REFUGEE SETTLEMENT AREAS AND ENVIRONMENTAL DEGRADATION IN MOGADISHU, SOMALIA

A Dissertation

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By

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DECLARATION

This research is my original work and has not been presented for a degree or any other academic award in any university or institution of higher learning.

06-06-2015

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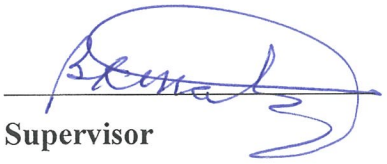
APPROVAL

"I confirm that the work reported in this dissertation was carried out by the candidate under my supervision".



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05th June 2015.

Date

DEDICATION

This work was dedicated in the memory of my lovely mother Mrs. Adar Ali Hussein and to all my uncles without whose moral and financial support that i would not be able to complete.

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TABLE OF CONTENTS

LIST OF TABLES

PLATES

ABSTRACT

The study was based on the analysis of environmental degradation in refugee settlement areas in Mogadishu, Somalia. The objectives of the study were; (i) establish the effectiveness of the strategies used by the local government in settlement of refugees in Mogadishu, Somalia, (ii) to determine the level of environmental degradation within and around refugee settlements and (iii) to analyze whether there is a relationship between refugee settlement and environmental degradation. The cross-sectional survey design was used to harmonize both quantitative and qualitative data in order to counter the possible biases of the two methods employed. Both simple random and purposive sampling techniques were used to select a sample in Slovene's formula for calculations of the sample sizes.

The findings of this study indicated that the policy of government want for environmental protection from refugees in camp areas practices are effective but it does not implemented well during routine internal refugee camp areas.

The study findings established serious negative impact of refugee settlement patterns on the natural environmental resources in IDP camps in Mogadishu. In addition, the study findings established that refugees in the camp sites were greatly exposed to challenges of diseases and hazardous substances which can affect their health.

It is recommended that the formation of joint refugee/ local management develop and enforce by-laws relating to environmental friendly in order to implementing acts on environment and can be an effective mechanism for reduction pollutants from point source, waste disposal, noise and spread waste hierarchy management, replanting and thus reduce, the conflict resolution and enforcement refugee impact on the environment. The local government is also recommended to improve on the hygienic environmental life style of the refugees in the settlements in the camps such as building sewage system, recycle bin which they are collaborating with other parts of the town. This is to prevent diseases such as cholera, typhoid, malaria, diarrhea, among others.

CHAPTER ONE: THE PROBLEM AND ITS SCOPE

1.0 Introduction

This chapter presents the background information in regard to historical, theoretical contextual and conceptual perspectives. Problem statement, objectives, research questions and significance of the study have also been stated in this chapter.

1.1 Background of the Study

1.1.1 Historical Perspective

The refugee phenomenon dates back to the biblical times in December 1949 when the UN General Assembly established UNHCR. Refugees can be settled in several possible ways, each associated with different environmental outcomes. One way is for refugees to self-settle (or spontaneously settle) amongst the local community, where they remain unregistered, often receiving unofficial assistance from local people in the form of loaned housing or food provisions, or sometimes loaned or rented land. Alternatively, refugees settle (either voluntarily or with the active encouragement of the host government and relief agencies) in various types of camps and organized settlements where they are registered and receive official assistance (Armstrong, 2008; Hubbi (2010).

On the global perspectives, refugee settlements often occur in environmentally sensitive areas. The natural environments, with all its ecosystem services, comprise the entire basis for life on the planet. Environmental degradation due to unsustainable human practices and activities now seriously endangers the entire production platform of the world (Macadam, 2008). Land degradation and conversion of cropland for non-food production including bio fuels, among others, are major threats that could reduce the available arable land. Weeds and insects, combined with water scarcity from overuse and the soil erosion and Greenland deforestation and depletion as well as climate change may increase in the absence of policy intervention (Danish Refugee Council, 2012). These factors entail only a portion of the environment covering direct effects. The indirect effects, including socio-economic responses, may be considerably larger given the presence of refugees' settlement in the area.

Evidences show that, in more than 50 countries around the world, about 26 million individuals are uprooted from their homes or from their own countries as a result of conflict or human rights violations (Macadam, 2008). In another note, emperical

evidences indicate that, the largest source of refugees come from countries like Afghanistan, Iraq, Sierra Leone, Myanmar, Somalia, the Palestinian Territories and South Sudan, Comparatively, the country with the largest number of victims such as IDPs is from South Sudan, with over 5 million persons.

In Africa, refugees have usually been settled in semi-arid, agriculturally marginal areas or (as in the case of the Rwandese in Zaire) near national parks or forest reserves. Refugee camps tend to be large for both logistical and political reasons. These large camps have a more negative impact on the environment than would be the case if several considerably smaller camps, catering for the same total numbers, were set up (Macadam, 2008).

The areas where the refugees have moved, they are confined to those specific settlement camps. These camps are overcrowded and lack access to other sources of livelihoods. High population density constituted by the local inhabitants, coupled with that of the refugees on the host communities reviles a gross demand for political, natural and environmental resources within the host communities. It should however be acknowledged that, as the natural factor endowment is different for each location, these refugees end up relying on the readily available resources. In situations where the resources are scarce, the resources tend to be over stretched due to the overwhelming population depending on them in the short, mid and long term as the refugees are still living in these camps. This situation mainly cause tension on the environment in terms of natural resources and the hosting communities' social service delivery as well. However, in the long run when they would have left, those in the host communities are left in helpless conditions as the resources that sustain their lives would have been exhausted (Ahmed, 2013).

1.1.2 Theoretical Perspective

This study was based on Neo-Malthusianism theory of environmental degradation proposed by Hardins, (1968). According to this theory, population increase causing famines into a model of individual selfishness at larger scales causing degradation of common pool resources such as the air, water, the oceans, or general environmental conditions. Environmental conflicts are social conflicts, are economic conflicts, are political and are cultural conflicts which all are related to the catalysts to the increasing number of refugees in communities. This means that since refugees increase the population density of the areas they are settled in thus creates pressure on the pool of

resources like air, water, etc, hence deteriorating the environment (Bromley, (1992). This occurs as refugees and the internally displaced persons including the local occupants seek for food, fodder, wood fuel, timber for consumption and raising shelter, and for animals respectively, in the due cause, some occur as a result of over population in slums, serious pollutants, clearing on Greenland, unpleasant noise grazing and over cultivation of the same piece of land without letting it rejuvenate. The herds of animals tend to strain the carrying capacity on the ranch, water sources and the like. In the long run, this cannot support sustainability. With increased utilization some of the resources become contaminated or polluted while others may get depleted (Black, 1997). Sanitation and garbage or other waste accumulations around refugee camps make their living surroundings unhealthy. (In addition, refugees are seen as exceptional resource degraders' as a consequence of their poverty, short time horizons, lack of local environmental knowledge and traumatized psychological status).

1.1.3 Conceptual Perspective

In the views of Macadam,(2008). The term refugees in its ordinary usage, has a broader and looser meaning. It signifies someone in flight who seeks to escape conditions or personal circumstances found to be intolerable. The reasons for such a flight may be several. One may flee from oppression, a threat to life or liberty, or prosecution. The flight may also result from deprivation, biting poverty, war or civil strife or from natural disasters such as earth quakes, flood, gales, drought or famine, among others.

In this study, refugees have been looked at as a group of most deprived people in terms of having resources to reduce vulnerability. They are mainly the product of destructive war and conflict which greatly undermine their adaptation capabilities. They often lack salable skills and no prior orientation and awareness of the need to care the environment on which they are hosting in. They are totally dependent of relief handouts of international community's which are not reliable and adequate to ensure self-sufficiency necessary for adaptation to climate change induced vulnerability. (UNHCR, report on Sustainable Environmental Management Practices in Refugee Affected Areas: 2010). This study analyses the magnitude level of environmental degradation in refugee settlement areas in Mogadishu, Somalia. Nevertheless, various definitions have been coined out in as far as who a refugee is, however, in the context

of this study; a refugee had been referred to as a person driven from his or her home to another state due to environmental conflicts, War, famine or generalized violence.

On the other hand, environmental degradation is a situation attributed to various human activities and some natural processes, with the later having an insignificant share in the same. Most of the resources on the planet are vulnerable to depletion, and the rates at which humans are exploiting them have already brought some of them to the brink of exhaustion. Human activities which have been contributing to this environmental issue include urbanization, overpopulation, illegal dumping deforestation, pollution, waste disposal and hunting among others. Environmental degradation is the deterioration of the Earth's natural surroundings as a result of excessive, exploitation of the available resources such as water, air, flora, fauna and soil, (Johnson, 1997).

This research is looking at environment degradation as human activities and the unchecked increase of refugees population and inability of local government and community structures to regulate and promote sustainable use of the natural resource which has resulted in unprecedented environmental degradation like lack of mechanism waste disposal system, inability to control and manage huge sums of used plastic bags (solid waste for non biodegradable items),serious noise pollution and contaminated water sources.

1.1.4 Contextual Perspective

Since early 1980's, Somalia, particularly, Mogadishu has been hosting a huge number of internal refugees from the varied sources within almost all direction of its borders. There is no sign that number is significantly decreasing in the near future as the root causes for refugee influx has not yet disappeared. As can be seen from the presentation of various impacts assessments made by Administration of Refugee and Returnee Affairs (ARRA) and its partners, operating with refugees in Somalia, all of the major problems that are commonly created by refugees elsewhere in the world are also conspicuously observable in Somalia. These cannot be tackled without developing workable adaptation strategy that commensurate to the extent of damages to the environment around internal refugee settlement areas in the country (ARRA report 2011).

The presence of large population of refugees in Mogadishu in the internal refugees settlements of Hodan, Yaagshid, Wadajir, Hiliwa and Shibis have invariably had adverse environmental impacts on these fragile ecological areas, The fighting over firewood, grass and grazing land and sub clans in Somalia had forced up to 8,000 refugees to flee from their shelters to district camps, Houses, tents and granaries belonging to refugees and villagers alike were set on fire during the fighting impacted serious environment degradation of negative magnitudes to the area trust land environment(UN, 2012). The environmental impacts of these internal refugees have had multiple cause effect on this environment that can lead to irreversible land degradation, polluting in body districts, dumping sites around camp areas and loss of biodiversity and economic value (social environment) of the environment in Mogadishu and is also rapidly spreading to the bordering districts (Hubbi, 2010).

Like this situation is even worse at present. Rapid Environmental Assessment (REA) made for five refugee camps including Hodan, Yaagshid, Hiliwaa, Shibis and Wadajir by Save the Environment Somalia (SES) in 2012 clearly showed that, the high population pressure as the result of net population increase of the town population side by side where refugee settlement camp areas in Mogadishu, Somali.

The spontaneous movement and displacement of large numbers of people has significant impacts on the natural and the environmental resources of the hosting communities. Among other problems the internal refugees face severe hunger, fatigue, humiliation and grief. In this respect, they are concerned with looking for the fulfillment of their basic needs using the available resources in the hosting communities. This creates imbalance between the carrying capacity and the population consuming these resources. Alongside these practices comes a related problem like deforestation Greenland, (plants), soil erosion, noise pollution, contamination of water sources, poor housing slums and clashes or fights and conflicts which are based on resources (Shabelle media, 2011). This is as a result of competition for natural resources such as fuel wood charcoal, building materials, fresh water and land shelter as a means of survival. Due to disorientation undergone by the internal refugees when they are expelled from their local lands, the internal refugees cannot be expected to put environmental concerns as their priorities at the expense of their current living conditions.

1.2 Statement of the Problem

After collapsed Somali Central Government in 1991 there had been long running, armed conflict that brought destruction of basic life of civilians and displaced in large numbers, and many people evacuated from their shelter into settlement camp areas in Mogadishu.

Approximately new arrivers of above 8,000 refugees to flee from their shelters to the district camps, Houses, tents and granaries belonging to refugees and villagers alike were set on fire during the fighting in urban areas (UN, 2012).

The compounding livelihoods crises resulting from the competition over scarce resources currently taking root is at the core of host-refugee tensions. Despite a consensus among humanitarian actors at the beginning of the emergency in Mogadishu that the host community needed to receive assistance in parallel with the internal refugee community, this has not happened on a large enough scale although these are internal refugees displaced from within Somalia as a country. Save the Environment Somalia (SES) in 2012 clearly showed that, the high population pressure as the result of net population increase of the town population side by side with presence of refugees for a long period of time now is becoming uncontrollable despite the continued assistance by humanitarian organizations. These areas are mainly characterized by the indicators of environmental degradation manifested from poor waste disposal, hips and hips of dumped plastic bags some of which are packed with human wastes as there are no enough sanitary facilities i.e. toilets. The situation is even worse at present especially in refugee camps like Hodan, Yaagshid, Hiliwaa, Shibis and Wadajir districts. Currently large population of refugees in Mogadishu settlements has invariably had adverse environmental impacts on these fragile urban areas and pollutant as well as degradation on environment and damaged it through unstructured waste disposal, dumping of plastic bags, water contamination by both animal and human wastes plus destruction of plants and trees that are rarely available. Given such circumstances as this, a researcher sought to conduct a study in this area concerning the refugees in the hosting communities and their impact on natural and environmental resources which can cause degradation on general environment in Mogadishu, Somalia.

1.3 The Purpose of the Study

- To explore the contribution of internal refugee settlements and the host communities environmental degradation in Mogadishu, Somalia.

1. 4 Objectives of the Study

1. To establish the effectiveness of the strategies used by the local government in settlement of refugees in Mogadishu, Somalia.
2. To determine the level of environmental degradation within and around refugee settlements.
3. To analyze whether there is a relationship between refugee settlement and environmental degradation.

1.5 Research Questions

1. What is the effectiveness of the strategies used by the local government in settlement of refugees in Mogadishu, Somalia?
2. What is the level of environmental degradation within and around refugee settlements?
3. Is there a relationship between refugee settlement and environmental degradation?

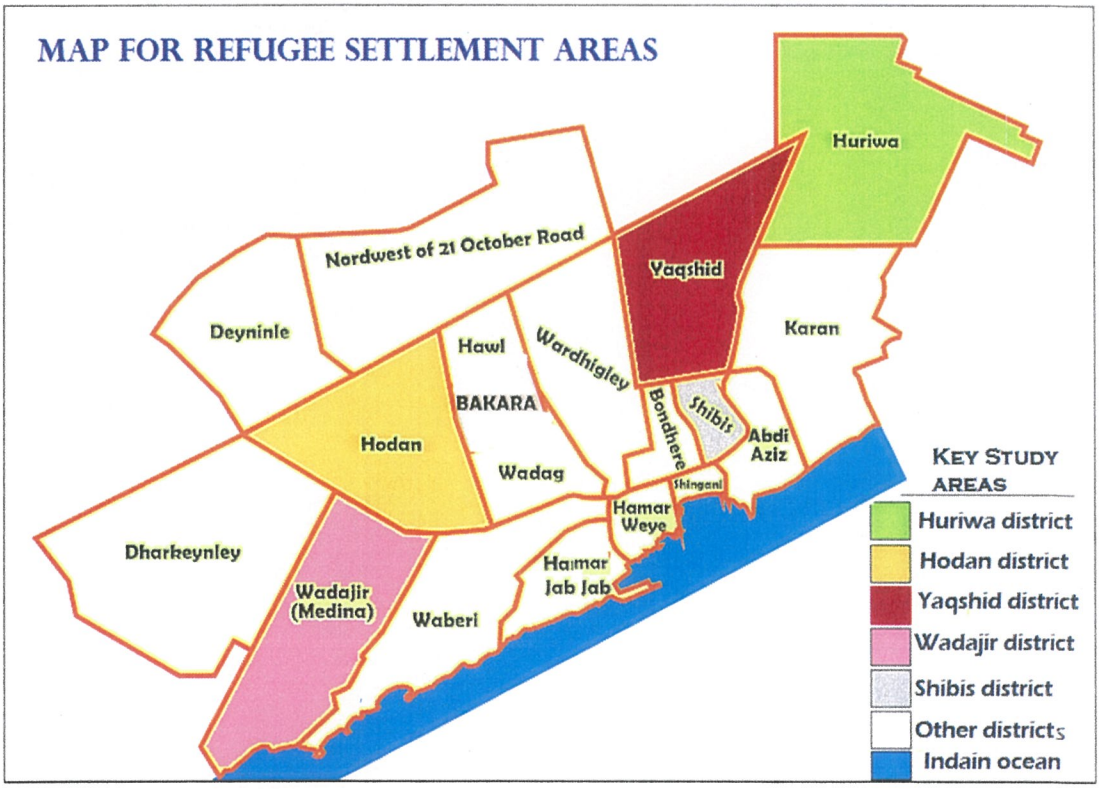
1.6 Research Hypotheses

- Ho: There is no significant relationship between refugee settlement areas and environmental degradation.
- H_1: There is significant relationship between refugee settlement areas and environmental degradation.

1.7 Scope of Study

1.7.1 Geographical scope

Mapping Area of study



The study was carried out in Mogadishu Somalia. It is the largest city in a greater Somalia and it is the nation's capital, located in the coastal Benedir region on the Indian Ocean, the city has served as an important port for centuries. The study was conducted in five refugee settlement districts namely Wadajir, Hodon, Yaaqshid,

Shibis and Hiliwaa. And the researcher deliberately included both densely and lightly populated districts of refugee camps in Banadir region of Mogadishu, Somalia.

1.7.2 Content Scope

The study examined the relationship between internal refugees' settlement areas and environmental degradation. Both functional and dysfunctional environmental management policies were examined, land use/slums, pollution water sources, clearing green plants and waste disposal as components environmental degradation, and it explained deeply the impact of refugee settlements on the environment and the methods used to control and protect the environment as components of refugee settlement areas in Mogadishu, Somalia.

1.7.3 Theoretical Scope

This study was based on neo-Malthusianism theory of environmental degradation proposed by Hardins, (1968). According to this theory, population increases causing famines into a model of individual selfishness at larger scales causing degradation of common pool resources such as the air, water, the oceans, or general environmental conditions so this means that since refugee increase a number of population density of the areas that they settled in thus creates pressure on the area they have settled and hence deteriorating general environment day after day (Bromely,(1992).

1.7.4 Time Scope

Displaced persons have been reported to come to Mogadishu evacuating their homes sake for security, famine and lack of shelters. This period is preferred or selected because of the adverse spillover effects of the wars and generalized violence from and within the surrounding districts of Mogadishu where by many internal refugees were encamped for safety of their lives due to the increased level of violence and insurgencies. The study was conducted between, July, 2013 up to November 2014.

1.8 Significance of the Study

This study will help to disseminate and harmonies (environmentally friendly) best environmental practices among donor communities and partner organizations.

The study will also provide environment officers and stakeholders with an understanding of the usefulness of integrated environmental intervention of internal refugee and relief agencies will get more information that is aim to prevent, mitigate and rehabilitate negative refugee related impacts on the environment.

The study will provide a basis for best practices needed to be promoted and applied at all level, particularly in project planning, implementation, management and monitoring and rehabilitation of internal refugees and IDPs. And also this study will deeply give the government officials information to identify the effects of refugee settlements on the general environment.

Refuge and IDPs host governments will be in a position where they will be able to identify the effects of refugee settlements on the environment so that they could lay immediate intervention for the benefit of both variables i.e. refugees and the environment.

Finally the study will be useful for academicians and future students as reference point.

1.9 Operational Definitions of Key Terms

- **Environment**; the surroundings, circumstances or conditions in which a person, animal or plant lives or operates and affect.
- **Environmental degradation** is the deterioration of the Earth's natural surroundings as a result of excessive exploitation of the available resources such as water, air, and flora, and fauna, soil extra (Johnson, 1997). Also Environmental degradation is the deterioration of the environment through depletion/reduction of resources such as air, water and soil the destruction of ecosystems or can we say Lowered productivity of a natural resource (land, forests, aquifers.by reference to a selected benchmark.
- **Refugee Settlements** A temporary settlement built to receive and accommodate asylum seekers.
- **Refugee** A person who is driven from to his/her home of origin or habitual residence to another state or region Because they have suffered famine, war, persecution and other generalized violence on account of race, religion, nationality, Political opinion, or because they are a member of persecuted social group or because they are fleeing a war or natural disaster.

- **Internal Refugee(s):** A person in flight/transit to seek escape from unbearable conditions of violence such as war from their homes to another place considered to be secured and peaceful.

CHAPTER TWO: LITTERATUE REVIEW

2.0 Introduction

This chapter reviews the various related literature written by those who had earlier provided substantive information concerning environmental protection from unsustainable use of natural resources. The work cited key themes such as establishment of the causes and impacts of refugee settlement patterns on the natural and the environmental resources of the host communities, ascertaining possible ways for proper management of natural and environmental resource resulting from continuous refugee settlement.

2.1 Theoretical Review

The study is basically rooted in the Neo-Malthusianism theory of environmental degradation proposed by Hardins, (1968) which states that, population increases causing famines into a model of individual selfishness at larger scales causing degradation of common pool resources such as the air, water, the oceans, or general environmental conditions.

Additionally, Gunvor J, (2010). Asserts that typically, environmental change in poor countries has been linked to population pressure on resources and unsustainable exploitation of the land beyond its carrying capacity and with conflicts like civil wars, consequently leads to migration where migrants are referred to as refugees in this study. The problem with this push-pull argument and the neo-Malthusian approach is that it assumes that the societies where refugees originate have no external influences or income sources, but are self-governing and completely agrarian; it also assumes that these societies are technologically constant, unable to circumvent or adapt to environmental constraints. Moreover, it disregards the fact that environmental change is only one of the factors determining whether or not people should stay or seek refugee; and it ignores that migration is just one of the possible responses to environmental change.

Malthus' principal hypothesis was that lack of equilibrium in the relationship between population and natural resources is followed by some kind of negative response from either side. Hence, crises including famine are responses resulting from a lack of balance between resources and population, so-called 'population pressure (Ezra 2001).

Neo-Malthusianism applies these notions to environmental sustainability, linking environmental degradation to population pressure. One of the key problems with neo-Malthusian theory is that it posits the environment as a finite source that sets absolute limits for human action and therefore, famine and starvation are "natural" and inevitable Robbins,(2004). This deterministic approach and particularly, the notion of population pressure on resources ignore the significance of socio-economic change and technological input, such as new crop introduction (Blaikie and Brookfield 1991). Even in extremely poor countries, refugees and the receipt of food aid relax the constraints imposed by a country's carrying capacity (Neumayer 2006). Moreover, as Blaikie and Brookfield (1991) argue, it should not be assumed that population pressure leads inevitably to land degradation.

According to Johnson *D. et al,* (1997) environment is everything that makes up human surroundings and affects man's ability to live on the earth. That is the air we breathe, the water that covers most of the earth's surface, the plants and animals. In recent years, scientists have been carefully examining the ways that people affect the environment and found that man is causing air pollution, noise pollution, deforestation, acid rain, and other problems that are dangerous both to the earth and its contents. According to Merriam Webster College Dictionary (1993) environment refers to the surroundings or conditions in which a person, animal or plant lives or operates. It is often referred to as the overall condition of the planet, or how healthy it is.

The UNHCR, (2002) indicates that environmental problems exist throughout the world, but many reach an exaggerated scale where large numbers of people are forced together through a common sense of survival. Among the most significant problems associated with refugee-affected areas are deforestation, soil erosion, and depletion, waste disposal, illegal dumping sites and pollution of water resources. Other considerations which must be taken into account include changes in the social and economic welfare of local communities following the arrival, or during prolonged residency, of refugees. These too impact the environment, altering the rate and extent of local services available to people today and in the future. UNHCR is aware of the potential environmental impact of refugees. Competition for natural resources such as fuel wood, building materials, fresh water, polluting, waste disposal and wild foods is an immediate concern. Environmental degradation or conflicts between refugees and resident populations may, if not addressed, undermine the effectiveness of UNHCR's

programs and, equally important, influence the future decision of governments to offer asylum to refugees.

The UNHCR, environmental impact assessment report, (2003) indicated that the sudden arrival of large numbers of people in a small area can place significant pressure on the local environment. Refugees and internally displaced people, (IDP) often have no choice but to rely on natural resources for their survival, particularly during an emergency. Trees may be cut to build or support simple shelters, wood may be collected to cook meals or to keep warm, waste may be dumping in illegal sites, polluting may be careless and wild game, fruit, herbs and other plants might be gathered as a source of food or medicine. Unless controlled, these and related activities can quickly get out of hand and have a negative impact on the environment as well as the displaced and host populations. Camps for displaced people are never meant to be permanent, though many countries have hosted refugees or IDPs in the same place for several decades. Strategies and actions need to be implemented that address key environmental issues, prevent environmental degradation from taking place and help avoid conflicts arising over competition for natural resources.

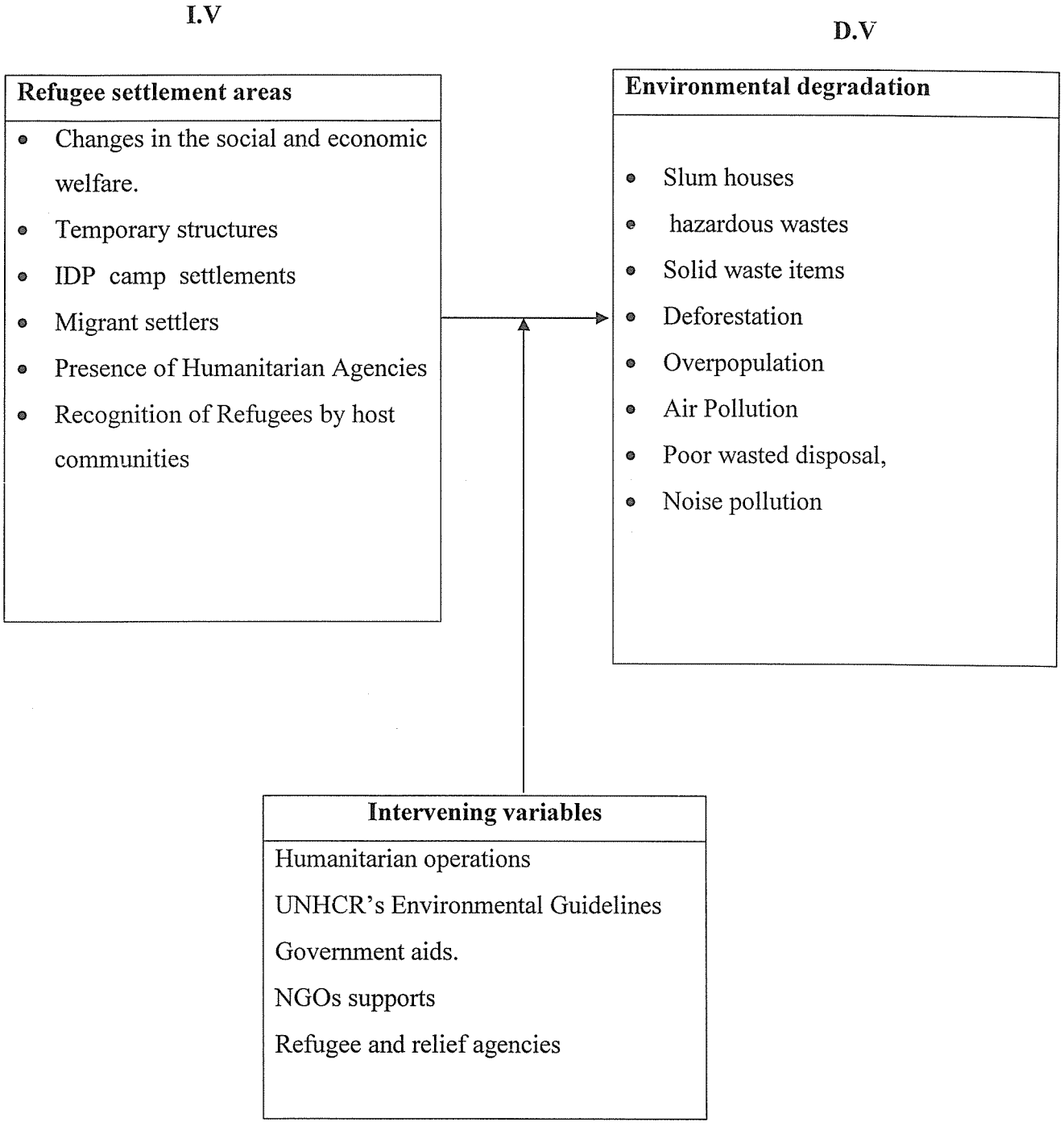
UNHCR (2003) recognizes the potential damage that camps and settlements can have on the environment, as well as on the local economy and relations with host communities. To this end, the refugees or IDPs agency has developed an overarching policy to deal with environmental issues. Equally important, UNHCR develops and supports a range of field projects that help reduce or overcome some of the damage caused by humanitarian operations. UNHCR also responds to new, emerging threats such as climate change

In general, only a minority of the refugees entering a host country during a mass influx end up in organized settlements; the majority become self settled. Such cases can be found amongst the Eritrean and Refugees in the Eastern region of Sudan during the 1980's. Somali refugees at the Dadaab camp during the early 1990s, and in Western Tanzania in the mid 1970s, self-settled refugees in the border regions moved into the settlement at Kakuma in order to avoid the forced "villagilization" program of the Tanzanian government (Dejongh, 1994). Where these refugees are settled in camps, the camp commandants and the government officials should ensure the welfare of these refugees are taken care of so that they do not solely depend on the natural and environmental resources. Alongside this, the needs of the host communities also

depend on the same resources to be addressed adequately. All these are to be done in good time in order to avoid environmental degradation.

2.2 Conceptual Framework

Figure 1: Conceptual framework



Source: Adopted from environmental Degradation model (Ahmed, 2012)

The conceptual framework figure expresses the inter-linkages between the presence of refugee in Mogadishu and the environmental degradation in the area of settlement,

with reference to Refugees settlement camps. Although there exists the Mogadishu environmental protection programs that involves carrying out massive sensitization on environmental sustainability, equitable resource allocation between the hosting communities and migrants or refugees to avoid tensions, peace building to ensure harmony, strengthening of democratic institutions to foster respect for human rights and adherence to rule of law in Somalia, resettlement of refugees to reduce population pressure on Mogadishu meager resources, developing and improving on infrastructures to raise inhabitants' standards of living and introducing alternative sources of livelihoods e.g. biogas, solar, spacious tents etc as this would reduce on the rate of deforestation to fetch firewood, polluting, minimizing waste disposal on living areas and some charcoal burning mentioned to brought in capital but a few; a lot need to be done to ensure that these efforts have been not in vain.

2.3 Related Studies

Refugees

The Merriam Webster College Dictionary (1993) defines a refugee as a person who is outside his/her country or home of origin or habitual residence or stay another state or region because they have suffered famine, war and persecution on account of race, religion, nationality, political opinion, generalized violence on his/her environment or because they are a member of persecuted social group or because they are fleeing a war or natural disaster.

There are estimated numbers that are close to 18 million refugees and 22 million internally displaced people around the world and almost all are found in developing countries. They are settled in host countries or host communities applying different patterns of settlement. The types of settlement of refugees include self-settlement, agricultural settlement and camp settlement, and these are usually determined by the preference of the host communities and governments. Although the extent of impacts vary depending on the type of refugee settlement, their relation to the environment and other resources of the host countries, refugee settlement are generally considered to be adverse. As a result, refugees are often tending to be labeled as 'exceptional resource degraders' (Jacobsen, 1994 & Myers, 1993).

Somalia large-scale population movements for refugee self-settled can adversely affect the environment of host countries. This creates an enormous challenge for agencies

working with refugees, who need to ensure the continued willingness of host governments to provide asylum, while at the same time safeguarding the welfare of the refugees themselves (Ahmed, 2012).

In an effort to bring greater benefits to refugees, harmonize relations with local communities and host governments and guarantee asylum, it becomes important to implement strategies which sustain the local environment and natural resources for current populations and future generations. Refugee and relief agencies aim increasingly to prevent, mitigate and rehabilitate negative refugee related impacts on the environment. Such a commitment requires the integration, to the greatest extent possible, of sound environmental management practices into all phases of refugee operations (Sakran, 1994).

Environmental problems occurring in the emergency phase continue into other phases of refugee assistance and typically become more costly to address. Action taken during the emergency phase is the key to pre-empting environmental problems and putting in place measures to avoid or reduce them. In line with UNHCR's Environmental Guidelines (1996), one of the principal themes of which is to encourage preventative measures, emphasis should be placed on introducing environmental considerations at the emergency response stage of any refugee operation. Problems, costs and conflicts related to environmental degradation are likely to be significantly reduced as a result of such an approach. This realization reinforces the need for budgetary allocations at the contingency planning and emergency stage for environment protection measures world (Macadam, 2008).

Refugee Settlements

These are Temporary buildings and camps established to accommodate asylum seekers as defined by Skran,(1995). The earliest settlements in Africa were for approximately 140,000 Rwandese who fled to Burundi, Tanzania, Uganda, and Zaire and who had little prospect of returning home. The first settlement was Bibwe in Kivu, Zaire opened in October 1961. By 1966 there were 24 Rwandese settlements--nine in Zaire, four in Burundi, three in Tanzania, and eight in Uganda--of which seven were abandoned and seventeen achieved self-sufficiency and are still in existence.

The ideal view of a refugee settlement, particularly from UNHCR's point of view, consists of two main phases, (a) the land settlement phase to assist refugees settle on the land and become self-supporting, and, (b) the consolidation and integration phase

to complete development of settlement infrastructure, promote a sense of community, and to integrate the settlement into the larger social, political and economic life of the host country world (Macadam, 2008).

In the land settlement stage a site is selected and prepared, refugees move in and work on their own individual sites and the settlement infrastructure, seeds and tools are provided, as well as food rations until the refugees achieve food self-sufficiency. The expectation is that rations will be needed for 2 to 5 years, but some refugee settlements never end their need for food aid. The land settlement phase is more than just land, seeds and a hoe. It is the creating of a new rural agricultural community and involves issues of community development, relations with neighbors, levels of service and assistance, problems of administration, legal rights, and self-help (Gasarasi, 1990). The consolidation part of the second phase is largely internal and refers to achieving settlement self-reliance and a sense of community. The integration aspect is largely external and involves the settlements relationship to the local population, markets and towns, and to various levels of government from local to national.

According to Coat (1978), no settlement really stands alone. It must depend on local government for many of its services and for upkeep of its infrastructure. To thrive it must also be part of the larger local economy through participation in markets, providing goods and services, and paying taxes and fees.

Integration is directly related to achieving a durable solution. UNHCR seeks to phase out international assistance to refugee settlements and to handover responsibility to the host government. In an ideal case, integration will include citizenship for the refugees are aliens, they are 'guests,' they are not voting citizens, and they have little or no political leverage Coat, (1978).

2.4 Effective Local Integration of Refugee Settlements

Refugees Settlement

Rhetorically, integration has always been a guiding principle of refugee programmers in Adjumani District. According to the 1951 UN Refugee Convention, restoring refugees to dignity and ensuring the provision of human rights include an approach that would lead to their integration in the host society (Article 34 of the 1951 Convention Relating to the Status of Refugees). Indeed the Convention uses the word,

'assimilation,' which implies the disappearance of differences between refugees and their hosts as well as permanence within the host society (ARARA, 2010) Recent thinking, however, emphasizes both the importance of maintaining individual identity and the possibility of "promoting self-reliance pending voluntary return,"(Crisp, 2003) whereby local integration could be temporary.

The possibility of integration of refugees and their hosts is a question of concern for the international community and host governments, especially in the context of protracted refugee situations. While the impact of refugees on host populations has been explored at a theoretical level, (ARARA, report, 2010).

ARARA outlines a simple definition of integration that is useful to employ as a guide for the purposes of this discussion: "a situation in which host and refugee communities are able to co-exist, sharing the same resources both economic and social with no greater mutual conflict than that which exists within the host community." Tom Kuhlman makes this definition more explicit in outlining indices that can be used to gauge refugee integration to a host community. Among others, he identifies the following characteristics of successful integration:

- The socio-cultural change they undergo permits them to maintain an identity of their own and to adjust psychologically to their new situation,
- Friction between host populations and refugees is not worse than within the host population itself and
- Refugees do not encounter more discrimination than exists between groups previously settled within the host society.

2.5 Related Studies

Environmental Issues in Refugee Settlements

According to Blaikie, and Brookfield, (1991), ample evidence exists to demonstrate that large-scale dislocation of people, characteristic of many recent refugee crises, creates adverse environmental impacts. The scale and suddenness of refugee flows can rapidly change a situation of relative abundance of natural resources to one of acute scarcity. Where the hosting environment is already under stress, as it is for instance in many arid regions of Africa and Asia, an influx of refugees can seriously threaten the integrity of local ecosystems, the economic activities dependent on them, and the welfare of local communities. Although deforestation tends to be the most apparent

negative environmental feature of refugee situations, other visible impacts may include soil erosion, loss of wildlife and non-timber products, and loss of biodiversity. Indoor and outdoor air pollution caused by the concentrated use of biomass fuels, depletion or contamination of aquifers, waste disposal illegal sites and an altered pattern of transmission of certain diseases tend to be less obvious impacts, but can nonetheless be a serious threat to refugee health.

Neumayer, (2006) submits that host governments and humanitarian organizations are responsible for assuring the welfare and security of asylum- seekers. The condition of the environment where those asylum-seekers are settled becomes a key factor in enabling them to fulfill this mandate. One reason for this is the range of direct linkages that exist between refugees IDP sustenance and various products derived from the local environment. Refugees may depend on firewood and building poles from nearby woodlands, water from local aquifers or rivers, or crops grown on nearby farmland. In this way they rely on products derived from the surrounding environment for their day-to-day existence. There are also a variety of indirect linkages between refugee well-being and the state of the local environment. If firewood becomes scarce, for example, refugees or IDP may turn to green wood that gives off harmful smoke and leads to acute respiratory infections. When water sources are over-used, refugees may turn to contaminated alternatives. Environmental concerns are therefore an integral part of overall humanitarian assistance, and are consequently relevant to all agencies with a mandate to ensure the well-being of refugees and asylum-seekers. The situation in Somalia has evolved dramatically since 80s, 2011 and this has had an impact on Kenya, which hosts large numbers of Somali refugees. Current hopes for stability to take root in Somali have led to certain expectations of voluntary repatriation of Somali refugees.

Land is a primary environmental resource that provides space and supports all biodiversity upon it Land degradation renders this important resources economically valueless and unproductive limiting landscape for economic production proportionally lowers its ability to support that economic activity. For instance Dadaab, Jarajilla and Liboi division covers an area of 7074kms and 1783km respectively combined form approximate 1/3 of the district trust land available to support the local pastoral economy. The best dry land season grazing land referred to as RAMAGUDA falls in the heart of these three (3) divisions and because of its significance to the pastoral community the range land development project drilled boreholes and divided the area

into grazing blocks. The impact of the refugees on these resources has vehemently reduced the land space previously available to the local community to support livelihood. Each refugee camp occupies 4km2 of land devoid of vegetation as a result of using earth moving machines to pave way for refugee settlement. Former Liboi camp was occupying 2km2 which is bare land with gaping pit latrines and silted communal water pans, hubbi, (2010).

Environmental Degradation

This is a term used to describe a situation in which a part of the natural environment is damaged. It can be used to refer to damage to the land, to water, living areas or the air. Environmental degradation can also mean a loss of biodiversity and a loss of natural resources in an area. Environmental degradation is not a new thing, it has been happening all over the world for centuries. The problem is that it is now occurring at a much faster rate, therefore not leaving enough time for the environment to recover and regenerate. The greater demands placed on the environment by an ever increasing human population is putting a great strain and drain on the earth's limited natural resources. Environmental degradation is a serious threat to the lives of people, animals and plants, making it imperative that we stop further degradation from occurring.

Project plants trees (Aforestations)

Figure on World environmental day

The Canopy Project. Rather than focusing on large scale forestry, The Canopy Project plants trees that help communities - especially the world's impoverished communities to sustain themselves and their local economies. Trees reverse the impacts of land degradation and provide food, energy and income, helping communities to achieve long-term economic and environmental sustainability. Trees also filter the air and help stave off the effects of climate change.

With the reality of increasingly unpredictable weather patterns and more frequent and violent storms and floods, tree cover to prevent devastating soil erosion that has never been more important. That's why, in 2012, Earth Day Network made a commitment with the Global Poverty Project to plant 10 million trees over the next five years in impoverished areas of the world. For example ARRA report (2003) currently harvesting of live trees for fuel wood is 10KM away from the camps. While harvesting of live building material is 40km away from the camps.

The actual land area surrounding the refugee camps that has been rendered valueless and unavailable for the utilization by the local pastoralists is 50KM2 and is soon spreading to 100KM2. Before the settlement of the refugees in Dadaab area the natural

vegetation was relatively dense comprising of trees, shrubs and grasses that sustainably the pastoral economy.

Slum Houses

The situation of a slum is a house or a neighbourhood that is in poor condition and that is generally considered unsafe and not nice to live or be in. Also slum areas mostly are dangerous and dirty part of town is an example of as overpopulation.

A building that is falling down which can cause poor ventilation and in disrepair is an example of a slum house

Solid Waste Items

A community participation in solid waste management including whether community participation could be the missing link to environment degrade and promote environmental sound, the role of community participation in solid waste to reduction waste disposal, air pollution. Also social capital and participation in solid waste management, the role of the community in solid waste management, the challenge of involving the community in solid waste management (ARRA report2010).

Hazardous Wastes

Worldwide, The United Nations Environmental Programme (UNEP) estimated that more than 400 million tons of hazardous wastes are produced universally each year,

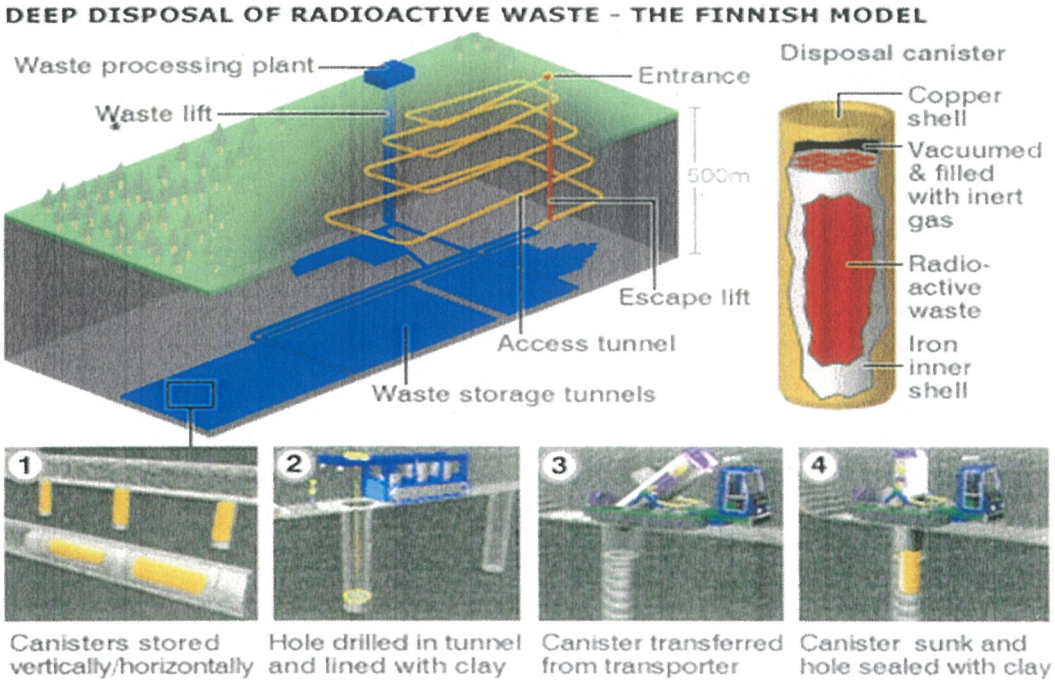
mostly by industrialized countries (Schmitt, 1999). About 1- percent of this total is shipped across international boundaries, with the majority of the transfers occurring between countries in the Organization for the Economic Cooperation and Development (OECD) (Krueger, 1999). Some of the reasons for industrialized countries to ship the hazardous waste to industrializing countries for disposal are the rising cost of disposing hazardous waste in the home country.

Air Pollution

This is accumulation in the atmosphere of substances that in sufficient concentrations endanger human health or produce other measured effects on living matter and other materials. Among the major source of pollution are powers and heat generation.

The burning of solid waste, industrials processes and especially transportation.

The six types of pollutants are: carbondioxide, hydrocarbon, nitrogen oxides, particulates, sulphur dioxide photo chemical oxidants and radioactive substances which include radiation substances.



Justification of the Study

There is contextual gap, because there is no such like this study examining effects of refugees settlements on environmental degradation conducted in Mogadishu Somalia. So, this study is filling this gap.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter covered sections and tools that are very crucial and important to use and include as; research design, research population or target population, sample size and sampling procedure and strategies , research instruments, data gathering, data analyses, ethical consideration and limitation of study so that The above mentioned tools were utilized properly by the researcher because if the researcher has no any tools and mechanism to use, it is hard for him to find the desired facts and data required as much. The tools facilitate to the researcher the meaning and the path follow of the study. It enables identify and scrutinize the roots of the problem that the researcher fixed and find a suitable solution.

3.1 Research Design

A descriptive survey, ex-post fact and co-relational designs were used in the study. It involves co-relational design in order to analyze strengths and weakness of the variables, to observe status for IDP camp areas under the study and to describe the relationship between environmental degradation and refugee settlement areas in Mogadishu, Somalia.

3.2 Research Population

The study was carried out in refugee settlement area in Mogadishu. Somalia Research Population was 135 as a target population from Refugee settlement areas of leaders of camps in Mogadishu, Somalia Local government in Benadir region and UNHCR Officers at Mogadishu office.

3.3 Sample Size

Sample size of the study was 101 of which was selected by using Slovene's formula from target population of 135 and were categorized into three categories. The Sloven's formula (1978) is used to determine the minimum sample size. $\mathbf{n} = \frac{N}{1+N(e)2}$

Where: n= sample size

N= target population

e = level of significance/marginal error (0.05)

Table. 0. 1. Respondents of the Study

CATEGORIES OF EXPECTED RESPONDENTS	POPULATION	SAMPLE SIZE
ADMINISTRATION OF BENEDIR REGION IN MOGADISHU	50	37
UNHCR OFFICERS	30	23
LEADERS OF IDP CAM AREAS	55	41
Total	**135**	**101**

$\frac{n'}{N*n}$ Was used to calculate category size from main population.

Source: Researcher Observations. According to the table 0.1 the target population of this study was 135, while the sample picked from it was 101 respondents.

3.4 Sample Procedure and Strategy

The researcher used both purposive sampling and simple random sampling.

The purposive sampling was utilized to select respondents from the administration of Benadir region officers and IDP camps in Mogadishu because it was expected that these people had the needed information. Simple random sampling was used in selecting respondents from UNHCR officers. In this method, all respondents have equal chance to participate the study.

3.5 Research Instruments

In order to meet the objectives of this study, primary data sources were used. These primary data were obtained through questionnaires and observations.

The researcher used questionnaire to collect data from the respondents. The researcher together with his research assistants distributed questionnaires to the sample of respondents. The response modes and scoring system were based on Likert Scales four points of strongly agree (4), agree (3), disagree (2), and strongly disagree (1). Observation method was also used as the researcher could clearly see/observe the

status of the environment from the surrounding environment considering hygienic conditions like garbage collection and other waste disposal mechanisms.

3.5. Data Gathering Procedure

Before the Administration of the Questionnaire

The researcher first secured an introductory letter from the School of Postgraduate Research and Evaluation that he used as evidence for him to be allowed to conduct the study in the IDP camps and thereafter he went to leaders, officials to prepare the proposal that guided them in the process of gathering data. Then the researcher went leaders to secure permission from the KIU main campus administration and government officials to carry out the study and also access the study sites.

During the Administration of the Questionnaire

The respondents were required to answer completely and not to leave any part of the questionnaires unanswered.

After the Administration of the Questionnaire

The data a gathered, collected, and coded into the computer and statistically treated using SPSS.

3.6. Data Analysis

After data had been collected from the field, it were analyzed both qualitatively and quantitatively in order to describe the results properly in a near way. Data was analyzed using the SPSS software. Analysis involved generating descriptive statistics showing frequency distributions and percentages used to analyze the demographic characteristics of the respondents. Mean and standard deviation was used to analyze the strengths and weaknesses of the variables under the study. Pearson Correlation Coefficient method was used to test the hypothesis so as to establish the relationship between the variables. This enabled the researcher to determine the relationship that existed between refugee settlement areas and environmental degradation in Mogadishu, Somalia.

In order to interpret the data collected from the respondents the following mean ranges were used.

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	High
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly Disagree	Low

3.7. Ethical Consideration

To ensure that ethics is practiced in this study as well as confidentiality for the respondents and the data provided by them, the following were done:

- The researcher had to first obtain a letter of authority from the local authorities.
- Then the process of data collection involved; coding of all questionnaires,
- The respondents were requested to sign the informed consent, Authors mentioned in this study were acknowledged within the text, and
- Findings were presented in a generalized manner.

3.8. Limitations of the Study

In this study a major obstacle faced by the researcher was that some of the respondents were suspicious to share information. It therefore took time to convince about the purpose of the study. Also during the observation of the field under study some of the residential camp areas also were feeling suspicious.

Testing: the use of research assistants rendered inconsistencies such as differences in conditions and time when the data were obtained from respondents. This was minimized by orienting and briefing the research assistants on the data gathering procedure.

Instrumentation: the research tools were non-standardized. In order to overcome this, validity and reliability test and retest were done to arrive at a reasonable measuring tool.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The researcher presents an analysis and interpretation of the data. This was done to provide answers to the research questions and interpretation of each of these findings in light of the research objectives. Tables, percentages frequencies and other statistical tools were used to help the analysis of the findings.

4.1 Demographic Characteristics of Respondents

The researcher intended to measure the rationality of this research and tempted to find the respondents biographic data. This was based on assessing the material provided by the respondents based on their gender, qualification and experience. Respondents were asked to provide information regarding their sex, age, education level, and experience. Their responses were summarized in the Table 4.1.

Table 4. 1: Demographic Characteristics of Respondents

Category	**Frequency**	**Percentage**
Gender		
Male	54	53.5
Female	47	46.5
Total	**101**	**100**
Age		
Bellow (18)	-	-
(18-30)	37	36.6
(30-45)	43	42.6
(45^{+})	21	20.8
Total	**101**	**100**
Education level		
Primary	27	26.7
Secondary	14	13.9
Diploma	37	36.6

Category	Frequency	Percentage
Degree	12	11.9
Post graduate	11	10.9
Total	**101**	**100**
Working experience		
1-5 Years	28	27.7
6-10 Years	39	38.6
10-15 Years	18	17.8
15 & above Years	16	15.8
Total	**101**	**100.00**

Source: Primary Data(2014)

The study findings indicate that majority 53.5% of the participants were male and only 46.5% were female respectively. As indicated in this analysis mostly administrative positions in Somalia are male dominated, women have fewer roles than men.

It was observed in the study that 42.6% a representation of (43) respondents were aged (30-45) followed by 36.6% a representation of (37) aged (18-30) aged and 20.8% representing 21 respondents (45+) aged. Since the highest age group range of the respondents was (30-45, this shows that mature people having information related to their environment have participated in the study.

Findings indicate that, 36.6% representing (37) respondents were diploma holders, followed by 26.7% representing (27) were of primary, 13.9% a representation of (14) were secondary certificate holders, 11.9% a representation of (12) were celebrated for their first degree and 10.9% a representation of (11) respondents were from post graduate studies. People working in the refugee camps, the local government and UNHCR officials acquired higher levels of education. These groups of the respondents were important for the study because they are the refugee policy managers and technical people in the field of the study.

Findings further indicated that, 15.8% representing (16) respondents had already worked for 15 and above Years, 27.7% representing (28) had experience of 1-5 Years,

38.6% representation of (39) were 6-10 Years of experience on duty; and 17.8% a representation of 18 respondents were 10-15 Years of experience on duty.

According to Harrell Bond, (2000) the more experienced respondents possessed advantage to the study due to the technical information they withhold. Thus this was the case with this particular study.

4.2 Effectiveness of Local Government Strategies to Protect Refugees and the Environment

The researcher intended to examine the level of effectiveness of the local government strategies in protecting the refugees, their settlement and environment. These findings are presented in table 4.2.

Table 4. 2: Effectiveness of Local Government Strategies to protect Refugees in Refugee Settlement Areas

Item	Mean	Std. deviation	Interpretation
Democracy in local governance has enabled them to institutionalize participatory processes, negotiate partnership agreements to counter deprivation or exclusion.	2.64	.548	High
Local governments play an important role in addressing housing through a variety of mechanisms ranging from subsidized credit to providing accommodations.	2.99	.678	High
Local authorities play an important role in direct involvement in health care, education, vocational training, and other social services provision to the refugees.	2.43	.976	Low
There are big roles of the UNCR in reducing environmental degradation.	2.78	.789	High
Refugee residents near markets vendors are capable of managing the waste they generate without help from the Town administration.	2.12	.971	Low
There is no limit on the amount of money to be borrowed by the refugee camps in Mogadishu, Somalia for proper management of waste disposal	2.43	.976	Low
The local government has arranged new strategic policies like proper waste disposal and supply of enough food to avoid encroachment on the natural resources.	2.46	.798	Low
Around refugee camps, nearby residential village complains sound pollution	2.78	.789	High

Pollution and deforestation are becoming worse despite the various local government strategies to protect the environment.	2.12	.971	Low
Extension of piped water to IDP camps in Mogadishu has improved due to ever increasing number of refugees.	2.34	.821	Low
Community forestry is highly emphasized by the local government especially within refugee camps	2.15	.567	Low
Animals like cattle are grazed near water sources where refugees collect water for domestic use.	2.78	.789	High
NGOs and local leaders conduct massive sensitization to both refugees and local community about environment protection	2.60	.912	High
Average mean	**2.51**	**. 872**	**High**

Source: Primary Data, 2014

Results in Table 4.2 show the mean responses in determining the effectiveness of Local Government strategies in settlement of refugees in Mogadishu. The average mean of 2.51 with the standard deviation .872 was high implying that strategies to settle refugees in camps are effective.

Concerning the Democracy in Local Governance has enabled them to institutionalize participatory processes, negotiate partnership agreements to counter deprivation or exclusion, the aspect scored a mean value of 2.64 (the standard deviation .548) interpreted as high meaning that local governments play a significant role in addressing settlement of refugees in Mogadishu through a variety of mechanisms.

Further analysis present information about the role played by local authorities in direct involvement in healthcare and education plus vocation training and social service provision to the refugees, results showed the mean value of 2.43 with a standard deviation of .976 interpreted as low. This implies that Local Authorities have not properly met their responsibilities in provision of social services to the refugees in the IDP camps.

It was also found that efficiency in reducing environmental degradation by the UNHCR was high as indicated by the results. The mean score for this item was 2.78 (standard deviation .789) interpreted as high. This means that the UNHCR have tried to play its role in protecting the environment of refugee camps in Mogadishu.

Furthermore, the results on whether refugee residents near markets are capable of managing the waste they generate without help from the town administration was low with the mean value of 2.12 (standard deviation .971). This implies the refugee residents near market places do not manage their solid waste properly.

Results on the item on whether there is no limit on the amount of money to be borrowed by the refugee camps for proper management of waste disposal, the mean value was 2.43 interpreted as low. This implies that the amount released by the local government to manage waste disposal is limited.

Additionally, when asked whether local government have arranged new strategic policies like proper waste disposal and supply of enough food to avoid encroachment on the natural resources, the mean score was 2.46 (Standard deviation .798) and rated low, this implies that respondents disagreed with this item as there are no new strategies to improve on the environment protection.

Around refugee camps, nearby residential village complains sound pollution, according to the findings, a mean of 2.78 (standard deviation .789) interpreted as high was scored implying that refugee camps especially those residential villages cause noise pollution. Pollution and deforestation are becoming worse despite the various Local Government strategies to protect the environment, the mean value for this item was 2.12 as respondents agreed to the statement but disagreed that local government has provided strict policies to protect the environment.

In the same way, on whether there is extension of piped water to IDP camps to serve the increasing population, the mean value was 2.34 interpreted as low with a Std.D of low. This means that piped water is not extended to the camps something that creates competition on the available water sources between refugees and the hosting communities.

While on whether community forestry is highly emphasized by the local leaders (Government) especially within refugee camps, the mean value was 2.15, Std.D of .567 interpreted as low implying a low emphasis on community forestry and less care about the environment hence causing environmental degradation as the few trees available are cut down for settlement and firewood and charcoal.

In the same way, results indicated that animals like cattle are grazed near water sources and from the same water sources is where refugees and local people collect water for domestic use. This was attributed to the mean score of 2.78, Std.D of .789 interpreted as high.

It was finally established that NGOs and local leaders conduct massive sensitization to both refugees and local community about environment protection. The mean was 2.60 Std.D=.912 interpreted as high implying that NGOs and the Local Government are trying their best to sensitize refugees and the local people about environmental protection.

4.3 Level of Environmental Degradation in Refugee Settlement Areas in Mogadishu

The second objective of this research was to examine the level of environmental degradation in refugee settlement areas in Mogadishu, Somalia, results were analyzed and are presented in the table 4.3.

Table 4. 3: Level of Environmental Degradation in Refugee Settlement Areas in Mogadishu

Item	Mean	Std. deviation	Interpretation
You have enough solid waste containers in your home/shop/stall which are emptied on a regular basis by the garbage collectors	2.49	.769	Low
Humans feed from the same sources of water as some a domestic around the IDP camps	2.54	.876	High
Most of the vegetation cover in this area was destroyed for settlement of refugees	2.98	.789	High
Refugees have cleared the surrounding some plants in the districts.	2.67	.765	High
There are some waste items which can be re-used but you are not reusing.	2.59	.678	High
Willing to pay for collection of the waste that you generate in your home/shop/stall.	2.54	.786	Low
It is necessary for you to work together with other residents/traders/market vendors for better waste management.	2.10	.789	Low
Animal and Human waste are dumped in the water streams around refugee camps because the area lack proper structures for waste disposals.	2.91	.802	High
Charcoal and firewood is the only source of fuel for cooking food for refugees in this camp.	2.98	.811	High
The amount of noise pollution has increased since the influx of refugees	2.56	.690	High
The influx of refugees has no effect on the host land's plantations	2.49	.769	Low
Average Mean	**2.61**	**.762**	**High**

Source: Primary data, 2014

Table 4.3 presents findings about the level of environmental degradation in refugee settlement areas, the items in the table were analyzed and results were as explained below; the average mean recorded was 2.61, the Standard deviation .762 interpreted as

high implying that threat of environmental degradation is high in refugee settlement areas in Mogadishu, Somalia.

According to the results, the item on whether respondents had enough solid waste containers in their home/shop/stall which are emptied on a regular basis by the garbage collectors, the mean score for this item was 2.49 (Std.D .769) interpreted as low implying that waste disposal containers are less or even not available in the refugee settlement areas.

Results further indicated that humans/refugees and the local people feed from the same sources of water as cattle around the IDP camps. This is attributed to the mean score of 2.54 (Std.D =.876) interpreted as high, this implies that the water sources are polluted since people and animals are feeding from the same sources which are scare in the area.

In the same way, results on whether most of the vegetation cover in the study area was being destroyed for refugee settlement showed a mean value of 2.98 (std.D .789) interpreted as high implying that respondents agreed that refugee settlement destroyed vegetation cover in Mogadishu for construction of semi-permanent houses and camps.

Similarly findings on the aspect of whether refugees have cleared the surrounding plants in the district, the mean score was 2.67 (Std. D =.765) interpreted as high implying that the respondents agreed with the aspect hence refugees destroy the environment as they clear bushes to practice farming for growing crops and food.

According to the findings, the mean score on the aspect that animal and human waste are dumped in the water streams around refugee camps because the area lack proper structures for waste disposals was 2.91 (std.D =.802) interpreted as high, this means that respondents strongly agreed with this aspect as there are no proper solid waste management within and around refugee camps.

Further results indicated that charcoal and firewood is the only source of fuel for cooking food for refugees in the camps. This aspect scored a mean value 2.98 (Std. D =.811) also interpreted as high. This means that since charcoal and firewood are the only sources of fuel in refugee camps, deforestation around their settlement areas is high.

On the item that it is necessary for you to work together with other residents or traders/market vendors for better waste management. The mean score was 2.10 (Std.D =.789) interpreted as low an indication that refugees in camps and hosting communities /local people do not necessary work together in as far as environment protection is concern.

According to the results, the amount of noise pollution has increased since the influx of refugees, this is showed by the mean value 2.56 interpreted as high meaning that refugees in the selected settlement areas cause noise pollution in Mogadishu.

Table 4. 4: Correlation Analysis between the Variables

At 0.05 level of significance

Correlations			
		Refugee settlement areas	Environmental degradation
Refugee settlement areas	Pearson Correlation	1	.67
	Sig. (2-tailed)		.004
	N	101	101
Environmental degradation	Pearson Correlation	.67	1
	Sig. (2-tailed)	.004	
	N	101	101

Source: Primary data, 2014

The Pearson Linear Correlation Analysis shows that there is a relationship between refugee settlement areas especially IDP camps on environmental degradation in Mogadishu Somalia. (r = 0.67) at 0.004 level of significance. The value indicates that there is a close relationship between refugee settlements and Environmental degradation in Mogadishu. It is therefore argue that there is relationship between the two variables. From a different perspective, results vary with those of Ahmed,(2012) that when refugees arrive at a camp, they are often in great need of timber for construction purposes and for cooking, which puts a great strain on the timber resources of the local community. For instance, the Turkana population, host to the

refugees at Kakuma was alarmed at the rate at which refugees cause deforestation (Allan, 2004). This causes frequent alterations and fights between the local population and the refugees because the hosts argue that their livestock largely depend on the trees, which the refugees have been cutting down. Similarly, Competition for natural resources is creating compounding livelihoods crises in which both host and refugee communities are struggling to find coping strategies. The fighting over firewood, grass and grazing land had forced up to 8,000 refugees to flee from to the district camps, houses, tents and granaries belonging to refugees and villagers alike were set on fire during the fighting and impacted serious environmental degradation (UN, 2012).

CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This study was focused on environmental degradation in refugee settlement areas in Mogadishu, Somalia. In order to ascertain this link, three study objectives were formulated and analyzed in the previous chapter. Therefore, in this chapter, the major findings of the study are summarized from which conclusions are reached. Recommendations also made to bridge any existing gaps regarding environmental degradation in refugee settlement areas in Mogadishu, Somalia.

5.1 Discussion of Findings

5.1.1 Effectiveness of the Strategies used by the Local Government in Settlement of Refugees in Mogadishu, Somalia

Results showed the level of effectiveness with mean 2.51 was high as showed in Table 4.2. This means that Local Government is fairly trying to settle refugees in the camps. However, it was revealed that as the population is increasing in number and increasing serious effecting on general environment by internal refugees also the management policies protecting them are also getting weaker given that there are no new approaches to manage the ever increasing population and degrading surrounding in camp areas. The delivery of social services in the camps is also becoming poorer. For example, it was submitted that although the population of refugees is increasing, social services like extension of piped water, sewage disposal system and sanitary mechanisms in the camps are limited. In this context, the study findings established that the role played by local government in benadir region in refugee settlement was positive but policy implementation is necessary in every stage of environmental activities.

However, monitoring and seeking to influence policies affecting the environment in a refugee situation is more cost-effective for an environmental agency than direct implementation of field activities. The greatest impacts on the environment in refugee situations are caused by policy decisions relating to, amongst other things, camp sitting, layout and size. If agencies can influence such decisions at the policy level, through a combination of local, national and international lobbying and advocacy,

achievements can be far more significant than if they are confined to implementation of remedial programs.

This is proved by the majority of refugees or internal refugees to the statement that democracy in local governance has enabled them to institutionalize participatory processes negotiate partnership agreements to counter deprivation or exclusion. As well, local governments play an important role in addressing housing through a variety of mechanisms ranging from subsidized credit to providing accommodations. Host governments must therefore develop a clear policy statement on refugee access and usage rights, and then follow this through with whatever enforcement measures may be required. Otherwise, it is preferable to avoid such policies altogether.

The presence of humanitarian organization has also made the existence of refugee settlement effective given that international agencies like the UNHCR can help reduce the needs of the refugees or IDP thereby mitigating the chances of environmental resource consumptions by the refugees in the area. They can also help to influence government to ratify some of the international conventions relevant to environmental-refugee issues. For instance, UN High Commissioner for Refugees (UNHCR) continues to encourage Somalia government to sign and ratify relevant international conventions and treaties related to the protection of refugees and the prevention of statelessness. UNHCR strategy 2014 to address refugee needs in Mogadishu has outlined the overarching priority which will upgrade emergency structures in all camps and enhance interventions in the areas of shelter, health, education, water, sanitation and hygiene to reach a minimum standard. Protection priorities outlined include: maintaining the civilian character of refugee settlements; improving access to and quality of education, provision sanitarian a means of preventing child recruitment and child labour; promoting peaceful coexistence among refugees, IDPs and host communities; and strengthening the Government's capacity to respond to the protection needs of refugees and IDPs in Moqadishu,Somalia(UNHCR, 2014).

In the similar situation, the (UN report, 2014) submitted that after South Sudan gained independence in 2011, UNHCR's South Sudan budget was separated from the budget for Sudan as of 2012. Following the sudden influx of Sudanese refugees from Sudan's South Kordofan and Blue Nile States in 2011, a supplementary appeal and subsequent revision were launched to respond to the needs of refugees, bringing the financial requirements for UNHCR's operation in South Sudan to USD 265.3 million in 2012(UNHCR, 2014). In 2014, the financial requirements for the operation have been

set at USD 230.1 million, an increase of USD 11 million when compared to the revised 2013 budget of USD 219.1 million, reflecting the pressing need to establish more permanent infrastructures in the refugee camps and adjacent host communities (UNHCR, 2014).There has been significant investment in the extension of services and secondary benefits of the emergency operation to the host community and local authorities. These include: Road improvement projects, Rehabilitation of the airstrip, free health care is provided to host community members in all camps. This gives protection and sustainability for refugees.

5.1.2 Level of Environmental Degradation within and around Refugee Settlements

Results indicated a relatively high level of environmental degradation in refugee settlements in Mogadishu, Somalia. This is attributed to the results which showed highest mean score on the aspects that humans feed from the same sources of water as cattle and other domestic animals around the IDP camps, most of the vegetation cover in this area was destroyed for settlement of refugees, refugees have cleared the surrounding bush for agriculture and animal and human waste are dumped in the water streams around refugee camps also shelters for camps are slums houses with higher population for each camp because they lack proper improvements and structures for waste disposal systems. *As this observation field*

According to the field data collected, analyses showed that the degradation of the environment in the area is increasing (mean =2.61) since the influx of migrants in 2007 or before up to date. Respondents provided that the availability of natural environmental resources has decreased at the moment compared to years before, when the refugees began to pour into the area. This is the fastest level of natural environmental resources ever, which mean that in a few years to come, if continues with the same rate, the total area will turn into complete desert where settlement will be impossible. Besides, the habitat in this area will be extinguished and the human population endangered. And as argued by the respondents, the reason for the fastest degradation processes of the environment is the total dependence of the migrants on the natural environment for various demands purposes as life may require.

Results tally with those of Danish Refugee Council (2012) that it is clear that movement and displacement of large numbers of people may have significant impacts on the environment. Arriving in an alien situation, refugees face hunger, fatigue, humiliation and grief. However, their first concern is to look after themselves, most often to find food and shelter. Trees are felled to provide support for rudimentary shelters. Dead wood is collected to build a fire as fuel for cooking and other domestic use. With the continuation of refugee settlement and the activities involved, the environmental impacts are likely to be too serious and long lasting (Danish Refugee Council, 2012). Among the most significant problems associated with refugee settlement are deforestation in Greenland in the city, soil erosion, and depletion and pollution of water resources, poor slum houses with noise sound. Other considerations which must be taken into account include changes in the social and economic welfare of local communities following the arrival, or during prolonged residency, of refugees. These too may impact the environment, altering the rate and extent of local services available to people at the moment and in the future.

5.1.3 Relationship between Refugee Settlements and Environmental Degradation

The Pearson linear correlation analysis showed that there is a significant relationship between refugee settlement areas especially IDP camps on environmental degradation in Mogadishu Somalia. ($r = 0.67$) at 0.004 level of significance. The value indicates that there is a close relationship between refugee settlements and Environmental degradation in Mogadishu. We therefore argue that there is a significant relationship between the two variables. The protection of Somalia's coastal zones and in land areas

from hazardous waste dumping and land from deforestation, degradation from human activities requires technological and organizational capacity with implementation policy as well as political stability sadly lacking in the country particularly the city capital of Mogadishu, Somalia. In addition to environmental impacts, Greenland and forest deforestation for urban and rural areas as an income-generating activity also causes internal dispute and conflict within the society.

Charcoal production particularly in conflict of plant deforestration in central Somali, (IRIN, 2000)

In 1997, actions taken by local chiefs and clan elders in areas in central Somalia who tried to prohibit charcoal cutting led to conflict, that resulted loss of life (IRIN, 2000).

5.2 Conclusion

As this report has demonstrated, environmental degradation in refugee settlement areas in Mogadishu, Somalia have created a viable alternative to living in settlements. The policy of limiting protection and assistance to those living in settlements is not only inconsistent with Somalia and international refugee law, but also incompatible with refugees' harmony living within the local environment. This is one of the worst things currently happening in Somalia environment especially in Wadajir, Hadon, Yaaqshid, Shibis and Hiliwaa districts where refugees are concentrated and very high price for will be paid in the future. Through illegally dumping waste and disposal waste to the living areas from household or domestic, commercial and demolition and induced deforestation in Greenland, and mixed slum houses with over population Somalia's natural resources of future generations are bankrupted and plundered for profit. These merciless damages to Somali's natural environment are legally and morally unacceptable.

These cases are just a few, which demonstrate the ineffectiveness of global attempts to regulate an industry that overshadow its very hazardous impacts. The lack of laws to protect the environment is nowhere as evident as in Somalia. Apart from charcoal and hazardous waste dumping, waste disposal illegal fishing, merciless hunting and water pollution are all environmental abuses that have gone unchecked in Somalia for over a decade. The threat and damage done to Somalia environment will not receive the attention it merits as long as peace and political stability remain the main life-threatening conditions in the country. In its totality, the damage done to Somalia's natural environment is unimaginable and seems unmanageable even long after a solution is found for the current difficult prolonged political crisis.

The increasing scarcity and widespread misuse of water poses a serious and growing threat to sustainable development throughout the world. In Somalia, water was never adequate, even when the central government was functioning. The Somali people have frequently experienced severe drought. This scarcity of water has resulted in a devastating and appalling situation for both people and livestock. Most of the water wells have dried up and the boreholes' water rigs are out of order.

The valuable role of trees in controlling runoff and water and the positive interaction of *acacias* with crops and animals are reasons why much more emphasis needs to be given to the forest protection. Deforestation will have major adverse impacts on rainfall availability, capacity of the soil to hold water, local climate, and habitat for

animal species and bio-diversity. Basically, humans abandon areas that have been cleared, particularly when the community is nomadic depending on grazing for their animals. All these will finally collectively affect the livelihood and socio-economic aspect of the society.

The barriers to refugees' successful integration into African countries, especially Somalia society, need a joint approach from policy makers, resettlement agencies, and education as well as immigrant communities.

At present, local governments in communities took into account the presence of these extra people in their budgetary processes, and therefore local services including healthcare education and rehabilitation are placed under enormous pressure. This in turn endangers the good relations between internal refugees and hosts and undermines the Self-Resettlement.

According to the findings, Activities of internal refugees in deforestation in Greenland in the city for commercial or personal use which includes logging, burning charcoal use of bio, fuel, for building purpose and un improvement houses (slums) for tread among others so these activities lead to serious environmental degradation around camp areas and indicated that the policy strategies by local government are no posed to environment.

Also lack of waste mechanisms, sanitary provisions, water contamination sources, slum houses in living areas and noise pollution which resulted to spread waste types and rubbishes, soil and air pollution, vector and dirt in every, these were the ways found under study which the environmental degradation in camp areas are growing.

5.3 Recommendations

Adopting the following recommendations

- The counter the refugee backlash and keeping in harmony with the environment as environmentally friendly

The researcher also was recommended

- That the formation of joint refugee and local management develop and enforce by-laws relating to environmental friendly in order to implementing acts on environment and can be an effective mechanism for reduction pollutants from point source, waste disposal, noise and spread waste hierarchy management, replanting and thus reduce, the conflict resolution and enforcement refugee impact on the environment, .for example Forming such it is best to use existing local organizations and joint committees would normally be the responsibility structures to develop and manage environmental of a lead environmental agency, in conjunction with activities in a participatory manner.

The local government is also recommended

- To improve on the hygienic environmental life style of the refugees in the settlements in the camps such as building sewage system, recycle bin which they are collaborates other parts of the town, For example this is to prevent diseases such as cholera, typhoid, malaria and diarrhea, among others.

National and local refugee resettlement agencies was also recommended

- Emergency environmental funding needs to remain flexible. It is likely that initial site selection and establishment, as well as the first set of environmental interventions that go with it should, in time, prove imperfect or inadequate. Activities may need to be modified. Given pre-defined budgets and project documents this can be difficult, particularly when budgets have been subdivided in some detail according to different accounting codes. It is important that a high degree of flexibility is incorporated in emergency environmental programs and, as such, the budgetary system should allow for re-allocation of resources at short notice as the evolving situation dictates.
- Rehabilitation measures should help restore an environment's ability to sustainably deliver the ecological functions and values it has for human society.
- Rehabilitation should aim to restore the local community's capacity to derive a sustainable livelihood from the natural resource base. Integrated agro-forestry

practices, for example, are much more likely to contribute to long-term ecological sustainability and livelihood security than plantations.

- As together national and local refugee resettlement agencies, along with partners, stakeholders, and supporters of refugee resettlement, should advocate for refugee reform and sufficient funding for refugee resettlement..

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APPENDICES

APPENDIX I: OBSERVATIONS OF SETTLEMENT AREAS

The observation made in refugee in IDPs settlement areas under this study shows slum houses, dumping sites near IDP camps and a lot of disposal such as solid waste items that caused improper hygiene and lack of sanitary in the environment also there is unpleasant pollution among refugee settlement areas in Mogadishu-somalia.

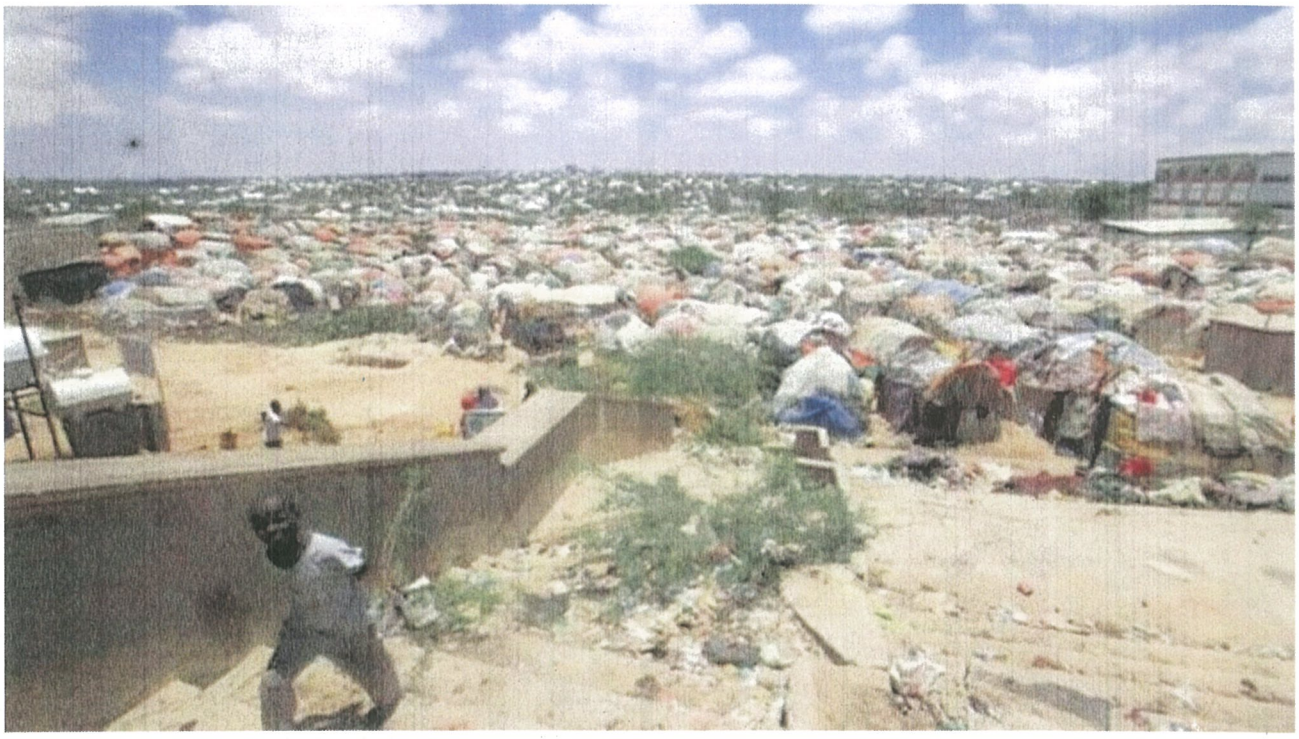


Plate 1: A newly refugee camp under the protection of the government working hand in hand with UNHCR in Wadajir. Here indicate how slums houses are increasing in this camp area

Plate 2: A refugee camp around Mogadishu the capital city under the government management in Yaaqshid district and AFP said housing crises and homelessness a mong in refugee camp in Yaqshid district,Moqadishu.

Plate 3: Picture showing refugees looking for piece of roof for their shelter in Hidon district camp

The bags are carelessly thrown away. This causes severe problems to vegetation. We have observed many plants which have died due to these nylon bags getting wrapped in their branches and around their roots. With nylon bags entwined, the plants cannot get adequate air, water and sun to sustain them. Contributed to the degradation of the Mogadishu especially in hiliwaa districts.

Plate 4: Careless of waste disposal in living area which are a round camp area in Hiliwa district.

Plate 5: A dumpsite near Shibis camp which near by residential area and scavengers uses here as site for waste disposal in dumping.

APPENDIX II: TRANSMITTAL LETTER FOR THE RESPONDENTS

Dear Sir/ Madam

Greetings!

I am Msc in Environmental Management and Development candidate of Kampala International University. Part of the requirements for the award is a thesis. My study is entitled, Refugee settlement areas and Environmental degradation in Mogadishu, Somalia.

Within this context, may I request you to participate in this study by answering the questionnaires; kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others. May I retrieve the questionnaire within five days?

Thank you very much in advance.

Yours faithfully,

Mr. Abdirashid Artan Abdirahman

APPENDIX III: QUESTIONNAIRE

PART ONE: FACE SHEET: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Gender (Please Tick):

— (1) Male

— (2) Female

Age:

Qualifications Under Education Discipline (Please Specify):

(1) Secondary certificate_____

(2) Diploma

(3) Bachelors _____

(4) Masters _____

(5) Ph.D. _____

Other qualifications other than education discipline----------

Number of Years Working Experience (Please Tick):

(1) 1-------5yr

(2) 5------10yr

(3) 10----15yr

(4) 15 yrs and above

Appendix: Questionnaire to Determine the Effectiveness of the Strategies used by the Local Government in Refugee Settlements in Mogadishu, Somalia

Direction 1: Please write your rating on the space before each option which corresponds to your best choice in terms of Effective strategies by the local government in management of refugee settlements in Mogadishu, Somalia.

sResponse Mode	**Rating**	**Description**
Strongly Agree	(4)	You agree with no doubt at all
Agree	(3)	You agree with some doubt
Disagree	(2)	You disagree with some doubt
Strongly disagree	(1)	You disagree with no doubt at all

	RESPONSE MODE			
ITEMS	**SD**	**D**	**A**	**SA**
Democracy in local governance has enabled them to institutionalize participatory processes, negotiate partnership agreements to counter deprivation or exclusion.				
Local governments play an important role in addressing housing through a variety of mechanisms ranging from subsidized credit to providing accommodations.				
Local authorities play an important role in direct involvement in health care, education, vocational training, and other social services provision to the refugees.				
There are big roles of the UNCR in reducing environmental degradation.				
Refugee residents near markets vendors are capable of managing the waste they generate without help from the Town administration.				
There is no limit on the amount of money				

to be borrowed by the refugee camps in Mogadishu, Somalia for proper management of waste disposal				
The local government has arranged new strategic policies like proper waste disposal and supply of water safety to avoid encroachment on the natural resources.				
Around refugee camps, nearby residential village complains sound pollution				
Pollution and deforestation are becoming worse despite the various local government strategies to protect the environment.				
Extension of piped water to IDP camps in Mogadishu has improved due to ever increasing number of refugees.				
Community forestry is highly emphasized by the local government especially within refugee camps				
Animals like cattle are grazed near water sources where refugees collect water for domestic use.				
UNHCR and local leaders conduct massive sensitization to both refugees and local community about environment protection				

Appendix: Questionnaire to Determine the Level of Environmental Degradation within and around Refugee Settlements

Level of Environmental Degradations

Direction 1: Please write your rating on the space before each option which corresponds to your best choice in terms of environmental degradation in Refugee settlements areas in your office/division. Kindly use the scoring system below:

Response Mode	**Rating**	**Description**
Strongly Agree	(4)	You agree with no doubt at all
Agree	(3)	You agree with some doubt
Disagree	(2)	You disagree with some doubt
strongly disagree	(1)	You disagree with no doubt at all

	RESPONSE MODE			
ITEMS	**SD**	**D**	**A**	**SA**
You have enough solid waste containers in your home/shop/stall which are emptied on a regular basis by the garbage collectors				
Humans feed from the same sources of water as some a domestic around the IDP camps				
Most of the vegetation cover in this area was destroyed for settlement of refugees				
Refugees have cleared the surrounding bush for agriculture				
There are some waste items which can be re-used but you are not reusing.				
Willing to pay for collection of the waste that you generate in your home/shop/stall.				
It is necessary for you to work together with other residents/traders/market vendors for better waste management.				
Animal and Human waste are dumped in				

the water streams around refugee camps because the area lack proper structures for waste disposals.				
Charcoal and firewood is the only source of fuel for cooking food for refugees in this camp.				
The amount of noise pollution has increased since the influx of refugees				
The influx of refugees has no effect on the host land's plantations				
You have enough solid waste containers in your home/shop/stall which are emptied on a regular basis by the garbage collectors				
Humans feed from the same sources of water as some a domestic around the IDP camps				

APPENDIX IV: INFORMED CONSENT

I am giving my consent to be part of the research study of Mr. Abdirashid Artan Abdirahman that will focus on Refugee settlement areas and Environmental degradation in Mogadishu, Somalia.

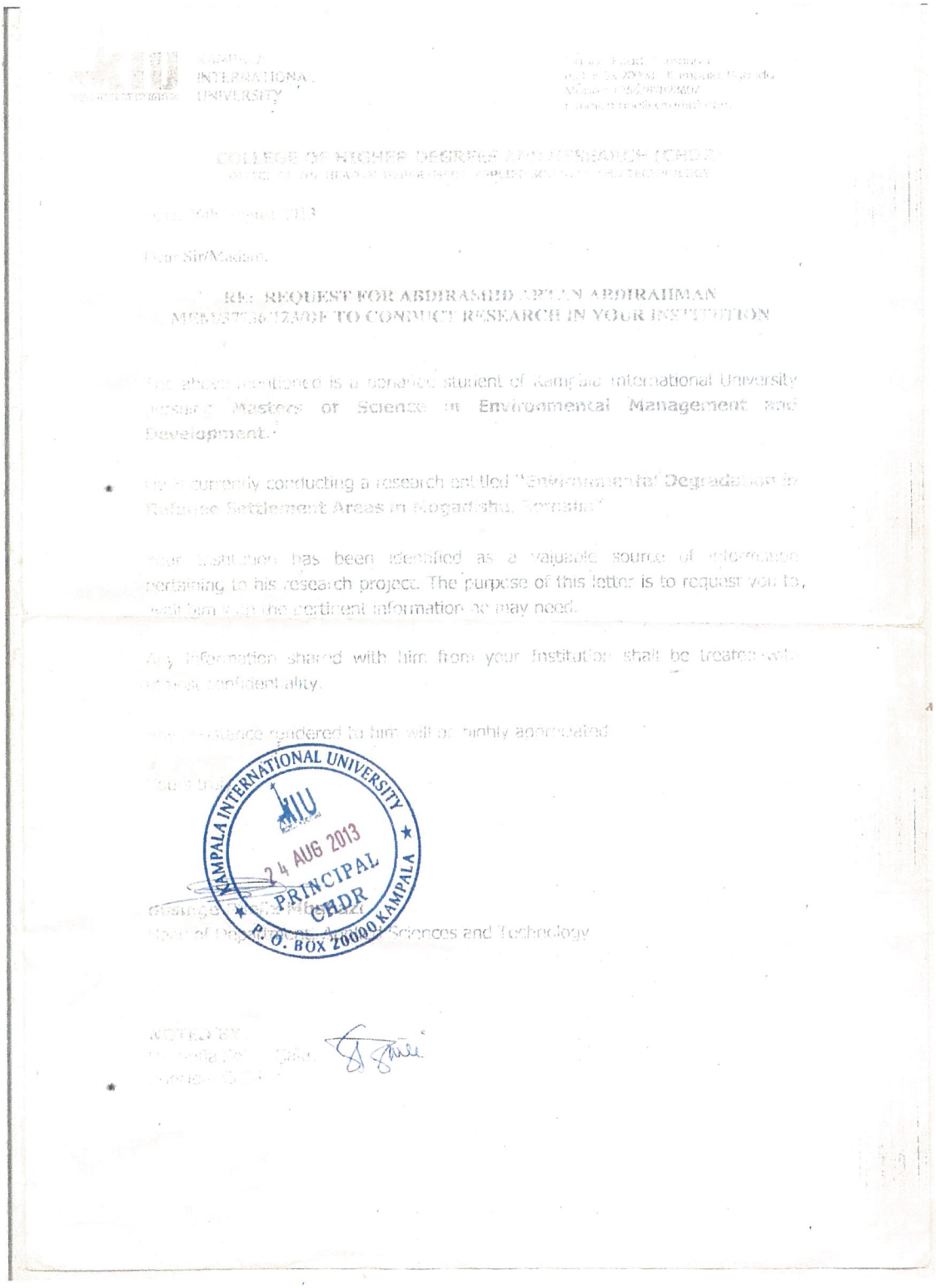
I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for them.

Initials:_____

Date_____

APPENDIX V REQUEST LETTER



KAMPALA INTERNATIONAL UNIVERSITY

COLLEGE OF HIGHER DEGREES AND RESEARCH (CHDR)

Dear Sir/Madam,

RE: REQUEST FOR ABDIRASHID OPTUN ABDIRAHMAN
MCS/37536/123/DF TO CONDUCT RESEARCH IN YOUR INSTITUTION

The above mentioned is a bonafide student of Kampala International University pursuing Masters of Science in Environmental Management and Development.

He is currently conducting a research entitled "Environmental Degradation in Refugee Settlement Areas in Mogadishu, Somalia"

Your institution has been identified as a valuable source of information pertaining to his research project. The purpose of this letter is to request you to, assist him in the pertinent information he may need.

Any information shared with him from your institution shall be treated with strictest confidentiality.

Any assistance rendered to him will be highly appreciated.

KAMPALA INTERNATIONAL UNIVERSITY
KIU
24 AUG 2013
PRINCIPAL
CHDR
P. O. BOX 20000, KAMPALA

Sciences and Technology

NOTED BY

APPENDIX VI RESEARCHER'S CURRICULUM VITAE

To document the details of the researcher, his competency in writing a research and to recognize his efforts and qualifications, this part of the research report is thus meant.

PERSONAL DATA

Name :Abdirashid Artan Abdirahman

Nationality : Somali

Sex : Male

Address : +2526-15242817

E-mail :ccrashka@gmail.com

Date of Birth : 1988

Residence : Mogadishu

EDUCATIONAL BACKGROUND

2012-2015 : Master of Science in Environmental Management and Development at KIU Uganda, Kampala.

2012-2013 : Postgraduate Diploma in Disaster Management at Uganda Institute Social work and Community Development in Uganda, Kampala.

2009-2012 : Bachelor of Education (Biology and chemistry) at University of Somalia, Mogadishu, Somalia.

2008-2009 : Computer Software at SOHDEC, Mogadishu Somalia

2006-2007 : First Aid at Al-Imra school, Mogadishu, Somalia

2003-2008 : Secondary School at S.Y.L, Mogadishu, Somalia

1999-2002 : Intermediate School at Ablaal , Mogadishu, Somalia.

SHORT COURSES CERTIFICATES 2012-2013

- Postgraduate Certificate in Project Monitoring and Evaluation at Makerere University, Kampala, Uganda.
- Community Mobilization and Development at Makerere Capacity Development and Research Institute in Uganda, Kampala.
- Public Health training held at Makarere University in Uganda, Kampala.
- Peace conflict and Management held at Makerere Capacity Development and Research Institutions in Uganda, Kampala.

- Oil and Gas training held at East African Center for Oil Law, Policy & Economics.
- Project Planning &Management at Makerere Capacity Development and Research Institutions in Uganda, Kampala.
- Urban Planning and Development at Makerere Capacity Development and Research Institutions in Uganda, Kampala.
- Oil and Gas Law Mgt at East African Oil and Gas Law policy and Economics in Kampala, Uganda.

WORK EXPERIENCE

2008-2009 : SYL Secondary *School: Cashier, Acc &Vice principle.*

2010-2011 : Education Development Center (EDC): Supervisor for Somali Interactive Radio Instruction program (SIRI).

2010-2011 : Wash consultant at Global Medical Center in Mogadishu.

2009-2010 : Community Mobilize at COOPI, Galgadud, and Cabudwaq district.

2010-2012 : SYL Secondary School: Teacher for Bio and Chem.

2013 -2014 : Survey Refugee settlement areas and environmental degradation in Mogadishu. Somalia.

2013-upto present: University of Somalia, Jobkey University and Plasma University: Lecturer faculties of Education, public health and Nursing

SEMINARS

Nov 25-30: 2011 : Responses Emergency: work Shop held at University of Somalia

JUN 10-13- 2009 : Mobilization IDPS Work-shop held at CONCERN

May 20-25 -2011 : Conflict resolution &Peace Building held at SYL F Organization April.

28-30-2009 : SIRIP (Somali Interactive Radio Instruction Program) held at EDC

LANGUAGES

	Listening	Speaking	Writing	Reading
English	very good	very good	Excellent	Excellent
Somalia	Mother tongue			

HOBBIES

- Browsing internet, entertainment & listening Somali music
- Searching new developing for Science Terminology
- Environmental Issues articles
- Reading For Newspapers

REFERENCES

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Ali Araye Addow	+2526165565999	Head of Research – University of Somalia