

**LEGAL EVALUATION OF THE EFFECT OF
DEFORESTATION AND POVERTY ON THE
ENVIRONMENT WITH SPECIAL REFERENCE TO
THOGWANENG VILLAGE IN LIMPOPO PROVINCE**

BY

RAMADUMETJE MAGGIE THOBEJANE

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Declaration

I declare that the mini dissertation hereby submitted to the University of Limpopo for the degree of Master of Philosophy in Environmental Law and Management in the Faculty of Management and Law, School of Law has not been previously submitted by me for a degree at this or any other University, that is my sole work in design and in execution and that any information taken from other sources are dully acknowledged.

Initials & Surname (Ms)

Student Number_____

Date

DEDICATION

This piece of work is specifically dedicated to the following:

- To my Son Thato and Daughter Masechaba for they have been without their Mom during my 14 years of academic pursuits, their support and understanding always.
- To my Mom, Granny, sisters for being there for my son and for me as well when I needed anything while in pursuit of my studies, for their support and understanding throughout.
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CHAPTER ONE

1. INTRODUCTION

“The link between poverty and environment is often mentioned in the debates on sustainable development and structural adjustment, but has hardly been explored systematically”¹. Thinking about the nature and causes of poverty tends to fall into one of two dread camps. One sees poverty as a shortcoming of individuals who will not or cannot do what is required to maintain a reasonable life. In this view, poverty is often a moral failing, and measures to provide extra support to poor people likely to encourage lack of initiative, thus making the problem worse. A second view holds broadly that poverty arises mainly from systematic inequalities in the economy and society, and is largely the result of forces beyond the control of individuals, such as lack of work, low wages or discrimination”.²

Awareness and concern about environmental degradation have grown around the world over the last few decades, and are currently shared by people of different nations, cultures, religious, and social classes. However, the poor disproportionately feel the negative impacts of environmental degradation. The poor often rely on natural resources to meet their basic needs through agricultural production and gathering resources essential for household maintenance, such as water, firewood, and wild plants for consumption and medicine. Thus, the depletion of these natural resources directly threatens the livelihoods of those who depend on them.³

Environmental degradation is usually understood in terms of high use of scarce non-renewable resources, damage or destruction of key renewable resources, such as soils and forests and the generation of waste that are not easily assimilated or broken down by natural processes. “Poverty is said to be both cause and effect of environmental degradation; the 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. Moreover, a degraded environment can accelerate the process of impoverishment, again because the poor depend directly on natural assets”.⁴

¹ (Brundtland’s Report 1987).

² UNEP’s Geo 2000

³ [Http://www.gdrc.org/icm/poverty-causes.htm](http://www.gdrc.org/icm/poverty-causes.htm)

⁴ Kasulo, 2005

Many poor people live in rural areas where it is difficult to access modern energy forms, and thus rely on traditional fuels such as wood and agricultural and animal wastes, often, collection and use of various types of these fuels have devastating environmental impact. Furthermore, often, poor households are not able to afford to consume the amount of energy needed by modest income-generating activities.⁵

Articulated by Joseph Stiglitz of the World Bank, Anil Markandya in his keynote speech at the workshop on poverty alleviation and sustainable development had a different view. He said “there is a lack of evidence to support the view that an increase in poverty always results in further environmental degradation”. However he did note support for the view that when changes occur in institutions that result in a breakdown of common management systems for natural resources, these can cause increased poverty and degradation.⁶

“It is also difficult to see how rural poverty is a major contributor to soil degradation”.⁷ According to this report most rural people have little access to land, forest and freshwater. Poor rural people’s production and consumption patterns also mean that their average contribution to greenhouse gas emissions per person is very low. Perhaps rural poverty contributes to environmental degradation on the very small proportion of the world’s forests, soils and water to which the poor have access. As a result it is not a major contributor to global environmental degradation in particular places.

A degraded environment produces less, and people become more vulnerable, for example, to water borne and other diseases. A driving force behind environmental pressures in South Africa is poverty linked with population growth. When people lack adequate finances as well as other resources, they often have little choice but to take what they can from the natural environment to meet their needs, without consideration for the future by resort to unsustainable use of natural forests and woodlands to meet their basic needs and it becomes a vicious circle.

⁵ Clark and Drimie, 2000

⁶ IISD Report 2001

⁷ UNEP’Geo 2000

The National Regulatory framework intends to ensure sustainable development through slowing down biodiversity loss, fragmentation of habitats and resource depletion as well as impaired ecosystem functioning. This ensures that the rights enshrined in South Africa's Constitution are honored.

In addition to the national regulatory framework, South Africa has ratified a number of international conventions, and for this study, the Convention on International Trade in Endangered Species of wild fauna and flora and the Convention on Biological Diversity are considered to be appropriate measures for the protection of natural resources. The environmental legislative framework covers all the legislation that regulate the use of environmental resource and this legislation will be discussed in details in chapter four.

1.1. PROBLEM STATEMENT

The rate at which forests are being depleted is alarming. Trees are cut down for firewood as a means of survival for the poor. This firewood is not only used for cooking and warming but also used in illegal trading of wood products, grass thatching so that some little income can be earned.

Forest actively contributes to the world's environmental stability and used as economic resources to produce subsistence and industrial forest products. They perform multiple roles, such as preventing soil degradation and erosion, protecting watersheds or stabilizing mountainous areas.⁸ In situations of poverty, the majority of vulnerable communities tend to depend on natural resources. The crisis however is that this has led to high degrees of degradation. The precedence of poverty deprives poor households to compete for resources. Instead, poorer households are confined to marginal land areas where resources are scarce and unproductive. Economic livelihoods of poor community are even more vulnerable when exposed to the risks imposed by land and resource degradation.

The concern is that while poverty does contribute to degradation of the environment, the very same environment is the only source of sustenance for the rural poor.

⁸ Munyai, 2005

1.2. SIGNIFICANCE OF THE STUDY

The link between poverty and environmental degradation, particularly deforestation, is a long existing problem in South Africa and the world at large. Much literature by many scholars addresses this relationship crisis. There is little published literature in Limpopo province especially on the relationship between poverty and deforestation. The rationale behind the study therefore is to examine to what extent does poverty impact on the environment, and what strategies can be employed to remedy the situation. The study will furthermore make recommendations with regard to the management of natural resource and also enhance sustainable conservation of natural resources provincially, nationally and internationally.

1.3. AIM OF THE STUDY

The study aims to investigate the impact of environmental degradation owing to deforestation practices by poor rural communities with poverty trends, and to apply the research recorded in this paper towards a proposed solution.

1.4. RESEARCH OBJECTIVES

- To assess the relationship between the dependency of a community on natural resources and environmental degradation.

- To study the attitude and perceptions of Thogwaneng villagers towards environmental conservation.

- To make recommendations that will help rural people to conserve their natural resources for future generations within the applicable environmental law framework.

1.5. HYPOTHESIS

The researcher acknowledges that poverty is of great concern in Thogwaneng area and that deforestation is of equal concern. The preceding paragraphs 1.1-1.3 above testify to this. The hypothesis is that there is a direct relationship between poverty and deforestation. The dependant variable is “increasing poverty” or “decreasing income” leading to depletion of natural resources, specifically deforestation.

1.6. STUDY AREA

The study will be limited to the Thogwaneng community at Ga-Chuene in the Limpopo Province. Thogwaneng is a small rural community at Ga-Chuene. Thogwaneng is about 40 kilometers outside Polokwane along the road to Burgersfort on the Western side, with growing population of about 120 households, consisting of approximately 1489 people.

1.7 CONCLUSION

This study will outline the impact of poverty on the environment of South African rural communities living with poverty. The impact will be demonstrated by way of research results obtained through empirical research conducted in the reference area of Thogwaneng Village. Background research conducted as part of this study, is discussed in Chapter 2. Chapter 3 explains the research methods used by the researcher. Chapter 4 deals with environmental law framework within which a solution has to be found. In Chapter 5 the presentation and analysis of the findings resulting from the field work research, leading to Chapter 6 which contains the conclusive finding of the research and some research based recommendations on how to solve the tension between poverty and environmental degradation.

CHAPTER TWO: BACKGROUND OF THE STUDY

2.1 CONCEPTUAL FRAMEWORK

2.1.1 Poverty

UNESCO defined poverty in either relative or absolute terms. Absolute poverty measures poverty in relation to the amount of money necessary to meet basic needs such as food, clothing, and shelter. The concept of absolute poverty is not concerned with broader quality of life issues or with the overall level of inequality in society. Relative poverty defines poverty in relation to the economic status of other members of the society: people are poor if they fall below prevailing standards of living in a given societal context. An important criticism of both concepts is that they are largely concerned with income and consumption.⁹

Economists often seek to identify the families whose economic position (defined as command over resources) falls below some minimally acceptance level. Similarly, the international standard of extreme poverty is set to the possession of less than 1\$ a day.¹⁰

To further develop the definition of the concept of relative poverty or relative deprivation, three perspectives are relevant; **income perspective** indicates that a person is poor only if his or her income is below the country's poverty line (defined in terms of having income sufficient for a specified amount of food); **the basic needs perspective** goes beyond the income perspective to include the need for the provision by a community of the basic social services necessary to prevent individuals from falling into poverty ; and finally, the **capability (or empowerment) perspective** suggests that poverty signifies a lack of some basic capability to function.¹¹

Accordingly, the multi-dimensional nature of poverty, in particular social aspects such as poor housing, poor health services or social security, need to be understood in order to create more effective programs for poverty alleviation. Hypotheses that

⁹ UNESCO, 2005

¹⁰ Smelser & Baltes, 2001

¹¹ UNDP Human Development Report, 1997

typically play a role in sociological theories of poverty are based on the idea that individuals are influenced by the physical and cultural context in which they live, and it gives importance to gender and household structure.

Poverty is not only economic, is also social, political and cultural. Moreover, it is considered to undermine human rights;-economic (the right to work and have an adequate income), social (access to health care and education), political (freedom of thought, expression and association) and cultural (the right to maintain one's cultural life).¹²

2.1.2 Environment

The term "Environment" is defined as the "aggregate of surrounding objects, conditions and influences that influence the life and habits of man or any other organism or collection or collection of organisms".¹³ Other academics highlight that environment therefore not only includes the natural environment but also the man-made and physical environment and the interaction between them.¹⁴

2.1.3 Environmental Degradation

Environmental degradation means the various ways in which the environment could lose its natural value. Population growth has (had) extremely hazardous effects on the environment, which is being degraded. Population growth effects have damaged our forests, land reserves, farmland, water quality and the ozone layer. The most damaging effect that can be seen on our (region) Limpopo, resulting from population growth, is deforestation, which is a result of ineffective environmental policies, fuel wood collection, subsistence farming, over-stocking, over-burdened debt obligations and poverty. The causes of environmental degradation could be either natural or human.

2.1.4 Physical degradation of the environment

The physical degradation of the environment has often been coined in a single word "denudation" which is the process of breaking down or decay of the environment

¹² Pierre Sane, 2001

¹³ ECA, 1989

¹⁴ DU Plessis, Sept...1997

(rocks) aided by the agents of weather. This process involves weathering (Physical and chemical), erosion and deposition.

2.1.5 Human degradation of the environment

This is the contribution made by human to the process of denudation. Human population increases and human activities in terms of industrialisation, farming and (ploughing) have often been blamed for environmental degradation. Although many human activities are responsible for environmental defects, poverty and under development is an attributing factor in environmental degradation.

2.1.6. Social Injustices

One of the most serious forms of social injustice is poverty, it relates to economic and social class systems based on inequalities in the ownership and distribution of wealth, jobs, resources and power.¹⁵ Increased material poverty, leading to social exclusion is also affected by massive inequalities in cultural recognition and social diversity as well as huge inequalities relating to and reinforced by unequal access to information and education. People who are currently referred to as “socially excluded” are not only financially poor; they are also excluded from social groups that carry the least amount of recognition, influence and power in society.

Education on its own cannot change societies in which there are economic and class systems, which encourage huge differences in wealth and access to resources, including access to real jobs, information and democratic participation.¹⁶ But education can play a role in assisting people in their various struggles against poverty and unemployment, discrimination, exploitation, inequalities and social injustices.

2.2. Literature Review

In the literature on poverty and Environment, environment covers a range of issues related to natural resources. The Oxford Dictionary defines “environment” as surroundings or conditions for life or growth, but primarily interested in addressing how human well-being is influenced by the natural environment. It is possible to

¹⁵Social Exclusion Unit: 1995

¹⁶Thompson (1997, 2000)

claim that poverty is closely linked to many environmental problems. If one lives in poverty, environmental problems tend not to be at the top in one's list of worries. This probably is because this would imply long term planning, and one is in survival mode. A typical example of poverty and its interaction with the environment is that large part of natural forests deforestation particularly in the rural communities, is due to harvesting for firewood by poor people. Another one is that the reproduction rate is higher in poorer societies, therefore larger population exert more pressure on the environment.¹⁷

2.2.1 Concept of Poverty

Poverty is widely viewed as encompassing both income and non income dimension deprivations including lack of income and other materials; lack of access to basic social services such as education, health, safe water; lack of personal security; lack of empowerment to participate in the political process and in the dimensions that influence one's life.¹⁸ The dynamics of the concept poverty are also better understood, and extreme vulnerability to extreme shocks is now seen as one of its major features. One in five people on the planet – two thirds of the women live in abject poverty. While the last century saw great progress in reducing poverty and improving the wellbeing, poverty remains a global problem.¹⁹

Some opponents such as Amartya Sen perceive the concept of poverty under the aspects of functionings and capabilities. According to this concept what ultimately matters is the freedom of the person to choose functionings. In order to function, an individual requires a minimum level of wellbeing brought about by a set of attributes. The standard way of assessing whether an individual is above or below the poverty threshold is income.²⁰ The logic and rationale according to Sen's approach in the money metric is that in principle, an individual above the monetary poverty line is thought to possess the potential purchasing power to acquire the bundle of attributes yielding a level of wellbeing sufficient to function. Other opponents do subscribe to the lack of basic needs such as shelter, water, clothing, and food to define poverty.

¹⁷ Luis, 2004

¹⁸ World Bank 2002, p11

¹⁹ World Bank (ibid, 2)

²⁰ Thorbeck 2005, 4

The researcher approves of Amartya Sen's approach, restricting his definition to income poverty.

2.2.2 Historical background in South Africa

South Africa's historical circumstances have shaped the present configuration of poverty and opportunities along racial lines. Disadvantaged groups such as the black communities, colored, Indians among others, were systematically left out with relatively little on land and other resources. The quality of education in comparison to the whites compelled the underprivileged to adopt coping strategies. The apartheid regime is regarded among many as the solemn cause of the poverty situations in South Africa. Researchers continue to argue that, loss of land to the whites, creation of settlements, poor education, poor health, lack of proper housing, lack of finance and many others are consequences of the apartheid regime.

Since the change over from the apartheid government to a democratic South Africa, a lot is being done in a bid to sort out the imbalances of the past that affected especially the disadvantaged groups. Government programmes such as the RDP, GEAR and currently ASGISA all seems to impose a fair sharing in the redistribution of resources; land reform, housing, water sanitation, proper infrastructure, education, creation of employment, access to finance, proper health facilities among others. The RDP envisages the "provision of opportunities for all people to develop themselves in order to improve the quality of their lives and the standards of living of their communities".²¹

2.2.3. Poverty levels

According to the statistics given by the World Bank, USAID in the Earth trends on the environmental information portal, South Africa is portrayed as follows:

²¹ Department of Social Development 2003, p9

South Africa:

Region: Sub-Saharan Selected Earth trends data.

VARIABLE	VALUE
Gini index	59
Population living on less than \$1 day	7%
Population living on less than \$2 day	24%
Poverty gap \$ 1 a day	1%
Poverty gap \$ 2 a day	9%
Access to improved sanitation	87%
Access to improved water source	86%
Literacy rate all adults	n/a
Life expectancy- both sexes	48 years

(World Resource Institute 2006)

The above information is a summarized tabulation of the Southern African situation in relation to poverty. South Africans communities, especially the historically disadvantaged, continue to suffer from unemployment, racial influence to opportunity even though apartheid is long gone, lack of adequate income, food insecurity, lack of proper housing, and poor infrastructure especially in the rural areas thus encouraging migration in to urban areas. It is important to note also as observed in the tabulation that life expectancy of both sexes does not exceed 48 years. This is not only because of poor nutrition but scholars also admit the fact that the recent HIV-AIDS scourge has a got a role in this disharmony. It is also worth noting that the greatest impact of the poverty syndrome is experienced more in the rural areas of South Africa such as in the Eastern Cape and Limpopo Province.

2.3. Deforestation as a World Crisis.

2.3.1 The direct and underlying causes of forest loss

Forests are one of the most valuable eco-systems in the world, containing over 60 per cent of the world's biodiversity. This biodiversity has multiple social and economic values, apart from its intrinsic value, varying from the important ecological functions of forests in terms of soil and watershed protection to the economic value of the numerous products, which can be extracted from the forest. For many indigenous and other forest-dependent peoples, forests are their livelihood. They provide them with edible and medicinal plants, bush meat, fruits, honey, shelter, firewood and many other goods, as well as with cultural and spiritual values. On a global scale, all forests play a crucial role in climate regulation and constitute one of the major carbon sinks on earth, their survival thus preventing an increase in the greenhouse effect.²²

Forests have already disappeared in many parts of the world and deforestation rates worldwide during the 1980s were as high as 15 million hectares per year for tropical forests alone. In most parts of the world deforestation accelerated during the 1990s. It should be noted in this respect that deforestation rates tend to be obscured by the fact that there is no clear definition of forests.

The latest definition given by the UN Food and Agriculture Organization, formally the main body responsible for forests within the UN system is so broad that most green urban areas can be considered major forest eco-systems. Thus, the replacement of valuable primary forest eco-systems by monoculture plantations in many cases an alien species such as eucalyptus or pine trees or by biologically poor forests is seldom taken into account. Europe, for example, lost most of its primary forests during the 19th century. Yet, the latest FAO reports state enthusiastically that there is an increase of boreal and temperate forests in this region. A substantial part of these "forests" are biologically poor production forests, lacking undergrowth, original soil biodiversity, and most original bird, mammal and reptile species. They are in fact more akin to monoculture plantations than to true forests. (*ibid*)

²² World Rainforest Movement

2.3.2 Some direct causes of deforestation

The most important direct causes of deforestation include logging, the conversion of forested lands for agriculture and cattle-raising, urbanization, mining and oil exploitation, acid rain and fire. However, there has been a tendency of highlighting small-scale migratory farmers or "poverty" as the major cause of forest loss. Such farmers tend to settle along roads through the forest, to clear a patch of land and to use it for growing subsistence or cash crops. In tropical forests, such practices tend to lead to rapid soil degradation, as most soils are too poor to sustain agriculture. Consequently, the farmer is forced to clear another patch of forest after a few years. The degraded agricultural land is often used for a few years more for cattle rising. This is a death sentence for the soil, as cattle remove the last scarce traces of fertility. The result is an entirely degraded piece of land, which will be unable to recover its original biomass for many years. It is a major mistake to think that such unsustainable agricultural practices only take place in tropical countries. Many parts of North America and Western Europe have become deforested due to unsustainable agriculture, leading to severe soil degradation and in many cases abandonment of the area by the farmers.

In other countries, clear-cut logging practices have been the main reason for forest loss. In the early nineties, Canada and Malaysia were famous examples of countries where logging companies ruthlessly cleared mile upon mile of precious primary forests. Here too, the historical perspective should not be overlooked. Countries like Ireland and Scotland used to be almost entirely forested, but were nearly completely cleared under British rule to provide timber for English shipbuilders. Today, logging still forms the most important direct threat to forests in regions like the Guiana shield (stable area of low relief in the Earth's crust), Central Africa, East Siberia and British Columbia.

2.3.3 Other underlying causes of deforestation and forest degradation

During the last few decades, the forest crisis has prompted many international, regional and national preservation initiatives, yet many have had little success. There is general agreement that this is due to the fact that these strategies were too focused on the immediate causes of deforestation, and neglected the underlying causes which are multiple and interrelated. In some cases they are related to major

international economic phenomena, such as macro-economic strategies that provide a strong incentive for short-term profit-making instead of long-term sustain ability. Also important are deep-rooted social structures, which result in inequalities in land tenure, discrimination against indigenous peoples, subsistence farmers and poor people in general. In other cases they include political factors such as the lack of participatory democracy, the influence of the military and the exploitation of rural areas by urban elites. Over-consumption by consumers in high-income countries constitutes another of the major underlying causes of deforestation, while in some regions uncontrolled industrialization is at the heart of forest degradation with widespread pollution resulting in acid rain.

The causes of deforestation are many and varied, and it is impossible to cover them all. However some examples can show how these causes are closely interrelated.

2.4. Forest sector in South Africa

2.4.1 Natural forests

South Africa has never been rich in natural forests. Climate and the age-old effect of fires have confined natural forests to about 327 600 ha, 0.2% of South Africa's land area. Natural forests have been depleted over the past three centuries. Nevertheless, much of the natural forest has survived, though currently there are reports of renewed forest destruction in some parts of the country. Most natural forest occurs in the Eastern Cape (about 140 000 ha) and in KwaZuluNatal (about 91 200 ha). This is followed by the Western Cape (about 60 000 ha) and the Northern Province and Mpumalanga (about 35 000 ha each). These forests are mostly small and scattered. In the former Transkei, no forests are larger than 1 800 ha; the forests in the mountains are all smaller than 700 ha. Large forests occur only in the Knysna region, in the Amatolas and at Wood bush. Most of these forest areas are owned by the State (although the status of the forests formerly administered in the homeland "governments" needs to be clarified).²³ Only in KwaZuluNatal is a substantial portion of natural forest in private ownership. Here, the removal of indigenous trees along streams on commercial farms had a widespread negative effect.

²³ White paper, 1997

2.4.2 Woodlands

Vast areas of woodlands occur in the semiarid to sub humid parts of the country. The mapped area of these woodlands amounts to about 28 000 ha, but they have been depleted and the current actual area would be significantly less than this.(ibid) The National Land Cover project which the CSIR and the Agricultural Research Council are conducting will provide an estimate of their current extent within the next year. There has been a reduction in tree cover in much of this woodland over the past several centuries. In some parts, this reduction has been beneficial, such as where sustainable agricultural systems have been established. Generally, this is acceptable where woodland utilization and conversion have contributed to improved welfare in the long term. (ibid)

Elsewhere, woodlands have been replaced by unsustainable forms of land use, or destroyed in the overall degradation of the environment. In some former homelands districts, over half the woodland environment has been degraded or destroyed through the pressures of the apartheid resettlement programmes, and unsustainable agricultural development. In some commercial areas degradation has also followed tree removal for arable farming. Deforestation has also occurred through local-over harvesting of fuel wood. In this case, use of the woodland resources has not led to improved welfare.

In most instances rural people use natural forests, and especially woodlands, for many purposes. These include:

- timber for housing, kraals and fencing;
- fruit as an important dietary supplement, and sap for brewing of beer and wine;
- bark for making ropes and weaving;
- medicinal products from bark, bulbs, leaves and roots;
- honey production;
- harvesting of insects, mushrooms and other edible plants;
- grass for thatching and weaving, and for grazing cattle;
- local craft industries.

Most woodland in the rural areas of the former homelands is communal resources. Under the old Bantu Laws and Administration Act, the use and management of

natural woodland resources were assigned to Tribal Authorities, although some national regulations took precedence.

About 40% of South Africans live in the countryside and in rural towns and villages. They include most of the poor and very poor, most being women and children. Women between the age of 16 and 65 outnumber men by 30% to 40%, many men being absent, for example, to work in urban areas. (*ibid*) Women are especially important among the rural people, since they are often the effective heads of households in the countryside, and bear the major burden for maintaining the wellbeing of the family. They live in households of which the majorities do not have access to basic services. Most rural households have no tap water in or near their homes, nor electricity. (*ibid*)

Rural unemployment is high, exceeding 50% in the Northern Province and the Eastern Cape. There are disproportionately high levels of unemployment especially for women.

One third of households in South Africa are estimated to rely on wood for fuel. Many other households use a range of fuels, of which wood is one. In some regions, up to 80% of rural households use wood for energy in the home, with or without other fuels. Women in these households often walk long distances to fetch firewood. The average time spent this way is estimated conservatively at five hours per household per week. Between 9 and 11 million tons of wood are used for fuel per year, of which about 6.6 million tons are estimated to be harvested from natural woodlands. The amount of wood consumed for household needs nearly equals that used in the formal forest industry, which provides sales of about R 1 billion a year. (*ibid*)

2.5. The Poverty-Environmental Nexus

The environmental –poverty nexus is a two-way relationship. The environment affects poverty situations in three distinct dimensions, by providing sources of livelihood to the poor people, by affecting their health and by influencing their vulnerability. On the other hand poverty also affects environment in various ways, by forcing poor people to degrade the environment by encouraging countries to promote economic growth at the expense of the environment and by inducing societies to downgrade environmental concerns including failing to channel resources to address

such concerns.²⁴ Desertification already costs the world \$ 42 billion a year in lost income.²⁵

The bone of content in this research problem dwells to a large extent on the poverty-environmental nexus, particularly on the issue of deforestation. The question put forward at this point in time is whether the presence of income poverty especially in rural areas directly correlates to environmental degradation and particularly deforestation for income. Some commentators argue that high inequality takes many forms – in terms of access to basic social services or productive resources in terms of income, in terms of human development concerns, in terms of regional – rural urban differences between borders and between socio groups. This rural non-belonging to minority group may face the highest degree of disparity especially among women – first because of her sex, second because of her location and third because of her ethnic identity. (*ibid*).

Access to cleaner and efficient energy services is a critical element for overcoming poverty and also for ensuring environmental sustainability. But poor people in developing world are at the bottom of the energy ladder, burning dung, wood and crop residues for their cooking and heating. They are without access or have less access to cleaner and efficient energy services such as kerosene, propane, biogas and electricity. About 2 billion people in developing world are without electricity and nearly 70% of the energy use in sub Saharan Africa comes from traditional sources.²⁶

There is an argument also that “Poor people are the primary creators of environmental damage” Not true the argument proceeds that even though poor people bear the brunt of environmental damage, the irony is that they are not its principal creators. It is the rich people they say that are the polluters and contribute most to global warming. They degrade the global commons making the resources scarce for poor people.²⁷

²⁴ Jahan et, al., 2003, 8

²⁵ United Nations Development Programme (2002, 20)

²⁶ DFID et al , 2002

²⁷ Jehan et al, 2003, 10

The other argument from scholars on this subject is that “The poverty-environment nexus basically stems from low incomes” It is not that simple. Arguments that maintain that poor people degrade the environment basically explain the poverty – environment nexus in terms of income levels only. Many of the natural resources that are degraded are communal property. Rights are ill-defined often because they were originally defined within local social and political framework that is no longer there. Some say that over- exploitation of sources of fuel wood is linked more to the time available to women than to their poverty status. There is gender dimension, but not necessarily the income dimension. (*Ibid*)

Natural resources can be a primary source of livelihood or may supplement the household’s daily need and income. A growing body of research shows that poor rural households often derive a significant share of their income from natural resources. An excellent study conducted in Zimbabwe illustrates the degree of natural resources dependence of poor people in rural areas.²⁸

When trees are removed without adequate replanting, environmental problems such as soil erosion, global warming, habitat destruction, desertification and drying up of streams occur. In addition, in places where communities depend upon the soil for their livelihood, deforestation contributes to downward spiral of poverty.

2.6. CONCLUSION

It is in view of the above poverty/environmental nexus that it is recommended in the final chapter of this research paper that both components of this nexus must be accommodated in a solution designed to solve both the “environmental” and “poverty “ dilemma simultaneously.

²⁸ Cavendish ,1999

CHAPTER THREE

3. RESEARCH METHODOLOGY FOR FIELD WORK

3.1. MODE OF ENQUIRY

A combination of quantitative and qualitative modes of inquiry was used in this study. Quantitative research methods are used in order to gain factual data, and use of statistical analysis indicates that quantification often makes over-observations more explicit, and summarizes data.²⁹

The term 'qualitative research' is used to cover a wide range of approaches and methods. Although there is still some debate, the general consensus is that qualitative research is a naturalistic, interpretative approach concerned with understanding the mental mapping process that respondents use to make sense of and interpret the world around them.³⁰

Qualitative research can stand alongside and complement quantitative survey inquiry to provide depth and richness to an investigation, and also be used in the development of quantitative investigation by informing survey content and coverage, developing themes and typologies on which a survey question or questionnaire modules can be designed and in testing the question.

The methods employed helped to gain factual data, such as information concerning the impact of poverty on the environment, and community awareness of environmental regulations on deforestation.

3.2. RESEARCH DESIGN

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure.³¹ The design used in this study was literature survey and Empirical study. The researcher chose these methods to help in determining the relationship that exist between poverty and environmental degradation.

Empirical study and literature survey entail a process of data gathering, analysis and interpretation. The object of survey is to determine the variation in the response,

²⁹ Babbie, 2001:36

³⁰ Ritchie and Lewis:2003

³¹ Selltiz et al, 1965:50

each item of information in the survey represents one variable that is a measure by which the differences in responses can be established.³² The researcher in this study was able to compare different responses of research participants. Data sources include direct observations and data obtained through questionnaires and interviews.

3.3. DATA COLLECTION

A Survey questionnaire, interviews and fieldwork observations were the researcher's instruments of data collection. A simple random sampling was used in this study, and the participants of the study were woman from youth and adult category, sculptures, indunas, traditional healers, male residents and councilors. The following were the research instruments:

3.3.1 Survey Questionnaire

A survey questionnaire was used, and constituted the major part of the research instruments. The new dictionary of social work (1995:51) defines a questionnaire as a set of questions on a form, which is completed by the respondent in respect of a research project. The basic objective of a questionnaire is to obtain facts and opinion about the phenomenon from people who are informed on the particular issue. The type of questionnaire used was self-administered questionnaires. Eighty questionnaires were administered to the responded and were all interpreted and analyzed.³³

3.3.2 Interviews

Interviews were conducted, and the researcher personally conducted the interviews, to obtain information about the effect of poverty on the environment and why people do invade the forests for firewood. The researcher was obliged to translate the questionnaire from English to N.Sotho, because some of the respondents were older people who cannot write or read. The interview data has been recorded on the questions by the researcher.

³² Baker, 1999:11

³³ A.De Vos (1988:152-153)

3.3.3 Field-work Observations

The researcher visited the study area on several occasions to verify if the problem stated is still practiced by the residents. The selling of firewood, traditional brooms made of grass and kitchen utensils such as spoons made from cut wood is a daily activities in this area. The researcher also visited a place called Molapong wa Matebele where local men collected freshly cut wood to a truckload.

3.3.4 Pilot Study

A pilot study is defined in the new dictionary of social work (1995: 45) as the process whereby the research design for a prospective survey is tested. The main purpose of a pilot study is viewed as investigation of the feasibility of the planned project and to bring possible deficiencies in the measurement procedure to the fore. In this study, the research instrument (questionnaire) was tested whereby the researcher distributed 20 questionnaires to some of the students at the University of Limpopo to check whether people know the significance of having forests around us and also if they know the laws that protects the natural resources.

3.4. DATA ANALYSIS

Data analysis has been done by means of frequency tables, descriptive narratives, graphic illustrations, and charts and presented in qualitative methods elaborated in text. Analysed data will be presented in chapter five.

3.5. ETHICS

Ethics in research means that the researcher should consider respondents' feelings. Researchers should avoid questions that are embarrassing and anxiety-inducing situations or discomfort. Researchers depend on respondent's voluntary co-operations, researcher need to ask well-developed questions in a sensitive way, treat respondents with respect, and very sensitive to confidentiality.³⁴ The researcher in this study is willing to comply with the ethical standards when conducting the research. There was a high level of confidentiality, respect and asked questions, which were stress-free for my respondents.

³⁴ Neuman (2000: 284)

3.6. RELIABILITY AND VALIDITY

In research, researchers would want their measures to be reliable and valid. Reliability means dependability or consistency, it suggests that things is repeated or recur under the identical or very similar conditions.³⁵ Validity actually may also refer to the degree of relevance of the instrument and, in that way, the instrument may be considered more reliable. Reliability and validity both concern how concrete measures are connected to constructs.³⁶ The reliability and validity in this study will be indicated by the relevance of the instrument chosen in this study.

³⁵ Neuman (2000: 164)

³⁶ Balia (1982:55)

CHAPTER FOUR

THE LEGAL FRAMEWORK

4.1. Introduction

A lot has been done in South Africa after 1994 to develop Policies and legislation that regulate Environmental Management. The environmental legislative framework covers issues such as land reform and planning, natural and cultural resources use and Conservation, protected areas and community based conservation, biodiversity and genetically modified organisms, Environmental assessment as well as pollution and waste management. (Limpopo Environmental Implementation plans, 2001). The 1996 Constitution of South Africa guarantees a clean and healthy environment for all in section 24 (a) (b). This right has to be balanced against the responsibility to ensure that national resources are used in a sustainable manner. Environmental legislation is one of the various environmental management processes, aimed at balancing the rights and responsibilities of resources, environment and development.³⁷

The recently developed South African legislation on Environmental Management has been extensively based on the provisions of multilateral environmental agreements and other frameworks. The protection of the environment was previously focused on the prevention of environmental degradation, and after the 1994 elections, more environmental legislation was introduced.³⁸

The South African perspective of conservation was seen as synonymous with preservation of the country's natural resources mainly through rigorous policed nature reserves. Over the years the public's perceptions are assumed to be gradually changing more so that the Constitution of the Republic of South Africa has given the environment and conservation a more pronounced role, hence stakeholders are beginning to realize and appreciate that the healthy condition of environment underpins economics development hence the need for the environmental policy framework.³⁹

³⁷ (Scheepers: 2000)

³⁸ Fuggle and Rabie (1983: 114, 1992, 18)

³⁹ Botha and Hutley (1991)

4.2. Development function of law

The concept, development is widely used having both a more general and specific meaning. It is sometimes used to refer to the general societal, economic and political transformations which affect countries and on the other hand, it is used to refer to the promotion of wellbeing of individuals.

Development is defined as an integrated change of societal institutions (political, social, economic and cultural) according to collective evaluative preferences which may be executed on an evolutionary or revolutionary manner through conscious human action.⁴⁰ However, development can be defined as a process of change involving people traveling along a road to new destinations somewhere in the future.⁴¹

In every society, there is set of rules that people should follow. Law can be said to be a set of enforceable rules governing the relationships between legal persons. Law has many functions in present –day society. It regulates controls, creates order, determines outcomes, prescribes penalties, and outlaws certain acts or actions. Laws are used as tools of administrations, control crime prevention, rehabilitation and justice, and for collecting revenues and taxes. Law also functions as a management tool. Therefore; development law is there to govern, guide and advice role-players in the development process, hence it is that part of the law that forms with reference to the values of civil society, framework for the effective management of the development process.⁴²

Since everyone has the right to development, Thogwaneng villagers also are entitled to such, and they need to consult with their role-players to ensure enforcement and implementation of that right. However, they need guidance, information and advice that will lead to the effective management of the development process, which is the role of law in development.

In this chapter, statutes that regulate environmental management are discussed very briefly. Those includes the Constitution of the Republic of South Africa Act 108 of

⁴⁰ Kotze (1983: 17)

⁴¹ Scheepers (2000, 1)

⁴² Scheepers (2000, 18)

1996, the National Environmental Management Act 107 of 1998, National Environmental Management Amendment Act 46 of 2003, National Environmental Management: Biodiversity Act 10 of 2004, Limpopo Environmental Management Act 7 of 2003, National Forest Act 84 1998, Environmental Conservation Act 73 Of 1989, including socio-economic rights.

4.2.1. The Constitution of the Republic of South Africa Act 108 of 1996

The Constitution of the Republic of South Africa Act 108 of 1996 creates the overall framework for environmental governance in South Africa, by establishing the right to an environment that is not harmful to health and well being, balancing the right to valid social and economic development. Section 24 of the Constitution of the Republic of South Africa states that: “Everyone has the right to, an environment protected for the benefit of present and future generations through reasonable legislative and other measures that:

- Prevent pollution and ecological degradation
- Promote Conservation
- Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”

This section compels government to pass reasonable legislation in order to ensure sustainable use of natural resources and also ensure compliance of legislations for those who contravene the outlined laws. Furthermore, the Constitution stipulates that management of the environment is a concurrent competency between the national Ministry of Environmental affairs and Tourism and South Africa’s provincial governments. Such Concurrent competency includes joint policy decision making with regard to issues such as pollution and waste regulation, environmental impact assessment, authorizations, compliance monitoring, and enforcement.

4.2.2. National Environmental Management Act 107 of 1998

The National Environmental Management Act 107 of 1998 is a framework legislation covering natural resource use and conservation, pollution control and waste

management, and land use planning and development.⁴³ The Act states that the environmental resources must serve the public interest, and that the environment must be protected as the people's common heritage.

As framework legislation, the Act does not include specific provisions on forests but the principles outlined in chapter two of the Act have relevance to the regulation of the sector, where they state that sustainable development requires, amongst other factors:

- That all necessary steps be taken to avoid the disturbance of ecosystems and the loss of biological diversity;
- Responsible use and exploitation of no-renewable natural resources;
- That the use of renewable resources does not exceed the level beyond, which their integrity is jeopardized;
- The prevention of negative impacts on the environment by the early anticipation of such impacts; and
- Participation of all interested and affected parties in governance is encouraged as well as community well-being and empowerment.

The purpose of NEMA is to provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment.

Section 2, subsections (3), (4),(a), (i) and (h) of the Act indicate that development should be socially, environmentally sustainable and that the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided, are minimized and remedied.

The National Environmental Management Act is generally seen as an attempt by government to comply with the requirement of section 42(b) of the Constitution and in the process ensuring that everyone in the environment pursues the best practicable environmental option that will promote conservation of natural resources.

⁴³ Glazewski, 2000

4.2.3. National Environmental Management Amendment Act 46 of 2003

The National Environmental Management Amendment Act 46 2003 aims to provide for the administration and enforcement of certain national environmental Management inspectors for the enforcement of NEMA or a specific environmental Act as defined in section 1 of the Act.

4.2.4. National Environmental Management: Biodiversity Act 10 Of 2004

The National Environmental Management: Biodiversity Act 10 of 2004 was signed into law and came into effect on 1 Sept 2004 (Burgener, Greyling and Rumsey ,2005)⁴⁴. The aims of the Act as described in the preamble are to Provide for the Management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, the protection of species and ecosystems that warrant national protection, the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting and the establishment of the South African Biodiversity Institute.

The Act allows, for the establishment of national norms and Standards for the Management of biodiversity across all sectors and by different Management authorities. The application of the Act is guided by the Principles found in section 2 of NEMA.

4.2.5. National Forest Act 84 of 1998

The National Forest Act 84 of 1998 provides a framework for conservation Management, protection and utilization of forest resources in the country. The main aim of the Act is to sustain the contribution of the forest resources to the upliftment of the quality of people's lives, particularly that of the rural people who are the most disadvantaged. Therefore it is a serious offence if people cut, disturb, damage or destroy forests, and the forests are protected under section 7(1) of the Act.

The Act also promotes the sustainable use of forests for environmental, economical, educational, recreational, cultural, health and spiritual fulfillment, community forestry and greater participation in all aspects of forestry. Section (1) of the Act provides for

⁴⁴Burgener, Greyling and Ramsey, 2005

the optimal utilization of the forests and forest products for the purpose of development.

Community forestry is encouraged under chapter 4 part 3 of the Act but communities should enter into a community forestry agreement with the Minister of forestry and the Department for community forestry. The content of the agreement and details are stipulated in section 29-32 Of the Act.

In terms of section 19 of the Act, the Minister may prevent a person wishing to exercise the right of access referred to from entering the area: Prohibiting any person from removing forest products from that area, prohibit any other activities which may cause deforestation or prevent rehabilitation, suspends licenses issued under this act in respect of the area; require the owner to take specified measures to prevent deforestation or rehabilitate the natural forest, or woodland, and requires the owner to submit and comply with sustainable Management plan for the area.⁴⁵

4.2.6. Limpopo Environmental Management Act 7 of 2003

Limpopo Province has succeeded in enacting the Limpopo Environmental Management Act no 7 of 2003 (LEMA) through a consultative process. This Act repealed the former Lebowa, Gazankulu, Venda and Northern Province Acts and Ordinances.⁴⁶

The objectives of LEMA are to:

- Manage and protect the Environmental in the province
- Secure ecologically sustainable development and responsible use of natural resources in the province.
- Contribute to the progressive realization of the fundamental rights contained in section 24 of the constitution of the Republic of South Africa, 1996 and
- Give effect to international agreements affecting environmental management which are binding on the Province.

The use of natural forest for firewood and thatching grass is less controlled in the study area, and anyone from the communal can collect these resources without prior

⁴⁵ Munyai J. ,2005

⁴⁶ Schedule13 of LEMA

permission. LEMA restricts the collection of firewood on communal land to a head load.

This rule does not seem to have been adopted by the traditional authorities that allows for unlimited collection of dry firewood as long as it is for personal use.

Limpopo province interprets and applies LEMA in accordance with the National Environmental Management Act Principles, thereby adhering to the principles of co-operative governance in section 96 of LEMA in accordance with the National Environmental Management Act. The dynamic multi-disciplinary nature of environmental issues and those implementation mechanisms in Limpopo province require interaction, consultation and agreements amongst interested groups.

4.2.7. Environmental Conservation Act 73 of 1989

Environmental Conservation Act 73 of 1989 was enacted for the effective protection and controlled utilization of the environment. The GN R1182 and GN R 1183 as amended provides for impacts development, and that environmental damage is minimized, and that already damaged environments are rehabilitated, for this study, section 21 of the Act that deals with the identification of the activities that may have a substantial detrimental effect on the environment, and sections 22 and 26 are very important for the community of Thogwaneng to know how to conserve and protect the natural resources, in this case their forests.

Section 21 and 22 falls under part 1 of the Act that deals with policy for environmental conservation, it relates to deforestation in the sense that it has proactive control over activities that may have a damaging effect on the environment.

4.3. Discussion on Socio-Economic Rights

There is growing international recognition of the universality, interdependency and indivisibility of human rights. The United Nation World Conference on Human Rights held in Vienna in June 1993 emphasized this recognition by proclaiming that “all human rights are universally, indivisible and interdependent and interrelated”(Vienna Declaration, 1993). What this means is that political, economic, social and cultural differences cannot and should not be used as an excuse for the denial or violation of human rights. In the African context, the African Charter on human and people’s

Rights places special emphasis on the universality of rights and recognizes in its preamble that the satisfaction of economic, social, cultural rights is a guarantee for the enjoyment of civil and Political rights. Despite such recognition, most challenge to human rights violations in most African countries tend to focus on civil and political rights even though in Africa, or elsewhere, economic and social rights are daily concerns of most people.⁴⁷

The poor people in the rural communities are excluded from many things, of which the enforcement of their socio-economic rights is very important. These rights provide for the legal-constitutional basis of addressing poverty.

The inclusion of socio-economic rights in the South African Bill of Rights was put in place for the protection of people's rights and also that the protection, implementation and enforcement of such rights generally take place through the legislature by the enactment of the necessary enabling legislation, through the executive and state administration by the adoption of the appropriate policies and through the judiciary by interpreting and making the relevant orders of enforcement. Such rights includes; the right to:

- life, water, food, shelter (for children)
- Education
- Environment
- housing
- social security
- Health
- Land

The Constitution prescribe that the South African Human Rights Commission must "require organs of state to provide the commission with information on the measures they have taken towards the realization of the rights in the Bill of rights concerning housing, health care, food, water, social security, education and the environment."

4.3.1 Right to Environment

Section 24 of the Constitution of the Republic of South Africa entails the right to have the environment that is not harmful to health or well-being. Sections 24(a) and 24 (b)

⁴⁷ Mabangizi, 2004

place a duty on the state to prevent pollution and other damage to the environment, and to promote conservation and sustainable development. In promoting justifiable economic and social development, care must be taken to secure the ecology and to promote conservation. Section 24 (b) belongs to the category of collective rights, which usually impose constitutional imperatives on the state to secure and provide services and other social or economic amenities.

Principle 4 of the Rio Declaration on Environment and Development (Rio-Declaration) provides that to achieve sustainable development, environmental protection shall constitute an integral part of the developmental process. Using rights language, the principle of integration would require the balancing of the right to development with the right to environmental protection.

With reference to Thogwaneng community, the right to the environment that is harmful to health and well-being could be well contested by the villagers, since they live under serious unhealthy conditions that could harm their wellbeing. There is no proper sanitation and toilets; they use water from the nearby river which have inadequate clean drinkable water. It is submitted that the environmental right of this community is being violated and the relevant Municipality should intervene together with the Dept of Environmental Affairs and Tourism.

4.3.2 Right to Education

The important of entrenching the right to Education is based on certain premises: firstly it is a precondition for the exercise and understanding of other rights, such as freedom of information and the right to vote depends on a minimum level of education, including literacy. Economic, social and cultural rights, such as the right to choose work or to take part in cultural life, can also only be exercised meaningfully once a minimum level of education has been achieved. Secondly, through education individuals can be taught values such as tolerance and respect for human rights Education therefore can strengthen a culture of human rights within and amongst nations.

Section 29 of the Constitution provides that every one has the right to basic education which includes adult basic education, to further education, which the state through reasonable measures must progressively make it available and accessible. The right to Education is recognized in article 26 of the Universal Declaration of Human Rights (1948) and article 13 and 14 of the International Convention on

Economic, social and Cultural Rights (committee on ESCR), created in terms of CDESCR, has prime responsibility for monitoring socio-economic rights, including the right to education.

Level of education in the researched area is not satisfactorily, given the high percentage of people who only have primary education. In this case, we cannot expect them to fight for their rights while they are not well informed.

Since the community of Thogwaneng was not aware of forestry regulation when it comes to the use or protection of the natural forestry, an awareness campaign was proposed to familiarise them with Environmental laws and regulation.

4.3.3 Health, Care, Food, Water and Social Security

Everyone has the right to have access to health care services, including reproductive health care; sufficient food; water; and social security. The state must take reasonable legislative and other measures for the progressive realization of these rights within its available resources. All these rights are stated under section 27 of the Constitution.

Health care rights stipulated in section 27(1) means that every human being has the right to enjoy certain types of health facilities, goods, services and conditions that are suitable for living life with dignity.

Sufficient food in section 27 (1) (b) means that everyone must have access to enough amount of food and the food must be of acceptable quality and safe for everyone. Access to water refers to economic and physical accessibility of water, meaning that water should be available within a distance accessible to everyone including vulnerable individuals such as children, elderly persons and people with disabilities. Economic access refers to the financial costs associated with accessing water; the cost should not be unreasonably expensive.

The right to social security is stipulated in section 27 (1) © of the constitution that everyone has the right to have access to social security, including if they unable to support themselves and dependents, appropriate social assistance. Like in all human rights, international human rights law prohibits racial discrimination in the enjoyment of the right to social security.

4.3.4 Rights to Housing

Everyone has the right to have access to adequate housing .The state must take reasonable legislative and other measures to achieve the progressive realization of this right within its available resources. This right is stated in section 26 of Constitution of South Africa. The research area has many shelters that are made from cut wood, this is not adequate housing because the houses are not of good quality, safe and sustainable.

Section 7(2) of the Constitution state that the State is oblige to respect,protect,promote and fulfill the rights in the Bill of Rights. The implication being that the state must not only refrain from interfering with the enjoyment of rights but must act so as to protect, enhance and realize their enjoyment. “This should be done through the legislature by enacting the relevant enabling legislation; and through the executive and state administration by adopting the necessary policies and making the appropriate administrative decisions. However, it is mainly through judicial enforcement that the realization and enjoyment of socio-economic rights takes place”.⁴⁸

Lastly, in terms of section 152 of the Constitution; local government must ensure the protection of services to communities in a sustainable manner, promote social- and economic development, and promote a safe and healthy environment for all.

4.4 CONCLUSION

Forests contribute to the beauty of the land, and to a lager extent, has an important role on the ecosystem, there is an urgent need to protect the forests both locally and nation- wide, hence deforestation is a serious global problem. Legislative protection may not materialize if the immediate communities do not know about them and for them to know and understand everything about nature conservation, must through the help of their leaders, local authorities and municipalities get appropriate workshops, awareness campaigns and consult with relevant organizations for enforcement and implementation of their socio-economic rights. Everyone has the right to development, and the researched area should strife for the realization of this right and so is the government.

⁴⁸ Mubangizi, 2006

In general the right to development is all about recognizing the right to human dignity, equality, democracy, equity and justice, and all these are outlined in the South African Constitution.

CHAPTER FIVE

5. PRESENTATION AND ANALYSES OF FIELD WORK RESEARCH AND DATA

5.1. INTRODUCTION

This section of the study focuses on the analysis and presentation of data collected. A questionnaire was used to capture data in various categories according to research themes or topics. The analyses and presentation of captured research data is done according to the same categories. Accordingly these categories will also inform the frequency tables, narratives, graphics, illustrations and charts. Of 80 questionnaires distributed in the community, 12 were handed to elderly people and 68 to members of the community trying to cover all segments or groupings in that community. Care was taken to ensure that returned questionnaires represented the community as a whole and that results would reflect well informed information and research data. Analysis will be done in three sections as presented below.

5.2. SECTION A

5.2.1. DEMOGRAPHIC DETAILS OF RESPONDENTS.

The participants in this study were people living in Thogwaneng area in Limpopo Province whose ages varied from 16 to above 56 years. This comprised youth, people in active age above the age of 35 and the elderly whom the researchers categorized as follows-

Category	Frequency	Percentage
Youth	30	37.5%
Adults	38	47.5%
Elderly	12	15%
Total	80	100%

Table 1

5.2.2. GENDER DISTRIBUTION OF RESPONDENTS

The population sample comprised 47 females and 33 males who participated in the study as illustrated below. The small number of male participants can be attributed to the fact that most men go to the industrial areas or farms for most part of the day while women generally remain at home doing domestic chores in and around the households in the community.

Gender	Frequency	Percentage
Males	33	41.25%
Females	47	58.75%
TOTAL	80	100%

Table 2

5.2.3 AGE DISTRIBUTION OF RESPONDENTS

AGE	16-20	21-29	30-39	40-55	56+
FREQ	9	21	28	16	6
PERCENTAGE	11.20%	26.25%	35%	20%	7.5%

Table 3

The table above illustrates that the most respondents were in the age ranges of 30-39 (35%) while a handful (7.5%) were above 56 yrs. A total of 49 respondents (61.25%) are in the very active years of 21-39.

5.2. LEVEL OF EDUCATION

Because the level of education of an individual is critical in one's understanding of the importance of maintaining and practice of good environmental management, the researcher asked a question to determine whether education has an influence on one's attitude towards the environment.

Responses revealed that 12% of the participants have tertiary education, 35% have secondary school and 45% have primary school education while 5% indicated that they have no formal education. (fig.4 illustrates)

Academic attainment	Frequency	Percentage
Tertiary	12	15%
Secondary	28	35%
Primary	36	45%
No school	4	5%
Total	80	100%

Table 4

5.2.5. EMPLOYMENT OF RESPONDENTS

In order to assess the relationship between on the other hand unemployment and occupational status and on the other environmental degradation, the researcher saw the need to ask respondents about their occupational status. Distribution of responses revealed that 40% of the respondents are not gainfully employed, 20% are in the public sector, 12.5% work in nearby farms and 27% are in the either own account workers in the business sector or self employed as illustrated in fig 1 below.

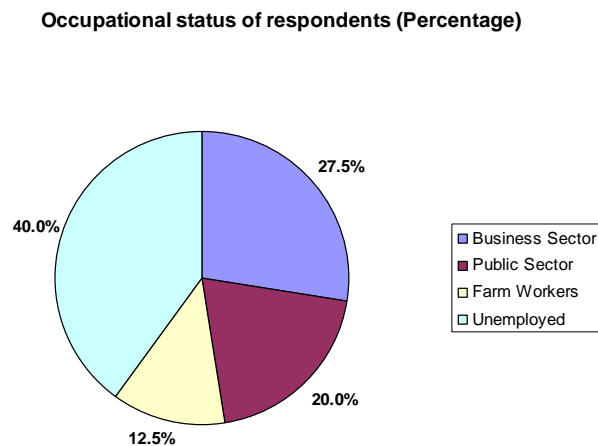


Figure 1

5.3. SECTION B

Poverty is one of the key variables in this study and is considered to have a bearing on the environmental activities of the rural communities under study. Thus questions were asked about the size of the household, number of dependents and breadwinners, activities that sustain families, sources of regular income, and available sources of fuel.

5.3.1. RESPONSES ON NUMBER OF PEOPLE IN HOUSEHOLDS

The number of people living in a household in the rural community under discussion is characterized by high number of dependents ranging from 5-10 people in the majority of cases. A total of 50 households were involved in the study and responses are shown in the table below. Table 5

No. Of people	Households	Percentage
1-2	3	6
3-4	9	18
5-7	18	36
8-10	20	40
Total	50	100

Table 5

5.3.2 ACTIVITIES TO SUSTAIN LIVELIHOOD.

Due to the high level of unemployment in the country especially in the rural areas, the researcher was keen to establish the kinds of activities most of the villagers in the area under study engage in as a way of sustaining their livelihoods. Responses given indicated that most villagers 60% (48) depend on subsistence farming, selling thatch grass and firewood 12% (18) and while 28% (22) mentioned “others”. A follow up on the “other response” showed that these activities are basically indicative of illegal dealings such as gambling, touting at taxi ranks, vending, drug dealing.

5.3.3 RESPONSES ON REGULAR SOURCES OF INCOME

In order to establish whether respondents are not heavily depending on activities that deplete the environment, the researcher sought to find out the regular sources of the participants' income. Support grants 40%, public sector constituted 28% and other informal activities accounted for 32% including self-employment to include vending, and firewood selling.fig.2

Responses on regular sources of income

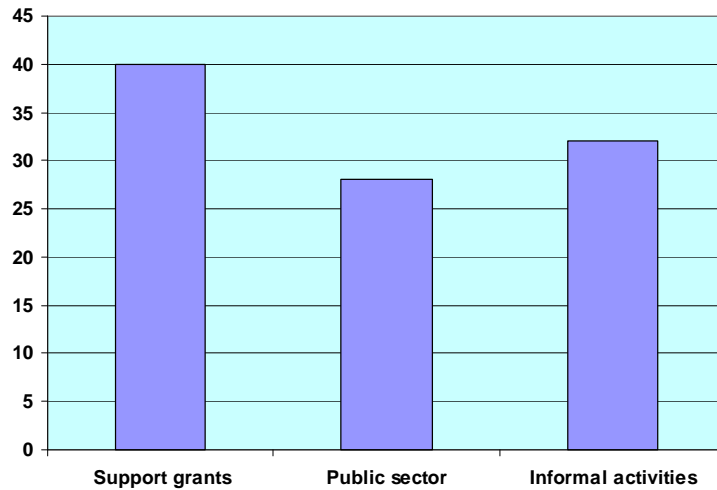


Figure 2

5.3.4 SOURCES OF FUEL

The majority of households in the area of study do not have electricity in their homes for the various domestic uses such as cooking and warming the family. Hence, the researcher asked the respondents a question in regard to explore the extent to which forests are cut down for fuel purposes in relation to alternative sources of fuel such as cattle dung, paraffin and electricity. The study indicated that 80% of the participant household still depends entirely on firewood for daily domestic uses. Cattle dung is not acknowledged as an alternative 0%, while electricity is used by 10% and 10% use paraffin not in a regular basis as illustrated in Table 6.

Power source	No. Of households	Frequency	Percentage
Electricity	08	Daily	10%
Firewood	64	Daily	80%
Cattle dung	–	–	–
Paraffin	08	Weekends only	10%
Gas	–	–	–
Solar	–	–	–
TOTAL	80		100%

Table 6

5.4. SECTION C

It would be limiting to view poverty as the single element likely to lead to deforestation, following this, the researcher realized the need to also find out whether out participants had adequate knowledge on environmental awareness as one of the factors that has an impact on the study.

5.4.1. IMPORTANCE OF CONSERVING FORESTS

The question demanded a Yes/No response and all participants gave responses to the question reflecting a 70% and 30% response respectively. This reveals the extent to which environmental awareness programmes have been conducted in the past few years in the area. Notably however, is that most of the “yes” responses were raised by participants who are within the 21-40 years while the “No” responses was largely from the 40 and above age groups. The latter scenario could be as a result of low educational attainment as indicated in the demographic details of most respondents above the age of 40 included in this study.

5.4.2. IMPLICATIONS OF INDISCRIMINATE TREE FELLING

The study is fundamentally an attempt to investigate the respondents’ attitude towards the environment specifically deforestation. The researcher asked this question in order to evaluate the participants’ perception towards the impact of deforestation. Responses indicated that people are aware of the implications. Views presented showed that windbreaks, erosion and shades issues raised by respondents are critical results of deforestation. Most of the “Yes responses given were elaborated by younger participants.

The level of education and consciousness could have had a critical influence in exposing the youth to the danger of indiscriminate cutting down of trees. Of the 80 respondents, 18 acknowledged not having received any orientation on dangers of cutting down trees.

5.4.3. ENVIRONMENTAL LEGISLATION

Responses on this question showed that the majority of participants are not aware of any legislation that prohibits the cutting and that protects trees. Responses were 62, 5% “No” and 37, 5 % “Yes”. As in the previous question, a majority of young people

(21-39) indicated a “Yes” response showing that they are conscious of environmental legislation associated with protection of forests and wildlife. The researcher would still attribute this awareness to the educational curriculum respondents have been exposed to recently in tertiary and secondary schools since such responses came largely from youth.

5.4.4 THE FREQUENCY OF TREE CUTTING PRACTICE

To assess the degree to which villagers cut down trees for various purposes, the researcher asked respondents a question on the frequency of these activities. Respondents were asked to indicate their answers with “very often”, “often”, “seldom”, “never” response. Participants indicated a “Very often” practiced 67%, often practised are 22, 5% and seldom practised is 10% and Table 7. Serves as an illustration.

Response	Frequency	Percentages
V.often	54	67,5%
Often	18	22,5%
Seldom	08	10%
Never	-	-
Total	80	100%

Table 7

5.4.5. MAJOR SUBSISTENCE ACTIVITY IN THE COMMUNITY

Notably in a complex relationship between poverty, environmental awareness and environmental degradation is the issue of subsistence. In order to establish whether poverty has a direct influence on environmental degradation, the researcher asked participants what their major subsistence activity is. Responses raised issues such as gardening, tree felling, woodcraft and sculpturing and subsistence farming. Of interest is the findings that 52% response was on “all of the above”. This indicates that the community largely depends on natural resources such as forests for survival in the face of the financial challenges they face. A follow up question was made on

the above response with regard to the length of time these activities have been going on. Both youth and matured, were agreeable that the survival activities have been practised for at least 10 years with 73, 5% responses. However young people said the practice is fairly new in their area. This response could have been prompted by their lack of knowledge on the history of their communities.

5.4.6. REASON FOR CUTTING DOWN TREES

The researcher views the issue of environmental degradation, especially deforestation, as caused by social and economic factors that characterize rural community life. Accordingly a question was asked to establish the real reasons for the indiscriminate cutting down of trees. Responses were medicinal usage, (5%), woodcraft, (20%) building shelter (15%) and firewood (an emphatic 60% response). Consequently, the absence of electricity paralleled by readily available cheap firewood for cooking and raising income is evidently a driving factor contributing to deforestation. The response to this question is illustrated in fig. 3 below.

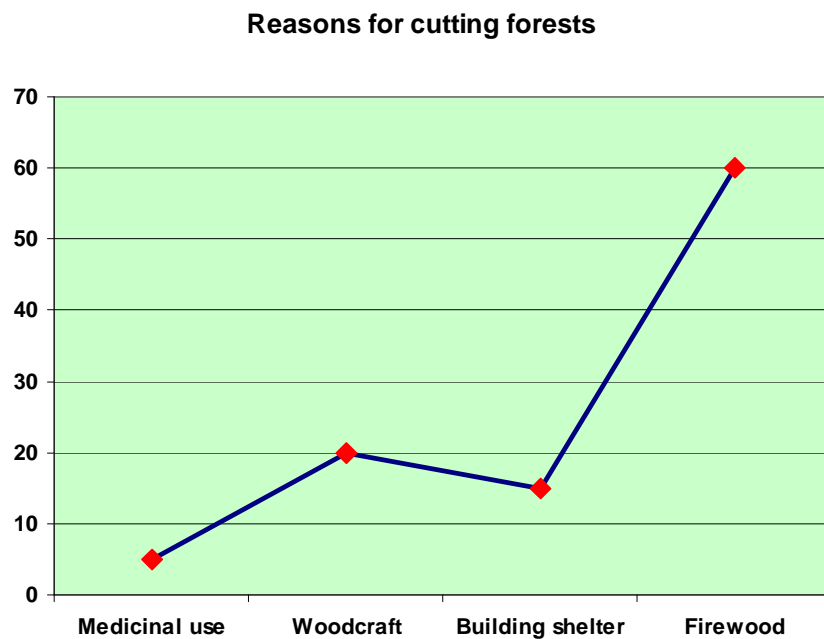


Figure 3

5.4.7. RECOMMENDATIONS/VIEWS FROM THE PARTICIPANTS

The researcher provided an open-ended question to elicit suggestions that participants felt would make a positive impact on the environment, more particularly with reference to the deforestation problem. Respondents gave divergent views that provide insight into the problem. These areas include participating in National tree

planting activities, the provision of affordable electricity in rural areas, using traditional leadership structures to communicate to the villagers on the dangers of depleting the forestry environment. Most of these views came from the younger respondents with a tertiary education.

CHAPTER SIX

6. FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1. INTRODUCTION

The chapter focuses on attempting to consolidate the information collected and the research findings on the relationship between poverty and environmental degradation through deforestation. The summaries of information collected will be categorised under (1) findings, (2) recommendations and (3) conclusions. In order to do this, the researcher includes the problem statement, research hypothesis and the objectives of the study in a way to confirm and possibly substantiate the outcomes of the research project.

6.2. FINDINGS

From the findings of the study, it is evident that deforestation is a serious environmental problem in Thogwaneng village of the Limpopo Province. These revelations are likely to be reflective of other rural areas scattered all over the Province and the environmental effects are alarming. The large numbers of family /household dependants (40% between 8-10), the high level of unemployment (40%), low literacy levels (45% primary, 5% no school) and heavy reliance on informal activities as a regular source of income do show the extent of poverty that characterizes the rural areas in the area. These conditions leave the rural communities vulnerable to entirely depending on natural resource. In essence, rural poverty contributes immensely to environmental degradation leading to depletion of forests, soils and water sources.

Findings of this study also indicate that people tend to rely on firewood basically for cooking and warming on a daily basis (80%) while other alternative sources of fuel account for only (20%) and are not used every day. This has led to the random and continuous cutting down of forests. Only 30% of the respondents said they were not sure of the value of forests for their household, while 70% said they knew. This could point to the fact that poverty is compelling them to act carelessly even though they understand that their practices are not environmentally friendly. Little is known about environmental and forestry legislation as indicated by the 65% "No" response. All the

reasons given for cutting down trees were denoting poverty patterns typical of people living in underdeveloped rural areas of the third world.

6.3. RECOMMENDATIONS

In view of the socio-economic functions of trees in rural communities, the researcher gathered divergent views and suggestions from participants. These were used in conjunction with a research literature review to help inform these recommendations. As indicated in the findings, poverty is a major burden affecting environmental developments as reflected in the destruction of key renewable resources such as forests.

Since the findings reveal that there is a low level of awareness of environmental regulation, forestry regulations, the National Environmental Management Act 107 of 1998 and the National Forests Act of 1998, the study therefore recommends that government through local structures in the Province, adopt an integrated development strategy for implementing the legal framework (referred to in chapter 3) in a manner that will constantly reduce the need for poor people to cut down trees in order to survive and in a manner that will simultaneously bring about a continuous process of wealth creation which will eradicate poverty. This integrated implementation strategy must involve rural communities, traditional authorities in the area and local municipalities updating and implementing environmental laws and regulations. This integrated approach to implementing environmental laws and regulations aimed at improving socio-economic life, must be closely linked to the integrated plans and planning process of the responsible local and district municipalities. This could be done by way of conducting environmental education workshops and training starting from areas where environmental degradation is the worst. All age groups should be involved in this exercise including the traditional leadership in the affected areas.

It is apparent that the disappearance of forests calls for urgent action. As a method of control, the government could also enforce the environmental and forestry regulation by taking strict measures to punish lawbreakers in order to protect the forests from depletion through regulators such as the Nature Conservation Act and

the national forest act. Heavy fine should be imposed to deter people from cutting down trees.

To complement government effort, a multi-sectoral approach should be adopted to increase public awareness on the importance of conserving and maintaining forests. This could comprise the active involvement of formal educational institution such as schools, universities, as well as government departments and the private sectors. This could be done effectively with the active involvement of the local communities themselves with the view that participatory education normally produces behavioral changes.

Notwithstanding the existing efforts being done by government in developing rural communities, the degree of poverty, according to this study, is impacting adversely on the conservation and maintenance of forests in the province and therefore poverty remediation practices must be put to place. These could include the intensification of the rural electrification programme, the creation of jobs for the majority of unemployment youth and people of active age groups even in the informal sector and also devising alternative means or sources of fuel and power to reduce over-dependence on firewood and commercial logging for livelihood.

6.4. CONCLUSION.

While concern about environmental degradation has caused great alarm over the whole world, for several decades now, not all cultures, social classes and nations fully uphold this view. The poor people especially those placed in the remote, undeveloped areas of the third world economies like South Africa, still heavily rely on natural resources to sustain their livelihoods. Their dependence on agricultural activities in these sub-Saharan climates causes their production to be susceptible to drought and inadequate harvests. This scenario, compounded with high levels of unemployment, low literacy levels, over-crowding, diseases and big numbers of household dependents complicate their survival ordeal. As such, the depletion of natural resources essential for their daily provisions lends them into over-dependence on forests for firewood, warming, edible plants, medicine and commercial logging among other activities. Conversely, the depletion of these natural resources, whether renewable or not, directly threatens the very existence of those who rely on them.

The failure to improve the conservation and maintenance practices on natural resources especially trees in the province is likely to accelerate the environmental degradation process in rural areas. This practice has far reaching effects on the environment and the future generations because deforestation facilitates weathering, erosion and dramatic increase in the destruction of ecological processes and system. The problem can only be solved by way of an integrated effort of government and non-government role players forming part of an integrated strategy to eradicate poverty and stimulate development simultaneously.

The key to effectively implement such an integrated strategy is the relevant environmental and developmental focused laws. The law enforcement process serves as the catalyst in bringing about change for the better that will solve the problems of environmental degradation linked with the urgent need for improving the quality of life, as well as level of socio-economic development in poverty stricken rural areas and communities.

Methods, such as environmental awareness programmes from a multi-disciplinary approach are necessary due to the fact that poverty is not the only major contributor towards environmental degradation but various other factors such as a lack of education, socio-cultural backgrounds, and different geographic/climatic settings should be considered in attempting to implement the recommended solutions to the problem. In view of the principles contained in South Africa's Constitution, the laws relating to environmental management and forestry, there is also a need for the political will and a demonstrated political commitment at all levels of engagement of the different role players, to pro-actively support the enforcement of forest protection and similar developmental focused laws in a manner that contributes to the integrated development process, especially the integrated rural development process.

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APPENDIX
RESEARCH QUESTIONNAIR

The research questionnaire is designed to solicit for information regarding the impact of indiscriminate rural activities on the environment with reference to Thogwaneng Village in Limpopo Province.

Kindly respond to the following questioning by ticking the appropriate response to you.

SECTION A
DEMOGRAPHIC DETAIL

1. Gender

- FEMALE
MALE

2. Age

- 16 – 20
21 – 29
30 – 39
40 – 55
56 +

3. Level of Education

- Primary
Secondary
Tertiary
Never Schooled

4. Are you employed?

- YES
NO

5. If Yes, in question 4, which category applies to you?

- Self employed
- Public Service
- Domestic Worker
- Business Sector

SECTION B

QUESTIONS ON POVERTY ISSUES

6. How many people live in the household? _____

7. Of these, how many are gainfully employed? _____

8. How many are not employed? _____

9. What sort of activities help to sustain your livelihood?

- Farming
- Selling of firewood
- Selling of agricultural products
- Selling of thatching grass

10. What are the regular sources of your household income?

- Salary
- Child support grant
- Old age pension fund
- Commission from selling firewood

11. What do you use for cooking?

- Electricity
- Firewood
- Cow dung
- Paraffin

SECTION C

QUESTIONS FOR ENVIRONMENTAL AWARENESS

12. Do you know the importance of conserving natural resources, especially forests?

- YES
- NO

13. Do you understand the implications of unselective cutting of trees?

YES

NO

14. If Yes, in question 13, what are the dangers of cutting the trees?

15. Do you know of any Environmental legislation/laws that regulate the use of natural resources such as forests?

YES

NO

16. Have you ever received any environmental lessons in your area?

YES

NO

17. How often do local people cut down trees for firewood?

Very often

Seldom often

Never

None of the above

18. What is the major subsistence activity in your locality?

Growing of vegetable gardens for selling

Farming

Selling of firewood

Selling of art work made from wood

All of the above

19. For what purpose do local people cut down trees?

For medicinal use

For art work use

For firewood

For building shelters/housing

All of the above

20. In view of the situation; what do you recommend as a solution to deforestation?

THANK YOU FOR YOUR CO-OPERATION IN THIS REGARD