is uniquely different from other secular organisations. The church represents Christ in the world and so it should be practicing what Jesus taught and did. Society should be able to remember Jesus through seeing what the church does in the community. This would include showing love, mercy and hope to the poor, and thereby creating opportunities for and empowering oppressed men and women for abundant life as Jesus mentioned in John 10:10. If the church does mission in an inclusive way and as an open community to everyone it would be the continuity of Jesus' purpose which is constituted in

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[103]This information is taken from USCCB, which stands for United States Conference of Catholic Bishops and can be accessed at: http://www.usccb.org/sdwp/international/socpres.shtml.

"the coming of the Kingdom of God, that fraternity where everyone can sit as brothers and sisters at the common table of creation" (USCCB 2003).

7.2 The city and the Bible

The city features prominently in the Bible. In Genesis, the book which describes origins, we find the first reference to a city, namely that which was built by Cain. Genesis 4:17 indicates that "Cain knew his wife, and she conceived and bore Enoch; and he built a city, and named it Enoch after his son Enoch."[104] In the Bible "the city was associated with "hubris and hierarchy, exploitation and apostasy…" The city was known for its proclivity towards violence, structural and otherwise" (Brown and Carroll 2000:6).

Ezekiel 48:35 teaches that the city represents God's everlasting presence. Gorringe asserts that "the city can be home, dwelling place, household, oikos, within the larger oikos of creation. The city of Jerusalem is the place where God dwells, the sign of God's presence, the place where humanity will be finally redeemed and where humankind finds peace" (Gorringe 2002:140). Additionally, Van Schalkwyk notes that "a city can be a garden city, with parks and green open spaces, nature reserves and natural features, where humans can come home to nature, and where ecology plays a role in place making" (Van Schalkwyk (2014:4). According to Scripture, this is because the architect and builder is God. The purpose of the city is that "the Lord will so permeate the life and activities and even the spiritual essence of the city that its very name will proclaim that God is found inside the city's walls" (Linthicum 1987:118). In addition, James says "God's primary vision for the city is to be recognized as its Lord and host. The ultimate goal is communion and fellowship" (James 2007:253).

The theological purposes of the city according to Isaiah 65:17-25, are to provide the inhabitants everlasting gladness and joy and without cries of distress. This text adds that it is in the city where people must build their houses and live, and produce the crops to eat. The city Isaiah talks about will be peaceful and joyful. This is the prophetic voice which the church needs to adopt in order to help their communities.

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[104]This quotation is taken from New Revised Standard Version (NRSV) Bible with Apocrypha.

James acknowledges that "naturally the church cannot assume the role and responsibilities of the government, however it can strongly advocate for service provision, public utilities and most importantly justice and fairness for the poor and marginalized. Wherever possible the church can actively participate in the renewal and transformation of the physical and social space of the city" (James 2007:254). The church's participation in the alleviation of suffering in the city through teaching and preaching, even without financial resources, will make a change. The church exists to bring peace, justice and joy since the city is God's home. James (2007:254) added that "the city and God are united in a common joy. If God is in the city there is still sufficient reason to be hopeful and joyful. The task of the church is to permeate the urban environment with Christian joyfulness and positivity. Despite the obvious negativity that shrouds the city, the church is called to 'discover the joys of the city" James (2007:254).

7.3 The Church in the city

For centuries, it has been inevitable that the church would be found in the city. For example, Brown and Carroll (2000:4) argued that "the biblical story of the city actually begins centuries before its first traditions were set to writing. In the great Babylonian Epic of creation…, Marduk, the beloved son of the gods, defeats watery chaos and immediately found a city to serve as the terrestrial counterpart to the heavenly realm". Thus, the presence of the church in the city becomes important because the majority of people live in the cities where they can access basic facilities for their sustenance.

Some passages in the New Testament seemingly teach that the church began in the city of Jerusalem where Jesus' disciples gathered and were ordered to remain there until they have been clothed or received the power from on high (Luke 24:49; Acts 1:4-5). It becomes an opportunity for the church to be present in the city to minister to people's spiritual and physical needs. Thus, "throughout history, the city has measured our capacity to live together and create a just way of life. The church in the city today is faced with enormous challenges and opportunities in its ministry to persons in need, from finding new sources of funding to responding to tectonic shifts in the urban social landscape"(Meyers 2000:23).

This shows that the life and mission of the church in the city is not merely to be there. The church as a spiritual institution with numerous possibilities to give to its community is in the city to be a public presence. The church's public presence should have the purpose of empowering the powerless through addressing issues such as injustice, violence and other evils against people and nature.

The church as a group of saved people has spiritual gifts to share with the world, because it is a sign of communion with God's entire creation. Additionally, "the most visible face of the church is that of its members. The nature of the people of God is that which is seen as closer and more immediate. However, what makes the people of God be the church is that Jesus Christ gathers together and unites with himself and each other those who believe and accept his teachings, wait on his promises, and fulfil the commandment of love" (USCCB, 2003). In this regard, the presence of the church in the city is extremely important. It exists to preach God's love, hope and promote unity among people and whole God's creation through Jesus. Thus, there would not be a problem between the church and city, unless it was linked with arrogance and power as in Genesis 11:1-10. Moreover, "the problem with the city, according to biblical tradition, is the problem of power" (Brown and Carroll 2000:5).

7.4 Nature and mission of the church in the city

The social changes that have taken place in Nampula can be considered as consequences of the Marxist-Leninist dogma adopted by Mozambique over a long period of years, this system has created some prejudices and ignorance among some Mozambicans. Thus, one can see the nature of some Mozambican churches is weak in its life and mission. In the Marxist-Leninist period the governing system was characterised by "vanguard parties and the centralization of power" (Fukuyama, 1984:6), which has worsened poverty. However, some changes are taking place as a result of hard work in many churches in Mozambique through their commitment to spiritual preaching, political participation and sometimes in community development concern. In our days, church plays an important role such as political dialogue and mediation for peace and justice. There is also a considerable freedom for public worship without threats and fear.

The achievement of independence and the establishment of a Peace Agreement, after a long period of civil war in Mozambique should be the starting point for considering church action. The church should start developing more inclusive, missiological strategies in all cities of Mozambique rather than simply planting new churches without nourishing them through education, skills training and advocacy. I believe that these strategies would make the presence of the church in the city more credible, and educate people about taking care of the city and addressing the environmental crisis.

According to USCCB "the church is the bearer of the word and of sacraments that she has received freely from Jesus Christ and that can help improve civil society to the extent that the church itself is truly a religious community of faith, a living and meaningful memory of Jesus Christ" (USCCB 2003). Thus, if the church is the holder of the word and sacraments it shows that it has huge responsibility in relation to the entire creation. Thus, the church should understand its role in the world as not limited only to the pulpit.

The mission of the church in the world is based on preaching the good news of Jesus Christ, which is specifically about His death as a seal or gift of his love to the people and his resurrection as a sign and assurance of hope to the hopeless. It is the good news about Jesus' love, forgiveness and salvation to sinners. One way to put it is that good news "relates to the saving acts of God, centred upon the person of Jesus and his substitutionary death on the cross and resurrection from the dead… A key theme of the Christian good news is that God offers a new life and forgiveness through Jesus.

Jesus' teaching of the good news also relates to the coming of the Kingdom of God (Mark 1:14-15")[105]. With this understanding, one can see that the church is called to preach Jesus' message without limit in time and space. For example, USCCB presents the challenge that "the church must preach Jesus Christ in season and out, convincing all people to meet with him to participate in his new life and attain salvation. This new life is born of the love of God that Christ puts in the

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[105]This quotation is taken from the Free Encyclopedia on Good News Christianity, which can be logged at: http://en.wikipedia.org/wiki/Good_news_(Christianity)

heart of Christians who can then commit themselves to the coming of Kingdom of God (USCCB 2003:4)".

Drawing from this statement one can see that the mission of the church in the urban as well in rural areas must in principle be Christ-centered and holistic. The reason for this, according to USCCB, is that "the contents of the Church's mission and its way of fulfilling it do not come from the will of those who belong to it, whether by majority or consensus, but from Christ himself…" (USCCB 2003). Thus, when mission is done according to this principle, the church's commitment to honouring God through empowering the poor and conserving the environment, will become evident. God expects to see his church in the world reaching out, lifting up the lost and working towards the restoration of his entire creation.

To support this view, the USCCB further argued that "God wants a full life for all his children, and he has made the sufferings and aspirations of all his own, especially those of the poor and rejected. Jesus Christ was not indifferent to human suffering: to pain, to sickness, to death, or to unjust situations that damage the dignity of man, such as: hunger, lack of freedom, abuse of power, and other economic or political conditions" (USCCB 2003). Therefore, since Jesus was concerned about suffering humanity the situations mentioned above and responded in love through his death, the church should adopt this truth and do its mission as inspired by God's love. It is from Christ's death and resurrection that the call to the church comes to present this love and hope to the world regardless of place, culture, race, gender, and class economics.

7.5 The church's theology and mission in the city

It seems clear, from reading the New Testament that most of the first Christian churches originated in cities, specifically in the city of Jerusalem and then, further abroad. From this perspective, it would be correct to say that church's theology and mission in the city are extremely important in our days. The church's theology in the city could be that which presents God's love, presence and strategic place for mission. The city is an important place for mission because even the Apostle Paul started his church-planting ministry in the big cities. After all, in the city it is possible to reach large numbers of people in a short time.

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The city is where people from all cultural backgrounds come together for many different reasons, such as access to what they need to supply their basic needs. Brown and Carroll argued that "the city as setting for instruction in the wisdom and ways of God is also evident in the distinctly urban mission of the apostle Paul" (Brown and Carroll 2000:8).

This indicates that even the churches that we have today began in and spread out from the cities. Missionaries from Europe and the United States took the gospel from their cities to cities in Africa. For example, many Mozambican churches began in the city and are stronger and more developed in the cities than in rural areas. The presence of the church in the city is significant because God loves and is interested in the city. Biblically, even the prophets and psalmists have preached in favour of the city. For example, if one reads Nehemiah 1-2, Isaiah 41:17 and Psalm 107:49, it is evident that the writers were concerned about protecting cities.

Brown and Carroll have indicated that "…God has a special love for the city. Jerusalem, admittedly, was known as the city that kills the prophets and stones those who are sent to it. At the same time it was the city whose children Jesus yearned to gather together as a hen gathers her brood under her wings" (Brown and Carroll 2000:10). Though the city is a place of crime and injustice, this figure of comparison of a hen and her brood illustrates the love of Jesus for the city. It indicates that Jesus can also use the city as a place of security and availability of basic needs to protect his children. For security purposes of the city, we learnt that after Jesus was born he escaped with his parents into the city in Egypt until the death of King Herod in Judea, (Mat 2:13-15). After this, Jesus and his parents returned into Galilee to their native city Nazareth, (Luke 2:29). It was in this city where Jesus grew up and started his ministry.

Another reason for the church to consider doing mission in the city is when Brown and Carroll (2000:8) say "God had once again come down to the city, this time not to confuse its inhabitants (Gen 11:7-9) but to restore unity amid cultural diversity, so that everyone who calls on the name of the Lord shall be saved." This is also confirmed in Acts 2:21.

Genesis 11:4 notes that the people who settled in the land of Shinar spoke the same language and this enabled them together to build the tower of Babel. Shared language helped people to create

and preserve their culture and work together. However, it seems that God was not pleased with the tower because people were building it for their own glory and popularity.

7.6 Holistic mission and the church in the city

The church is called to go and do mission among all the nations so that whoever believes may be saved (Mark 16:15-20; Mat 28:19-20; Acts 1:8). To do mission is a command and not an option of God. Jesus' command to go is not restricted to a certain place or a group of people. It is to go and make disciples from rural and urban areas. The matter of doing/making disciples involves a range of ministries, such as preaching, teaching, witnessing, baptizing, and empowering the children of God worldwide. It also involves taking care of nature in the urban and rural environments. In doing so, the mission that is entrusted to the church becomes holistic, not atomistic. In other words it is a mission which is based on the restoration and transformation of the spiritual and the physical, the living and the non-living creatures of both rural and urban environments. Van Schalkwyk argued that "No organism exists without an environment, no environment without an organism. Environments, spaces and places are forged through the processes of nature and the activities of living beings" (Van Schalkwyk 2014:3).

The church should practice a holistic mission and not preach only spiritual repentance. Contextualising this holistic and church mission approach, one should understand that the church's activities start and end on the earth. Temples of worship to God are built on the earth. The believers who constitute the Church have their sustainability from the earth and they are born, die and are buried on the earth. Evangelism which is the key for God's mission for man's salvation is done on the earth and not in the sky or only in the invisible spiritual realm.

In this regard, there is no doubt that the earth plays a distinctive role in the existence of humanity and the continuity of the church and God's mission. However, even within this closeness between the earth and humans, some Christian churches seem to misunderstand that nature is God's creation and neglect to care for the environment. Consequently, these churches find themselves in difficulties on how to engage with the world through mission, especially where the ecology is deeply degraded and where there is no good relationship with the public and private

sectors. For instance, USCCB argued that "the church's public presence and its service to society are determined according to the Church's nature and mission: what the church ought to contribute, how Christians should behave, and how the church should relate to the state" (USCCB 2003). The Church should learn that the work of God's mission, evangelism, economic development and other human demands never just happen "in the sky" but occur on the earth where humans dwell and other entities operate.

The ecological crisis is one of the issues that Bosch considers to be one of problems that shift the missions' process among many Protestant churches. For instance, he argues that "a further disastrous consequence of the Cartesian model is found in what we today refer to as the ecological crisis. We have degraded the earth by treating it as an insensitive object; now it is dying under our very hands…" (Bosch 1991:355). This statement shows that some Protestant churches today are not concerned with the earth as the source of their existence. It shows that the mission of these churches should not see physical matters in isolation from repentance of sin. It is important to preach the gospel that calls people to spiritual repentance. However, if such repentance does not correct all human negative behaviours, it is in fact only a partial repentance. True repentance should incorporate a complete human change and create love and concern for God's creation.

As Bosch observed above, the church will find itself more and more challenged in its activities if it does not seriously take and start acting responsibly regarding environmental issues as part of the church's calling to Christ's great commandment, i.e. making disciples of all nations. For example, some Protestant churches, like the UBCN, which still has little understanding and concern about earth degradation, will face serious problems. As a concrete example, in the area where the UBCN building is located, soil erosion is out of control. The space where this church is built is overcrowded because people are building houses around it in a disorderly fashion.

The location of the UBCN is unsafe and unhealthy. There is a high volume of traffic which raises a great deal of dust and potentially endangers churchgoers. During the rainy season, the water gets contaminated and the sanitation systems become blocked by accumulated waste. It has been my observation that the gospel preached by some of these Protestant churches does not empower

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people in the sense of liberating them from their daily struggles. Most of these churches, especially the UBCN, believe that the only way to do mission/evangelism is to preach spiritual conversion from the pulpit and to say nothing about physical change.

While the necessity and priority of spiritual things is not wrong, the church is often seen as irrelevant because it does not address matters that affect people daily. The church should realise that the people who come to church are humans and have serious spiritual and physical needs. The church should realise that these problems create serious crises such as sickness and death. Consequently the church can become empty because people will get sick, and will no longer come to church.

Is God happy when he sees his people unhealthy and his creation uncared for? Though God is omnipresent, since he is holy would it not also be true that the Spirit of God cannot dwell "comfortably" where there is no healthy or living body?

7.7 The creation of humankind

In the creation story we learn that God first created man's body and then made it alive by putting or breathing his spirit into it. Before God had poured the Spirit into man's body it was not alive and could not move. The human body is important, since the Spirit dwells in the body.

The church also has the responsibility to nourish both human and spiritual needs, as Moses and Jesus did. This kind of nourishment should be given through a holistic mission, mission that represents God's love and concern to the whole world. The Church's preaching and teachings should address spiritual and physical transformations. The message preached by the church should call people to repent utterly from their sin. This should include repentance of not being a good steward of creation and mistreating the earth. The church in the city ought to be seen as an influential and empowering institution rather than as a destructive entity. We cannot see ecological crisis as a matter that can only be managed by the government.

Further, states Gibellini that "in the Christian sphere, in fact a division of competences has largely developed: nature has been abandoned to science and technology, and theology has limited itself to history, which it interprets as a history of salvation. But by so doing, theology has failed to be culturally operative in creation" (Gibellini 1995:126). Therefore, doing mission that is inclusive on all societal levels, in the rural areas and the cities, is important. For example, doing mission in the city is essential because God is present there.

Jerusalem is considered as the "city of God. The identification of Jerusalem as the city of God has clear Old Testament roots" (Brown and Carroll 2000:8). The psalmist describes the city of Jerusalem as God's dwelling place when he says "there is a river whose streams shall make glad the city of God, the sacred home of the Most High. God himself lives in that city; it cannot be destroyed or shaken. God will protect it at the break of day" (Ps 46:4-5).

Old Testament texts like Psalm 46:4-5 sound beautiful because it describes the city as God's dwelling place. It is not just a place where he is only present sometimes, but it is where he lives. It is also relevant for our days as well. Thus from the new city that is described in Revelation and other texts, the city can be seen as symbolic of a safe place where people find refuge for survival. It is the place that he protects, makes glad, and calls home. In the same way God loved the cities in the Old Testament he also loves our cities.

Drawing from the text above one can see that this city becomes a dwelling place of gladness, not because the city does so itself, but because God himself protects it from destruction. The interesting point is that, "God's presence was also safeguarded by the implementation of justice in the city" (Brown and Carroll 2000:8). This shows that wherever injustice is out of control God will not be present and live in the city. For instance, Brown and Carroll argued that "rampant injustice and apostasy jeopardized God's urban residence" Brown and Carroll (2000:8). In addition, Ezekiel 11:22-25 points out that "the glory of the Lord ascended from the middle of the city, and stopped on the mountain east of the city".

The prophet Ezekiel is assuring us that the removal of God's presence from the city and temple to the mountain may be the consequence of man's sin. It was from the Mount of Olives that the

vision went up, illustrating the ascension of Christ to heaven from that very mountain. It also helps and challenges us to understand that though God promised not to forsake his people, he may be driven away from any part of his visible church because of sins and negligence. Consequently, anguish or misery will be upon us when he withdraws his presence, glory, and protection. Therefore, according to Brown and Carroll (2000:8-9) when the city of Jerusalem was restored, "…God's glory returns to the city and…all the land…is restored". Thus, as it is referred in Meyers (2000:31) the church in the city needs to be a church committed to the needs of all people and the whole creation.

7.8 Mission, evangelism and healing as social concern

One can consider it unscriptural if the missionaries and the church would work without paying attention to social struggles and the ecological crisis. Costas (2002) argued that "the struggle at the heart of this moment has always been to define the relationship between evangelism and social concern, without undermining the traditional evangelical understanding of the 'gospel'. This has been a running battle". Though technically, the apostles appointed deacons to take care of social needs so that they could devote themselves to the preaching of the word and prayer, to me Costas' statement constitutes a call to those who are involved in mission work to begin thinking that even Jesus and the apostles were concerned with social problems. It is not only a matter of thinking but also of acting practically. Jesus did practical ministry like that of healing, ((Matt. 10:8, Luke 9:2; 10:9). Healing was an essential ingredient of the proclamation of the Gospel.

According to Grundmann "healing was also one of the dominant features of spreading the Good News during the first centuries of the church's existence." (Grundmann 2008:1) [106] In addition Adolf von Harnack quoted in Grundmann remarked that "Christian religion and the care of the sick have travelled a long way together in the course of history; as a result, they now are

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[106]Grundmann, Christoffer H. 2008. Mission and Healing in Historical Perspective. Contributors. International Bulletin of Missionary Research. Volume: 32. Issue: 4. Overseas Ministries Study Center. Gale Group.
According to the website source bellow, Christoffer H. Grundmann, an ordained Lutheran minister, is the John R. Eckrich University Professor in Religion and the Healing Arts at Valparaiso University, Valparaiso, Indiana. Before joining Valparaiso in 2001, he taught for four years at the Tamilnadu Theological Seminary in Madurai, India, and was theological consultant to the German Institute of Medical Missions, Tübingen. http://www.internationalbulletin.com

inseparable…The influence and future of the church depend on her caring for those who suffer spiritually and physically…" (Grundmann 2008:1) In addition, the prophets also spoke out against oppression over powerless people. Thus, the aim of the local churches' mission in both urban and rural areas should be committed also to teach and preach the gospel, which includes addressing physical matters such as the preservation of creation.

Furthermore, De Gruchy challenges that "it is a strong call to integrate evangelism and social concern in the face of globalisation and the reality of poverty for many of the world's citizens" …. "mission is holistic and contextual with regard to its aim, practice, and location. Its aim encompasses the whole of creation (ecological concerns), and the whole human being; all people and the whole person – spiritual, mental, relational, physical and environmental needs" (De Gruchy 2006:363).

These statements suggest that the Church and missionary agencies need to rethink and re-evaluate their calling to mission. In support of De Gruchy's statement above, the Church and missionaries should carry on mission work that is integrated and contextual. This is because, according to USCCB, "Christians are asked to have a responsible and coherent attitude that favours the progress of human and Christian liberty" (USCCB 2003). Further, continues USCCB "for such a responsibility and coherent attitude to result, Christians should keep in mind the words of the Lord Jesus in (John 8:32),[107] which called the Jews and all believers to know the truth and declares that knowing the truth will set them free from sin and ignorance. People by themselves, without the church's guidance, will never know the truth if the church and missionaries display arrogance" (USCCB 2003).

It seems incongruous to do mission or call yourself an evangelical/Christian church, and yet display no concern for the planet and nature's suffering. Though it could be argued that ecological destruction is the result of mankind's disobedience to God, we should not stop there. It would be a big mistake and misinterpretation of the Scriptures if those who teach the Scriptures remain locked in "traditionalism", instead of moving forward and addressing the ecological crisis.

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[107] This text is taken from NIVUK (New International Version –UK)

In Scripture it is true that the world is corrupted because of sin. However, since by grace God loves us and entrusts us with the responsibility of caring his creation, the church and missionary agencies should also hold this principle and fight against humans' arrogance towards God's creation. In this regard, humans need a radical repentance of their arrogance. For instance, Velasquez suggested that "the indispensable condition for a true conversion is to put away pride, and honestly admit that we are mistaken. We are putting the earth and all life, including our own, in grave danger and we must humbly recognize that we are merely creatures on this earth" (1995:59). If the Church which is constituted by human believers cannot identify and address evils such as injustice over the earth, oppression and policies that deny society's development, then mission will never be effective, integral and contextual.

According to De Gruchy (2003:20-29) "what it means to be human involves both *'being'* and *'doing'*, and that human dignity is rooted in vocation, in the ability to labour creatively" . It shows that the church as God's ambassador on the earth must find and identify itself by having a good relationship with and impact on the earth. Further, De Gruchy (2006:377) argued that "a missional praxis that takes the earth seriously, that seeks to build an economy in tune with the Great Economy that proceeds with openness to the idea that God's creation is itself an act of redemption is one that moves humbly with light footsteps on the earth".

Therefore, it seems clear that the church's theology and mission to the world should not only be one-sided. In other words, the church must not bear a theology and mission that is focused exclusively on bringing people to Jesus. It should include the rescue of the environment and the whole creation from destruction. In other words, the church's theology and mission to the world should be integral, participative and contextual. Focusing on saving people, without teaching them how to deal with their environment, would mean neglecting our duty of caring for the environment. Our theology and mission must show interdependence between humans and nature, and raise the awareness that humankind has the capacity to resist the forces of destruction by using existing natural resources responsibly and justly.

7.9 The Church's duty in alleviating the ecological crisis

According to scripture, the whole bedrock of environmental concern is that God is the creator of heaven and earth (Gen 1:1). The entire creation is an expression of the creator God. This is an indication that, when human beings begin to understand the creation, they come to an appreciation of God as Creator, and do not base their attitude towards creation on mere assumptions. For example, the apostle Paul in Romans 1:20 says: "For since the creation of the world God's invisible qualities, his eternal power and divine nature have been clearly seen, being understood from what has been made, so that men are without excuse".[108]

In this perspective, the church as a representation of God's presence on the earth over creatures and redeemed people, people who belong to God, cannot practically deny the responsibility it is given by God to take care of his whole creation. It would be also unfaithful of these people called the Church of Christ and by his name to step back and watch God's creation to be destroyed and dishonoured without showing any concern about this. In the following section the focus is to discuss whether humans are above nature. Moreover, it looks at the church's responsibility and role it may play to rescue the earth from the crisis it is in.

7.10 Humanity and nature

According to the accounts in Genesis 1-2, there is interrelation between humankind and nature. The first mandate is the creation mandate, given in Genesis 1:26-28. Men and women are stewards of the creation, and as such are called to "tend the garden", to care for the world God has created. We are all called to work in God's creation, to become sub-creators under Christ and to provide for our families and for the needy. Work itself is good and Christians must accept God's proclamation of the creation as "very good". The Incarnation is God's ultimate "Yes" to creation and the physical world" (Hjalmarson 2003:4).

Nature includes all of God's creation. Earth is where Adam was created from and put in the garden for his family and social environment. From the earth humankind could dwell, cultivate,

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[108]This text is taken from New International Version (NIV) Bible.

care and socialise. On the earth humans were given a mandate to subdue God's creation in a responsible way as stewards rather than damaging it. This was part of God's blessing to Adam and Eve.

Being blessed and entrusted with something does not make the recipient of this trust superior. In this regard, it would be accurate to assume that humans are not above nature since they are also God's creatures. According to the experts mentioned below, I think the problem arises when humans are often tempted with misinterpretation of facts such as the scientific theory of human evolution. This theory holds that all humans originate from an ape-like ancestor that existed a few million years ago. For instance Abraham argued that "science is considered as power and not as the source of wisdom…until recently the physical environment was something that had to be accepted. But to modern man the physical environment is merely the raw material for manipulation and opportunity" (Abraham 1991:79).

One of the dangers of this extreme view of evolution, is that humankind can lose the sense of stewardship and see their dominion over creation as a license to do whatever they please. Humans must not manipulate the creation as mentioned in Psalm 8:1-8, for the purposes of their own glory. In verse 6 it clearly says humans were made a little less than God… It is because though God made humans as ruler over the works of his hands and put everything under his feet, according to this psalm it seems to show that humans should not look at themselves as superior over God and creation because the whole creation belongs to God and is made and controlled by him (Ps 8:3-4).

Though humans are made rationally there are still similarities between them and the rest of nature. For instance, the Scriptures tell us that all flesh is like grass and all its beauty is like the flowers of the field (Isaiah 40:6-8). Though humans consider themselves superior, they are not completely above nature. Rather, they "are part of nature but they are distinct from it. Humans are different from other creatures but difference is not superiority" (Abraham 1991:80). So, the Church's duty for alleviation of the ecological crisis should be characterized in humility that will lead them to a serious obedience to God and respect for the ecology. If humans show arrogance, there will not be peace between God, humans and nature.

7.11 The church's role towards the ecological crisis

The church is an important institution in Nampula, Mozambique and worldwide. It is well-placed to exercise its role in eradication of the ecological crisis and poverty, as well as mediating political and social conflicts around it. This task can happen only when the church interacts publicly, rather than only preaching from the pulpit. Jesus' commission to the church to go out and reach the world was an inclusive mission. It means that mission, as a task of each local church commissioned by the Lord, extends to rescuing whatever may endanger the life of humans and non-human beings. For instance, "God's eternal purpose embraces the world, as expressed in his promise to Abraham… (Gen 12:3)… Local churches are seen as being central to God's global purposes" (William 2002:1254).

Local churches could start a ministry of natural care and encouragement; provide leadership, and serve each other with gifts of love. The church could not really function in the degraded environment since its purpose of existence is to provide dignity, peace, justice, freedom and harmony for God's creatures. For example, the Church needs to discern and act favourably towards environmental conservation, poverty eradication, and as a way of constructing an "oikotheology".

7.12 Constructing an oikotheology

The Greek word oikos appear several times in the New Testament. As defined previously, *oikos* means "household" or "house". From it we get the English words "ecology" and "economy". The term oikos implies that the earth is a global household. Oikotheology helps us to understand and integrate ecological concerns with poverty alleviation, and thereby see the whole church in action, and not just the church hierarchy. Moreover, oikotheology is concerned with human welfare and God's whole amazing creation. Therefore, the church must be strategic in its actions and concentrate on those actions which most effectively should protect the life of human and non-human creatures. In my opinion, the church should be involved by teaching its audiences the values and respect of the beauty of nature. In addition they can participate by creating pilot projects of ecological care. The reason of participating in constructing oikotheology is because

the consequences of air pollution and degradation affect everyone. Moreover, the church is also part of the global household and worships God on the earth.

7.13 Action within the Church which will be practical for Mozambique and the city of Nampula

The church is not primarily about the appearance of lovely buildings, or leadership, and certainly not about how long it has been established. Rather, the church is about action and sustainability. McNeal[109] quoted in Hjalmarson, Leonard (undated) argues that "you can build the perfect church…and they still won't come - people are not looking for a great church…The age in which institutional religion holds appeal is passing away" (McNeal in Hjalmarson 2003:2). The Church isn't a building or a house; rather, it becomes visible through its empowering actions in the world. The church should go out to meet and hear people's struggles and needs and make a constructive plan to respond to such needs.

Furthermore, Warmback stated "…A local church should become a model of what it envisages for society. As well as mainstreaming the environment within societal structures, the church needs to mainstream it within itself. What is needed is sustainable church… [sic] If the church does not take environmental responsibility seriously then the very survival of the church will be threatened" (2005:238). In my point of view, Warmback is trying to show that the public presence of the church and action within society is supported theologically. The church represents God's unconditional love for his people and the whole creation. It is all about obedience to God's command to do mission in the world, among all peoples, cultures and in all places.

From this perspective one can see that God's presence and Spirit was with Moses for the purpose of giving him peace (Ex 33:14). In addition, because of his love God sent his Son Jesus to the earth and He dwelled among his people in order to experience, listen and help people in their

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[109]Reggie McNeal is the director of Leadership Development for South Carolina Baptist Convention. Drawing on twenty years of leadership roles in local congregations, and his work over the last decade with thousands of church leaders, McNeal counsels local churches, denominational groups, seminaries and colleges, and parachurch organizations in their leadership-development needs. He lives in Columbia, South Carolina with his wife and two daughters. More information can be obtained at www.josseybass.com

needs and struggles (John 1:14). Conversely, it becomes imperative for the church to understand and acknowledge these principles of God, and to see Jesus' public presence as a way of showing concern to people and to the earth in a broader sense. In addition, the preservation of nature could be seen as the church's extended liturgy and worship. It should be considered as a way of declaring God's glory, holiness and justice to all his creation. In this regard, all believers of Jesus should not underestimate the importance of taking care of the ecology. Otherwise, if ecology is degraded then the "shalom" we are talking about will be compromised as people will also face social and economic consequences.

7.14 The church's liturgy

Liturgy is all about worshiping God, which includes the spirit of loving one another, nature, animals and the rest of the whole creation. The earth constitutes an important and sacred place to worship God. To me, a place has a significant role to play in all good lives since nothing can happen without a place and space. Accordingly, Van Schalkwyk (2014:12) commends that "starting from a place of a beauty, worship and liturgy and then intentionally undertaking a pilgrimage to places of innovation, prophecy and justice is therefore central in the theology and practical work of urban mission". All economical, political, religious and theological activities occur on the earth's space. Considering that God is omnipresent, one can say that the earth is also God's house. It is where God comes to meet his people in different ways. Therefore humans must preserve the earth, in veneration to God and for our own benefit. Messenger argued:

> Earth liturgy believes that the most basic elements of the earth are God's house. If God's spirit is indeed a creative life force moving throughout all creation, we ought to invite the earth to be our partner in worship. Authentic earth theology will emerge from congregations that take earth liturgy seriously. And the practice of worshiping faithfully with the earth will model interactions that allow us to live faithfully in our earth community (Messenger 2001:175).

Accordingly, the sentence 'God's spirit is indeed a creative life force moving throughout' to others may sound a bit too "liberal", it is not quoted here in any attempt to diminish God's perfect holiness or to reduce him to some New Age or pantheistic concepts, because he is also the Holy Spirit, the third person of the Trinity. However, it is only to emphasise that liturgy

embraces the value of worship. It includes the earth as part of God's creation through the power of his Spirit.

Thus, continued Messenger (2001:175) "liturgy must reclaim the resources of the earth as the tools of worship if we are to rebuild our relationship with God, each other, and the environment". For this to happen we need to seek God closely as our creator and sustainer. Baptism and the Lord's Supper as part of church liturgy could be also valued. For instance, the water by which some churches baptise their converts and the bread used during the Eucharist (Lord's Supper) can also be seen and valued as products from the earth. If the water (for baptism) and the elements of the Eucharist (bread and wine) are for God's worship, then the earth must not be left behind/neglected, since it is the ground source for production of grapes to make wine and of wheat to have bread for the liturgy and also for daily food.

Furthermore, Messenger (2001:176) stressed that "baptism and Eucharist are paradigmatic rites for the earth community. These rites transform everyday human activities of eating, drinking, and washing into spiritual activities by which God can move in our common life". This everyday transformation of human activities does not merely refer to all our daily meals. It does not indicate our everyday washing is the Lord's Supper. Yes, in a sense all daily eating is transformed by looking back at Christ's death. Jesus' body and blood are just being symbolised in the bread and wine and the fact that for Baptists, believer's baptism symbolises the Christian's death and resurrection in Christ (Rom 6:1-4).

Therefore, reflecting this argument into this research, the church should take this link between liturgy and the earth seriously. If the church believes that all the church's liturgical activity occurs on the earth and that it is this earth which produces the sacraments of worship to God, then the church should commit itself to working for the good of the earth. It should also understand that Jesus teaches that if one is not conscious of the significance of it, one must not participate in the Lord's Supper. This could also be applied to Christians (the Church) destroying the earth irresponsibly and when they neglect to take care of it as part of being good stewards. When we participate on the Lord's Supper, we declare our relationship to Jesus consequently

announcing his advent. Thus, we cannot relate to Jesus and announce his second coming when we disregard his creation.

7.15 Eco-theology and spirituality

As we have seen previously, the Church is composed of Christians who believe in Christ and gather together to worship God. This section will attempt to discuss the term 'spirituality' in relation to nature conservation. Spirituality can be a way Christians experience life and relate to God and other creatures. Downey explains:

> Spirituality is concerned with everything that constitutes Christian experience, specifically the perception and pursuit of the highest ideal or goal of Christian life, e.g. an ever more intense union with God disclosed in Christ through life in the Spirit. At a second level, Christian spirituality is an academic discipline, increasingly interdisciplinary in nature that attempts to study religious experience and to promote its development and maturation, Downey (1991:271-278).

If spirituality is concerned with everything that constitutes Christian experience, then spirituality also involves ecology. Spirituality is a way by which human and non-human beings like animals feel and relate their faith and life to a certain deity, the self or nature. This definition excludes any old rigid understandings of spirituality centered only on the formation of denominational doctrines. Downey adds that "contemporary approaches to spirituality tend to begin by stressing the singular importance of the concrete experience of searching for God, and of finding appropriate ways to live out one's response to the divine initiative…" (Downey 1991:271-280).

According to Caleb Rosado (undated)[110] "spirituality is a state of interconnectedness with the other - the divine, the self, the human, the natural, or any combination thereof that nourishes the soul…resulting in a state of security with a sense of meaningful purpose in life" This is a comprehensive and inclusive definition of spirituality which encompasses many dimensions which is interrelated with "a vertical to God, the world of the sacred,…an inward to self, the

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[110]Caleb Rosado, (undated) is president of Rosado Consulting, a certified Spiral Dynamics company, yearly keynotes conferences and conducts training workshops for a wide variety of audiences as diverse as: corporate executives, colleges, local, state and national government agencies, teacher in-service sessions, community organizations and church ministerial and lay groups. Rosado is also Chairman of the Department of Urban Studies, Leadership and Development Campolo School for Social Change Eastern University, Philadelphia.

world of personal well-being; a horizontal to humankind, the world of people; and an outward to nature, the world of all non-human life-forms"(Rosado, undated).

Since the definition above refers to holistic spirituality, Christian communities, spirituality could be that which affirms the presence of God in humans and nature. Christians should practice a spirituality that promotes life, takes care of the poor, is compassionate to the oppressed, and pays attention to and rescues the earth from destruction. These actions could be done in many ways, such as through teaching/education and advocacy. Drawing from this relationship between spirituality (humans) and ecology (surroundings), humanity, specifically Christians, should attentively show concern and treat the environment with love as something that makes part of their life. For instance, Bruteau stresses that:

> We can see ecology as spirituality and again we can see spirituality as ecological. Taking the first way first, we can see, for instance, that concern for the ecology, for the welfare of the planet, may be functioning at the present time as an avenue for development of a global spirituality. Earth Day is celebrated all over the world, and environmentalists everywhere preach much the same doctrines: rescue from pollution, recycling, thinking as a bioregion, respect for the dignity and beauty of the Earth, identifying with the planet as a whole, setting aside human in-group greediness to reach out to the needy and to other species. There are common spiritual values, common spiritual insights in all these movements.[111]

These common spiritual values are also related to some common human experiences, as Jung (1993:52) point toward that "people feel related to nature; often persons have a sense of transcendence in the presence of nature; human beings feel powerful emotions in the face of nature - fear, friendship, beauty, power, trustworthiness; and environmental awareness is associated with other religious commitments…". In addition, Gulick explains that "Spirituality is that dimension of inner life that is attuned to the things that are understood to be most valuable in life; it motivates and guides significant activity..." (1991:185-186). Therefore, the church, as a spiritual institution, should be the first to understand that spirituality is more about Christian experience and concern about everything, rather than a narrow, single-focused life. If spirituality

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[111]Eucharistic ecology and ecological spirituality, by Beatrice Bruteau, is an article in Cross Currents, the journal of the Association for Religion. This article does not provide the date and place of publication. To access, log on to the following web. www.crosscurrents.org/eucharist.htm.

is all about being in good relationship to God, it is also being in good relationship to living and non-living creatures.

7.16 Repentance/confession

Repentance of sins constitutes one of the main parts of the Gospel and the first step of becoming a follower of Christ. Repentance is a sign of spiritual maturity and a way of worshiping God by expressing sorrow for humans' wrongdoing. It could be argued that humans have, in a sense, sinned against the ecology. If this is indeed so, they need to repent about this sin against nature, and not only about moral wrongdoing in their communities and against God. Ways in which humanity commits sin against God include "felling trees without planting any in return; overgrazing; riverbank cultivation; and the rejection of contour ridges, which cause soil erosion: in other words taking the good earth for granted and exploiting it without nurturing or reverencing it" (Daneel 2001:164).

In different ways the church has neglected to deal with many issues that have implications for the life of humans and also for the earth. For example, church systems and structures have contributed to this carelessness and led to the fact that the voices of the powerful are heard and those of the oppressed, including the earth, are ignored. Wright and Kill noted that "…Christianity has been slow to respond to the injustice of humans toward the Earth and toward the poor…The relative silence of Christian churches has made them partners in the evolution of the current ecological justice crisis" (1993:5). I agree with this view, so that when we cut trees unnecessarily it is also oppression against ecology.

In order to reverse the ecological crisis, the church urgently needs to change its attitude of silence and begin promoting awareness in favour of earth conservation. Rajotte and Breuilly commented that "the church has to change itself, and show the world how to change…in repentance of what has been wrong; in preaching a vision of what could and should be; in giving hope and power to the hopeless and powerless; in praise and celebration of the creator and sustainers of the earth and in practical actions" (Rajotte and Breuilly 1992:98).

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The foregoing discussion leads one to the conclusion that a church that does not deal with the suffering of the oppressed and the poor, really has no spirituality at all. The prophets were called to proclaim God's Word, which included preaching against Israel's neglect of the poor and the oppressed (Isaiah 1:16-17; 10:1-2; 58:6-10). In addition, Jesus preached against injustice, to free the captives and relieve the suffering of the oppressed. Therefore, it constitutes a call for the Christian community to work responsibly in a way which will promote freedom. Proclaiming the Gospel in a way which brings hope, freedom, peace and justice to the earth is also part of the church's mission on the earth to free the marginalised and the poor. Thus, this mission can happen through educating our church members and the community.

7.17 Teaching/educating as part of the Church's mission

Associated with the generally high rate of illiteracy in Mozambique, there is little knowledge about ecology at the grassroots level. The church seems to have no agenda for establishing forums that would associate ecological awareness in their society. This lack of action goes hand-in-hand with ignorance on matters of ecology by many churches. Gitau (2000:86) considers ignorance based on illiteracy a reality which "underscores the failure of environmental education even at the governmental level to integrate the underlying socio-economic causes of environmental degradation and pollution".

Besides illiteracy, according to Gitau (2000:86) there is also the problem of "funding and comprehensive environmental policies and laws as well as poor enforcement machinery…", which increases the ineffectiveness of ecological education programmes. Thus, the church as a Christian institution has the obligation to teach its members, in order to eradicate the earth crisis. The silence of the Church in fighting against the ecological crisis may be partly the result of this funding problem. Consequently it may lead the church into greater weakness and disobedience to God's calling to be good stewards in taking care of the entire creation. The church therefore needs to claim/request government funding allocation towards covering these costs. Besides that, the church can organise itself in small associations and find a way of training others.

7.18 The silence of the church on the built environment

Gorringe (2005:16) submits that the built environment "is not peripheral but essential to human flourishing". Clearly, the task of taking care and of cultivation was given to Adam and Eve, rather than any political power. Adam and Eve can be seen as a picture of the church in our days. Hence, care and cultivation of the environment have been an integral part of man's obedience to and worship of God since the beginning.

Hence, the church should not be silent about environmental issues. The silence of the church in dealing with environmental matters may indicate that the church is not aware of its relation to the whole creation. For example, walking around the periphery of the city of Nampula, it is not surprising to see some local congregations that are settled and even comfortable while being surrounded by a degraded environment. They behave as if nothing matters with their surroundings. In this case, the church fails to live a life of being the salt and light of the world. As light it should illuminate the darkness and ignorance of the attitude of people, as salt it means that the church should exercise the role of avoiding decay in the city of Nampula ecologically and spiritually. As light the church could also practice an influential role through advocacy and skill-training as a part of mission.

For instance, Gorringe stated that "it cannot be denied that theology has profoundly influenced understanding of the human, first in Europe, and therefore worldwide" (2005:17). With regard to environment, this statement seems to suggest that the church as God's representative on the earth must actively work in partnership with other agencies for the eradication of the ecological crisis. It indicates also that the church worldwide as the body of Christ must show its power and knowledge of the truth about the value of God's creation and influence its believers through teaching. In order to prevent environmental damage, the church could create environmental cleaning-up programmes whereby its members could be involved. For example, the Church in Nampula could use its available resources such as church members, teachings, preaching, civic education, songs and special events to deal with matters of the environment.

7.19 Preventing environmental damage

Understanding that ecological spirituality is linked with the soul, life and benefit of humans, it has been argued that every human being and specifically, every Christian who is inspired by God's Spirit should confidently play a role in preventing damage to the environment. To substantiate this view, Gulick said that "because many powerful persons, institutions, and structures continue to exploit nature in ecologically unacceptable ways, those inspired by an ecological spirituality need to continue to work to develop and to gain support for an ecological covenant that places limits on thoughtless human action" Gulick (1991:194).

Gulick challenges the church to start playing a role of advocacy for restoration. In this statement he calls the church to preach a message of ecological justice to all people. The church is expected to proclaim the Gospel of salvation in Christ, the Gospel of hope for the hopeless and the Gospel that protects against ecological destruction. This should also lead to the vision of the redemption and restoration of the whole ecosystem of the earth. This will not only bring a restoration, but according to Van Schalkwyk "...it may bring about new and innovative, sustainable ways of living in an earthly city where the 'greening power of the spirit' brings the fullness of life to the most marginalised communities; and life-sustaining justice to the centres of innovation, economy, and political power of the city, in an egalitarian and participatory manner" (Van Schalkwyk 2014:2) . She comments further that:

> Part of this vision of the restoration and renewal of the ecology of life in the cities of Gauteng is the overhaul and transformation of the hierarchical and patriarchal systems which oppress and destroy the lives of women, children, the youth, the marginalised and the ecology; so as to open up possibilities for 'power with' and 'power through' systems of society and ecology to flourish to the full in urban processes, places and spaces Van Schalkwyk (2014:2.

Further, Jung says, "if we truly believe, that God is present in the world, we should expect human beings to enjoy the beauty of creation…The call of the Christian is to affirm that the earth is God's without manipulating others… In fact, God has often enriched the lives and understandings of the Christian community through those who do not acknowledge the same formal confession of faith" (1993:54).

Jung's (1993:54) perspective is helpful because it is not limiting the church to work only in partnership with other "church" people. For instance, Jung suggests that "we need to listen to feminists, to deep ecologists, and to others because the Spirit of God may be speaking to us through them". As God did through different biblical writers such as prophets and apostles he can also use anybody such as our present environmental experts, teachers, scientists and church leaders to protect his creation. In this regard, we need to listen carefully to the messages from these groups of people in order to progress towards environmental preservation.

It is necessary and important for Christians, adds Jung (1993:55) to "articulate a faithful theology of the environment" that is grounded in the obedience of God's mandate to care for his creation. Jung continues that, "the Hebrew and the early church scriptures can speak with power to our environmental quandary. They can assist us in gaining insight on our place in the environment and our responsibility in relation to it [sic]" (1993:55). Nowadays, the church also has the power to convert and teach people so that they may avoid the destruction of God's whole creation. The church's teaching can bring about great changes in the world, including behavioural changes. Rightly put by Velasquez (1995:61) "a real conversion means changing our awareness, attitude, decisions and will, so that there is a real change in our way of life".

7.20 Experiencing God's grace

Grace is something that one does not deserve. The creation of human beings in the image of God can be seen as an act of God's grace, since we did not deserve this. Humans' capacity of thinking, discovery and creativity are all the fruit of God's initiative, since it is God who created humans as rational beings. We can become more aware of God's undeserved grace by examining our conscience. If we are created in the image of God and are therefore rational human beings, we must live responsibly and with self-control. Velásquez indicated that, "perhaps only we human beings have the power to become aware of ourselves. If we have to heal ourselves, we could open our eyes and see who we really are" (Velásquez 1995:62).

This shows that we have the awareness to understand that even the life we enjoy is an undeserved gift, given freely by God. Thus, as an act of gratitude to God, we must also give

freely of whatever we receive. According to Velásquez "it means gratefully receiving what we have been given and gratefully sharing it. God, the source of life, has offered us the possibility of becoming a reflection of his own being…without expecting anything more or anything less from us than love" (Velásquez 1995:62).

This love which results from God's grace and love must extend to all creatures, whether they breathe or not, whether they are great or small. In the Christian life, our greatest challenge is truly to love others. It is because "only those who know they are loved are capable of loving themselves and others. Beginning to love means beginning to heal" (Velásquez 1995:63). In other words, love constitutes a key instrument for healing someone's wounds. Thus, it is accurate to say that every person needs to love himself/herself before they can love others.

Velasquez' statement would challenge everybody who experiences God's love. It calls every one to the true love which includes one another and all surroundings. Loving everyone and everything becomes a process of healing to the poor and the hopeless. This kind of living leads to the prevention of ecological destruction. Spirituality as a way of feeling, and of being connected with something, whether one is a Christian or not, all people should feel that their lives are interconnected with nature. This connection definitely creates within humans a desire to grow, love and to be able to share what God has given us freely. Theologically, this human desire to grow, to love and to be able to share may differ from person to person and culture to culture because love itself constitutes the fruit of Holy Spirit as it indicated in Galatians 5:22-23.

Velásquez (1995:63) attempts to describe Christian knowledge about the work of the Spirit in the lives of believers - "we Christians know that the Spirit which dwells in us wants us to grow. What we are now discovering with new awareness and new eyes is that all our seeking, the thirst in us for something greater is the expression of that Spirit who constantly presses us on...it is a call to co-operate and share in the growth and transformation of all created things".

7.21 Conclusion

This chapter has discussed many issues such as the presence and contribution of the church in the city. It has discussed the significance of the church and its role in the public arena. It has also presented the church's theological significance to the city and environment. This chapter has also addressed the issues of love, grace and peace toward environmental context. In conclusion it should be said that the Christian community must assess their understanding of the earth and begin to see the earth as very close to humans. The biblical ideal that humans are the pilgrims and travellers in this world could be seen as an allegorical expression, since physically humans belong to the earth as the source of their existence from creation to death. They live, cultivate and produce crops for their survival and worship God on the earth.

For instance, Jung said "the image of the earth as home suggests: embodiment in a particular location; a corporate life of faithful activity; the expectation and interpretation of political and economic features; and interpersonal and transpersonal dimensions interpenetrating the personal" (1993:56). Thus, it is impossible to avoid all the conditions offered and faced by humans on the earth, otherwise humans would not be able to survive. If the environment continued to be degraded, the church would not adequately be manifesting its spirituality. Therefore, the church, and all spirituality, loses its meaning where the ecology is degraded.

Chapter Eight

Summary, suggestions and recommendations

8. Introduction

This chapter summarises the findings and analysis raised throughout this study. It makes suggestions, recommendations and offers a conclusion. This chapter assesses the nature and rationale of environmental degradation in Mozambique. The interview was addressed to the members of Union Baptist Church and the Municipality expert in the Department of Environmental Affairs in Nampula. The unstructured interviews, observations and documentary data reflected the major themes towards the role of local community understanding and engaging in ecological issues.

8.1 Summary

In both primary and secondary data, this study identified environmental degradation as a social, political, economic and religious problem. It becomes an extensive problem because all these social classes are affected wherever and whenever the environment is degraded, therefore there is a need for urgent collaborative intervention. The interview outcomes from the members of the Union Baptist Church and the expert of the Department for Environmental Affairs in Nampula share the same vulnerabilities. Such vulnerabilities include soil degradation, water pollution, urination and defecation in the open air. Cyclones, floods, drought and heavy rain comprise part of the ecological crisis. Informal settlements, deforestation and cutting the trees unnecessarily stimulate earth deterioration in the city of Nampula extremely.

The study suggested that both groups should have the aspirations of supplying information and empowering the public for awareness and skills to take action to reduce environmental vulnerability.

The study discovered that though the environmental policies seem to give power to the local people to exercise their responsibilities, unfortunately they do not provide the necessary

methodology that would engage the society into programmes for action. It therefore seems that the local communities are not effectively involved in the implementation of such municipal educational environmental campaigns.

However, the research observation does show that the Mozambican government has good plans to reverse the environmental deterioration. For example, the Municipal Director for Environmental Affairs in Nampula revealed that the government has begun to form activist groups for environmental campaigns in the local communities.

Regarding the local community involvement, the Municipal Director indicated that the "municipality has its internal limitations in terms of incorporating local people and their knowledge in the programme. The municipality incorporates local people only in the planning stage, which is the consultation with local leaders towards major ecological crisis" (Miguel, 11/09/2009). However, analysing the view of da Conseição (2006:138), it is likely that there is an apparent communication gap between the local people and the municipal authorities. There are also hindrances that sometimes lead local people to resistance against the implementation of environmental education programmes. Due to the financial shortages and the lack of qualified human resources, the Nampula municipality works in a precarious situation and faces real difficulties in evaluating environmental programmes.

8.2 Suggestions and recommendations

Since environmental degradation is a social problem, people, specifically the Church leaders, private sector and government authorities should strongly and promptly work towards:

- Adding their voices to the prophets as in Hosea 4:1-4 and Amos 4:1-2 and denounce the injustice and other evils against humanity and the oppression of nature.

- Advocate and establish peace, justice, and freedom in favour of the poor, powerless people, and also nature.

- Provide awareness to the ordinary community for ecological crisis participation and care.

- Teach people the knowledge of God's word, including his authority and obedience in keeping and taking care of the environment.

- Church leaders need to understand God's voice and play their advocacy role between the lawmakers and the oppressed people and nature.

- Promote God's love to one another, and to the environment.

- Church leaders need a paradigm shift in their theologizing so that it can make sense in relation to the current realities of life.

- Teach a comprehensive theology that is practical, contextual and which frees and gives hope to the oppressed world.

- Promote an equitable distribution of resources and the adoption of responsible lifestyles. Ecological concern should be a priority and integrated into the church's mission and preaching

On the governmental level, this study proposes some key strategies to alleviate the current status of environmental problems in Mozambique, such as:

- Integral awareness organized by the government authorities to the people from national, provincial and local levels including complete environmental power decentralization to the local people.

- Recommend local community inclusion in any developmental programmes and campaign for behavioral change.

- The just provision of resources such as technology, human skill-training and funding. For example, Filipe Lucio in Muhongo et al (2009:5) suggested that some strategies for mitigation and adaptation to environmental and climate changes would "include technological, behavioural, managerial and policy responses."

- To ease the environmental crisis the government should also consider the provision of funding to the interested civil society groups like the church and other environmental agencies.

- Adopting the participatory strategy most suitable for use in ecological campaign programmes for all levels of people.

- Environmental management programmes which include the appropriate theological interpretation for adult men and women and also for children's education.

- As a way of valuing people's rights, policy strategies for ecological care programmes should incorporate local community knowledge and traditions.

- The plans of the Department of Environmental Management and decision-makers should give details of how such local community's knowledge could be put in practice by clarifying how the activities could be organised and carried out in the community.

- The study recommends that the local communities should actively engage in all activities of EEPCs,[112] from planning, designing, implementation, monitoring, evaluating and decision-making, Da Conseição (2006:162).

- The rich nations may continue their high economic standards but also try reducing the earth impact of producing and consuming of materials.

Therefore, this study suggests that the church and Mozambican government as well as other private sectors could work in partnership, forming a partnership that would allow the church, government, and other agencies linked to the environmental management to create forums for learning from the experts and for constant assessment and development of the applied programmes.

8.3 Limitations and future studies

This study has focused somewhat directly on the local community's understanding and responses to the environmental management programmes developed by both church ministries and the Department for Environmental Affairs. It has provided a theological and scientific understanding of the implementation of ecological activities in some local communities and church members in the city of Nampula, Mozambique.

We are now able to better understand the variety of challenges and opportunities to interact and work for or with local people, providing a perception of local knowledge and traditions' work for effective environmental care. However, given the time and size limit of this research thesis, I was not able to incorporate the data of the ecological crisis of the whole province of Nampula but only of the local city of Nampula, the views and understanding of other Christian churches of

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[112]For da Conseição's work, EEPCs stands for Environmental Education Programmes and Campaigns.

the province are not included. Thus, further studies in this field would be required to provide a broader range of the detailed data from the other districts and cities of the province.

8.4 Conclusion

It seems that the participatory mechanisms adopted for environmental management in Nampula would be effective if the programmes and policies towards ecology are local people-centred. Environmental preservation would run smoothly if the laws and policies are clearly interpreted for and applied to meet the ordinary people's needs. Further, environmental management would be more widely valued and accepted when the theology actually applied by the Union Baptist Church is that which presents God as the creator/owner who sustains the entire creation and which gives hope, peace and freedom to the entire creation of God. The church needs to begin thinking responsibly about the actual existence of the church on the earth, this includes realizing that God gave them the responsibility of taking care of human and non-human creatures and that God through Jesus came down to rescue all broken creatures and not only humankind.

There is a shortage of methodological insight towards how local traditional knowledge can be incorporated into policy strategy, resulting in only very little actual involvement in environmental programmes carried out by Nampula municipal authorities. Consequently, it may be the reason people continue to resist the implementation of the Mozambican governments' environmental programme campaign. If we really want collaborative environmental protection, something has to be done by the local communities.

According to da Conseição (2006:164) "if EEPCs are to make an effective contribution towards the socio-economic needs of the Mozambican people through environmental protection and natural resources management, then a greater commitment from the local communities needs to be mobilised". It seems possible to involve local people because the fieldwork indicated that people are prepared to participate in/support government ecological campaigns.

It is necessary to incorporate and recognise native's knowledge and practices into scientific and theological experience. Theologically, God expects human beings to be responsible stewards

towards his creation. He entrusted them with the task of cultivation and guarding the garden even before they sinned (Gen 2:15). Therefore, this task and responsibility could apply also to all of humankind at all periods of history. Another theological significance is that "nature has intrinsic value, and so has the human race and neither is supposed to belittle the dignity of the other. Nature is not holy, or divine, but man has a responsibility and a co-creative task in and towards the world, which he has to see as a gift from God" (Kjellberg 2000:102).

This study has indicated that *oikos* means "house" (Gran 2005:1221) and it plays an important role, since ecology and economics share the same roots. As Diakonia (2006:25-30) states, the term *oikos* functions in a way that connects ecology, the economy and ecumenism, and so the land, which is God's property given to humans for their own benefit, could not be sold perpetually. Another link is that found in Neefies (2000:88, 90) and Kalonga (2005:51, 52) where they relate people as human capital to the land and as natural capital since both produce economically which also falls under financial capital. Human beings should therefore never misuse the land because it is their own resource of life.

The literature review and fieldwork experience together contributed a promising framework and methodology for hearing and analysing in-depth such local communities and their interactions towards the implementation of environmental management. The SLF (sustainable livelihood framework) developed further into a workable hypothesis of men/women adult awareness and youth/children education for the coming generations. This continued further towards suggestions for community development, participatory execution of programmes and policies and ecological protection incorporating native perspective and knowledge systems.

 I therefore hope and believe that there will be a vibrant and greatly significant change in the current paradox of the environment in the city of Nampula. Consequently, the economic and health contexts of the citizens will change for the better. This is an urgent need because in relation to the economic and health issues, it is stressed that "the economic crisis now threatening our future is as a result of the accelerated social devastation now gripping our continent and the world. Hunger, poverty and diseases are on the increase..." (Osano and Muli 2001:37).

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The above statement indicates that earth degradation denigrates human dignity, however since sometimes earth degradation is caused by human's own attitudes, this study definitely recommends that the responsibility of decreasing such environmental crises relies upon an adequate human response. Besides general human attitudes, ecological degradation is also a consequence of economic prosperity increases for the powerful nations which exploit natural resources in an uncontrolled manner. For instance, it is argued that "far and away the largest pressure on ecosystems comes from the consumption of people in wealthy countries... many observers have commented on extraordinary levels of current consumption in rich countries" (Martin-Schramm and Stivers 2003:11).

In accordance, it stressed that "one way to avoid degrading nature is to reduce the environmental impact of production and consumption. This, will no doubt help, but less clear is whether it will be enough" Martin-Schramm and Stivers (2003:12). While rich countries become richer through material production and consumption, they must also remember that poor nations are becoming impoverished and also dying. Rather than degrading the earth in search of economic increases, human's primary priority and responsibility should be that of redeeming nature. It depends on treating well God's creation which had been entrusted to humans to take care of.

Concerning its redemption, it is indicated that "if the natural world as a whole will participate in God's redemption, then all things must be treated with respect in accordance with divine valuations, and all living creatures must be treated as ends in themselves not simply as means to human ends. Again, the divine purposes are cosmocentric and biocentric, not simply anthropocentric. Christian ethics must take that fact into account in a process of ecologically-conscious reformation" (Nsha 1991:133). This statement suggests that humans should not use and take for granted the natural resources given by God since it still belongs to God rather than exclusively to humans.

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Miguel Filipe
Onofre Herminigildo Damião Jorge das Flores
Rijone Adriano do Rosário

The church women:
Alcinda Matos
Deolinda Roberto
Elena Nunes
Henriqueta Namucoio
Lidia Motiua
Luisa Imuili
Virginia Mário

The church leaders:
António Nihaua
Augusto José Cornélio
Ernesto Inviua
Ernesto Araújo
Fernando Cardoso André,
Rodriguês Faustino Pirilau
Serafim Silva

The expert for Municipal environment

Caetano Amade Miguel

Appendixes and consent form

Appendix A-1 – Interview schedule

Personal details of the interviewee

What is your name?

Can you tell to me your age please?

What is your position in the church and in the community?

Section 1 - Environmental crisis as a social problem:

Q: What do you understand by the term "environment"? What kind of environmental problems do you face? And how do they affect your family or community?

Q: You have said something about open air defecation. Would you explain why people have to urinate along roads, along rivers and in the open air?

Q: What disasters occur frequently in the city of Nampula and how do they affect your environment?

Q: What can you say about the causes of environmental decline? Then, what are the effects it has on the people, the economy and the land?

Q: In your opinion, what kinds of responsibilities do you have in caring for the environment?

Q: Why is it individual?

Q: How can individuals be encouraged to work towards sustainable development of the environment in the present and the future?

Q: Who would do such projects/excursions?

Q: What do you mean by NGOs and where is the church and what should it do for environmental awareness?

Q: Could you please explain more about the urbanisation issue in Nampula?

Section 2 – Policy, institutions and processes as tools for development or underdevelopment

Q: What can you say about the following structures and how they impact people's livelihoods, 1) local and central authority, 2) public service delivery, 3) legislation and policy formulation and their implementation in regard to the environment?

Section 3 – God and the Environment

Q: Who is and where is God*?*

Q: What do you mean by God being present all over or everywhere? How can God be in heaven and at the same time everywhere?

Q: Then, why do people urinate in the presence of God?

Q: Are you suggesting that it is God who incites bad things into human's heart?

Q: Where and what do we learn about God and creation?

Q: Who has the ownership, rights and control over nature?

Q: Is there a relationship between God, humans and nature? If so, describe this relationship.

Q: What is the significance of the Garden of Eden to humans?

Q: What do you mean by "paradise"? Where is it?

Q: So, if people do not die, where do they live?

Q: Is God still creating the universe or not?

Q: How should human beings declare God's glory to the world?

Q: Can you please explain what you mean by "adultery"?

Q: Is it possible to present God's glory to the world in the middle of waste, and air pollution?

Section 4 – The Church's theology toward the environment and the city

Q: What does it mean to be a church?

Q: What is the main focus of UBCN's mission?

Q: What is the role of the church in the city?

Q: What contribution can the UBCN make to reverse the current ecological crisis in Nampula?

Q: Should environmental preservation be considered a missions priority? Explain.

Q: Was Jesus' death only to save humans beings? What about other non-human beings?

Q: What actions or initiatives does the UBCN use to promote awareness among its members about environmental conservation in the city?

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Interview with the municipal director

Q: What do you understand by the term "environment"?

Q: Can you tell me what you think would be the main problems of Environmental degradation?

Q: As you mentioned, what could be the cause of erosion in Nampula?

Q: What do you mean by 'inadequate water supply'?

Q: So, what are the government plans to reverse the water situation in Nampula?

Q: Can you tell me about land occupation and habitation disorder?

Q: What is behind land occupation and habitation disorder?

Q: Mr Miguel, would you like to talk about sanitation in Nampula?

Appendix A-2: Interview schedule translated into Portuguese

Detalhes pessoais de intrevista

Qual é o teu nome?

Poderia me dizer sua idade, por favor?

Qual é a sua posição na Igreja e na comunidade?

Secção 1 - A crise ambiental como problema social

Q: O que entendes o term "meio ambiente"?

Q: Que problemas ambientais enfrentam e como afectam sua familia ou comunidade?

Q: Que calamidades você enfreta na cidade de Nampula e como afectam o seu ambiente?

Q: O que podes dizer acerca de causa da degradação ambiental e quais são as consequências para a sociedade, economia e terra?

Q: Na sua opinião, que tipo de responsabilidades voces têm no proteção do meio ambiente?

Q: Porque isto e individual?

Q: Como pessoas individuais podem ser encorajados para poderem trabalhar para a conservação do presente e futuro meio ambiente?

Q: Quem poderia fazer a tal tarefa?

Q: O que queres dizer quanto a ONGs e neste caso, onde estaria a Igreja e o que ela poderia fazer para a difusão de informação ambiental?

Q: Por favor, poderias explicar mais acerca do assunto de urbanização em Nampula?

Secção 2 – Leis/regras, institutições e processos como a base para o desenvolvimento or a pobreza

Q: Que podes dizer acerca de seguintes e qual é o impacto poderão influenciar na vida das pessoas? 1) Autoridade local e central? 2) Prestação de serviço público? e 3) formulação de leis e regras e sua implementação para o meio ambiente?

Secção 3 – Deus e o meio ambiente

Q: Quem e, e onde esta Deus*?*

Q: O que queres dizer quanto disse em toda parte ou todo lugar? Como Deus pode estar nos céus e ao mesmo tempo em todo lugar?

Q: Então, porque as pessoas urinam na presença de Deus?

Q: Esta a dizer que e o proprio Deus que inicia coisas ma dentro dos coracoes humans?

Q: Aonde e o que aprendemos acerca de Deus e a criação?

Q: Quen ten authoridade, direito e controle da natureza?

Q: Haverá relacionamento entre Deus, pessoas e a natureza? Se é assim descreva o tal relacionamento.

Q: Qual é o significado do Jardim de Edem para a humanidade?

Q: O que significa por "paradise"? Onde se situa?

Q: Então, se eles não morrem onde eles vivem?

Q: Será que Deus esta ainda a criar o universo ou não?

Q: Como seres humanos poderiam declarar a glória de Deus ao mundo?

Q: Por favor, poderia explicar o que significa para si por adultério?

Q: Seria possível amostrar a Gloria de Deus ao mundo no meio de lixo e numa poluição do ar?

Secção 4 – A teológia da Igreja para meio ambient and cidade

Q: O que significa ser uma Igreja?

Q: Qual e o foco principal da missão da UBCN?
Q: Qual e o papel que a Igreja desempenha na cidade?

Q: Que contribuição a UBCN pode dar para reverter a situação da crise ecológica em Nampula?

Q: Será que a preservação ambiental pode ser considerada como uma missão prioritária? Explique.

Q: Sera que a morte de Jesus era somente para salvar seres humanos? Que tal os animais não humanos?

Q: Que ações ou iniciativas que a UBCN usa para promover informações aos seus membros acerca da conservação ambiental e na cidade?

Entrevista com o director Municipal em Nampula

Q: O que entendes o term "meio ambiente"?

Q: Poderia explicar o que você pensa que seria como o problema principal da degradação ambiental?

Q: Conforme mencionou, o que acha seria como causa da erosão em Nampula?

Q: O que você quer dizer quanto diz o fornecimento de água impropria?

Q: Portanto, qual e o plano do governo para reverter a situação de agua em Nampula?

Q: Poderia explicar acerca da ocupação da terra assim como habitação desordenada?

Q: O que esta de traz da ocupação de terra e habitação desordenada?

Q: Sr. Miguel, gostaria de falar acerca de higiene em Nampula?

Appendix A-3: Interview schedule translated into Makhua

Makhalelo amuttu ni muttu sa okoha

Nsina nanyu tani?

Mokhala okilela iyakha sanyu?

Muteko anyu tani okerexa ni mulaponi?

Mpantta 1 - Onanara wa olumunko, mwaha mutokotoko mwattuni

Q: Musuwenlene ettu enriwa "ambienti"?

Q: Makattamiho tani a olumunko munviranyu nave makattamiho sheni aruhaya very wa emusi ni attu a mwilaponi mwany?

Q: Matakhalelo tani munviranyu muttetthe wa Wamphula nave nto makattamiho sheni anruhaya elapo anyu?

Q: Ettu xeni enrosha onanara wa makhalelo olumunko anyu, nave tho makattamiho tani anruhaya wa. 1) attu elapo, 2) muhakhu ni 3) ethaya?

Q: Mmupuweloni wanyu, makhalelo tani anrera wakhomaliha attu othene muryanyuno wa orehererya olumunko ola ni onorwa owo?

Q: Nthowa xeni muttu onikhalaiye wamekhayi?

Q: Makhalelo tani muttu mmosa ni mmosa aweryeke okhomalihiwa wi eweryeke ophara muteko wa orehererya oluminko wamuholo mmo?

Q: Muttu tani oni awerye ophara muteko yola?

Q: Enttukulela xeni a ONGs nave hihatto, eKerexa enikhala vavi nave tho ela eni yerexeni wi evuwihe mihupi sa orehererya oluminko?

Q: Mokhala onlela sa mwaha wa omaka opoma va wamphula?

Mpantta 2 – malamulo, ittu ni makhalelo elapo ntoko ettu enruha oruwerya ni ohawa

Q: Ettu sheni mukhanlanyu olotta ni ettu tani enruhaya mwa okhala wattu? Alipa olamula ovinyerya vava ni opoma? Mapharelo a muteko wa attu othene? Mapakeliwo ni ophariwawaya amalamulo veri wa olumunko.

Mpantta 3 – Muluku ni olumunko

Q: Muluku tani nave tho Muluku ori wowi?

Q: Muntthukulela hayi mwiraka vottheveni nari tho mapuro othene? Onawereyavohayi Muluku ophwanyaneya musulu ni mapuro othene vamoharu?

Q: Nthowa xeni attu anrusaya vanlakani nave tho vamithoni va Muluku?

Q: Muni Muluku munene tonruha ittu sonanara mmurimani wattu?

Q: Wowi nave tho tixeni ninxutteryahu okhala wa Muluku ni sopattushasawe?

Q: Tani orino olamula, ni othokorerya olumunko?

Q: Wokhalavo watana veri Muluku, attu ni sopattusha sawe? Wari hiha, mulotte.

Q: Entaphulelani eJardim ya oEdem very va attu?

Q: Entaphulelani "eparaiso"? Eri wowi?

Q: Yemwi ehinakhwa, nto ari wowi?

Q: Munupuwela wi Muluku nlelo onopwaheryano apakaka elapo?

Q: Hiyo ntoko attu, nni niwerye hayi ovuwiha nttittimiho na Muluku molumunkuni?

Q: Mokhala olotta sa otaphulela waya mararuwo?

Q: Nni niwerye hayi woniha nttittimiho na Muluku mwelaponi osarenyemo ikokhola ni ntthupi?

Mpantta 4 – masu a Ekerexa wa olumunko ni mmuttetteni

Q: Onttukulela xeni okhala eKerexa?

Q: Muteko tani wa eKerexa eryayano mmuttetteni?

Q: Okhaliherya xeni a UBCN yeraya yere we evukule onanarasha wa olumunko?

Q: Makhalelo tani a UBCN enupwelaya veri wa eKerexa ni muttette?

Q: Muteko tani eKerexa União Baptista: Mpantta xeni eKerexa UBCN enthonyeryayasha ntoko muteko aya? Munona wi onanara wa elapo wamuthokoreriwaka ntoko muteko wopaxerya wa eKerexa? Mulotte.

Q: Munupuwela we okhwa waYesu wari wi awopole attu pahi? Nki axinama ale aikhanle attu?

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Q: Miteko xeni UBCN onipharaye wi avuwihe ni olaleya muhupi wa anammukerexani otheni sa mwaha wa orehererya wa oluminko ni muttetthe?

Okohiwa wa Mukhulupale oMunicipio aWampula

Q: Musuwenlene ettu enriwa "ambienti"?

Q: Mokhala olotta tixeni munupuwelany wi tenitannya vatokotokosha wa onanara wa olumunko?

Q: Ntoko mulonttanyu, tixeni munupuwelanyu wi teri ettu enruha othipeya Wamphula?

Q: Munttukulela hayi sa mwaha wa masi ohikhala sana?

Q: Nto mupuwelo tani wa alipa olamula enaraya ewerye ophuka mulatto wa masi Wamphula?

Q: Mokhala olotta sa mwaha wa okamela ettaya ni omaka wotepanasha Wampula?

Q: Tixeni erivovo nave eniriha sa okamela ettaya ni omaka wotepanasha?

Q: Sr. Miguel, munnitthuna olavula sa mwaha wa oratta omuttettheni wa Wampula?

Appendix B -1: Informed consent form

I am Martinho Paulo, a Masters student at the University of South Africa in Pretoria. I am under the supervision of Rev. L. Mangayi and Dr Stephan De Beer. I am conducting a study regarding environment. My topic of research is :*Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus in the city of Nampula.*

The purpose of the study is to understand theological themes emerging from the church towards environmental conservation. My understanding is that God entrusted the church to be involved in taking care of the creation. I interviewed 20 people of the Union Baptist Church in Nampula, particularly in this city. The people interviewed were between ages of 18 to 75 to answer a few questions for my study. Clearly, I explained that the participation isvoluntary and free. The participants were free to decide whether they were willing or not to participate in this study. The interview lasted about an hour. In some cases where information needed clarity, they were asked twice using the same unstructured questions.

I asked the participants if they could be open and honestly answer the questions. They were also encouraged to answer questions with which they felt comfortable and leave out the questions with which they were uncomfortable. They were told to stop at any time without providing any reason or excuse. I explained that their participation would be anonymous if they choose to be so. I asked permission to record in order to write my thesis, then, they accepted. However, all information that they would provide will remain confidential. The results of the study will be released in a thesis which will be made available in the libraries. The interviews did not involve financial payment or any incentive regarding their participation in the study. However, they were encouraged to realize that their participation would provide a theological contribution to many readers about how God is related to humans and to his entire creation.

Rev Martinho Paulo

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Appendix B - 2: Informed consent form translated into Portuguese

Chamo-me **Martinho Paulo** estudante de Teológia na Universidade da Africa do Sul, UNISA. Estou a fazer o Mestrado e sou supervisado por Rev. L. Mangayi and Dr Stephan De Beer. O meu estudo é acerca do meio amiente e o meu topico de pesquisa é o seguinte: *Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus in the city of Nampula*

O objectivo deste estudo é para aprender acerca do estado do meio ambiente e como a Igreja em Nampula está envolvida para a sua conservação. Gostaria de entrivistar 20 pessoas desta Igreja União Baptista da cidade de Nampula. Pessoas entrvistada serão entre 18-55 anos de idade para responder as perguntas. A participação nesta entrevista não é de caracter obrigatória, mas sim por livre vondade. A entrevista durará cerca de uma hora de tempo. Se houver alguma coisa para se esclarecer, vou usar as mesmas perguntas não estruturadas. Peço vos que respondam as perguntas sem medo, mas com clareza e firmeza. Todos que aceitam participar nesta entrevista saibam que as perguntas que não se sintam a vondade de responder que as deixem. Também estão livres de sair da sala sem necessariamente explicar as rasões.

Todos que aceitarem participar neste estudo seus nomes serão tratados com exigilo. Se aceitam participar gostaria de gravar as respostas de cada participante. Isto vai ajudar transcrever o meu trabalho. As cassetes onde serão gravados no fim seão destruidas. Por esta razão, este trabalho será arquivado na biblioteca. Assim será lido e conhecido no mundo teológico e academico acerca como Deus vos ajuda nas situações do meio ambiente. Também será uma contribuição para outras aprenderem como a Igre de Nampula concerva a criação de Deus.

Rev Martinho Paulo

Appendix C-1: Declaration

I…………………………………………………………………………… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

_____   _____/_____/20___

      Signature of participant   Date

_____   _____/_____/20____

      Researcher's signature   Date

Appendix C-2: Declaration translated into Portuguese

Eu……………………………………………………………………………............ (nome complete do entrevistado) aceito que sei o conteúdo escrito neste documento e o propósito desta entrevista. Também aceito ser entrevistado/a. Ao mesmo tempo sei que não estou aqui por coesão e assim posso retirar me quando eu quiser.

_____

Assinature do entrevistado/a   Data ____/____/20_____

_____

Assinatura do entrevistador   Data ____/____/20_____

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Appendix D - 1: Letter to the Church asking for permission

Igreja União Baptista de Moçambique
Província de Nampula
Caixa Postal No. 523
Nampula

Date: 15 May 2009

RE: Permission request

My name is **Martinho Paulo**, student at the University of South Africa in the Department of Christian Spirituality, Church History & Missiology. I am registered for the Master of Theology (MTh) degree and my topic of research is: *Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus in the city of Nampula*

For this reason, this letter serves to ask church leadership for permission to conduct an interview with the 20 following 20 members of the UBCN:

- Group 1, constituted by 7 pastors and church leaders
- Group 2, constituted by 7 ladies
- Group 3, constituted by 5 youth
- Group 4, constituted by 1 Municipal director

The purpose of this interview is to help the researcher to obtain data about environmental issues and how it affects the society. The interviews were free for participation and occurred in secure places and all information will be confidential. Thus, your permission will be a great help and much appreciated.

Thank you for your attention.

Sincerely,

Rev Martinho Paulo

Appendix D - 1: Carta à Igreja pedido permisão (letter asking permission)

Igreja União Baptista de Moçambique
Província de Nampula
Caixa Postal No. 523
Nampula

Data: 15 May 2009

RE: Pedido de permisão:

Chamo-me **Martinho Paulo**, estudante da Universiade da Africa do Sul, no Departamento de Spiritualidade Cristã, História da Igreja e Missiologia. Estou registado para o grau de Mestrado de Teológia (MTh) e o meu topico de pesquisa é o seguinte: *Investigating Environmental Degradation Theologically: A Challenge for the Igreja União Baptista de Moçambique, (Union Baptist Church of Mozambique) with particular focus in the city of Nampula*

Por isso, esta carta serve para pedir a permisão da Igreja se aceita fazer a entrevista de 20 membros da UBCN na seguinte orden de groups:

- Group 1, constituido por 7 pastores e líderes da Igreja
- Group 2, constituido por 7 senhoras da igreja
- Group 3, constituido por 5 jovens da igreja
- Group 4, constituido por 1 director do Municipio da cidade de Nampula

A entrevista é para ajudar ao pesquiçador ter informação acerca da situação do meio ambiente e come affecta a sociedade de Nampula. A participação na entrevista é de livre vontade e decorrerá num lugar seguro e toda informção será confidencial. Portanto, a permisão de participantes será de grande ajuda.

Obrigado pela atenção despensada.

Rev Martinho Paulo