IMPACT OF CORPORATE SOCIAL RESPONSIBILITY PROJECTS ON RURAL HOUSEHOLD POVERTY REDUCTION: THE CASE OF KENGEN’S WATER PROJECTS IN WEST KOGUTA SUB-LOCATION, KISUMU COUNTY

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REG. C50/73904/2012

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN ENVIRONMENTAL PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

2016
DECLARATION

This research project is my original work and has not been presented for examination in any University.

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DEDICATION
To my parents Mr. and Mrs. Ogweno for their love, financial support and encouragement through my studies. To my sisters, brothers and friends who gave me the will and determination to complete my studies and above all to the almighty God.
ACKNOWLEDGEMENT

My special thanks go to my supervisors Dr. James Moronge and Dr. Martin Marani for the positive criticism and tireless guidance despite their busy schedule. There guidance, suggestions, encouragement, and moral support culminated in completion of this work.

I would also like to extend my gratitude to the Chairman, Department of Geography and Environmental Studies, University of Nairobi for according me the humble opportunity to undertake the postgraduate study program, the cartographic department, the 2012 EPM class especially Belinda Omungu, Joy Nkrothe and Orimba Peter who greatly assisted during the period of the study.

I appreciate the efforts of West Koguta residents including the household heads, CSR program officials at KenGen especially Mr. Steve Okello, local national government administrative officials, school heads, and traditional leaders (tribal elders); not forgetting the research assistants who assisted me in carrying the study to completion and to those that have not been specifically mentioned, I thank you all and may God bless you abundantly.

Great and special gratitude to God for giving me the ability, strength and patience to undertake the study, above all His blessing.
ABSTRACT

Water is fundamental to health, survival and livelihood, hence the international concern that it attracts. Globally it is seen as an economic, social, cultural and environmental good, and to a large extent, not only a basic need but a human right. Research has shown that rural water programs benefit communities by improving children’s education, health of communities and promoting their income generating activities. Owing to several factors, the problem of water access remains a multi-million challenge for families in rural areas. Households remain far from water projects despite interventions that governments, NGOs and other agencies inform of CSR have put in place.

This study set out to investigate the impacts of CSR water projects on poverty reduction in West Koguta Sub-location using KenGen’s CSR water projects as a case study. Specifically, the study sought to identify effects of CSR water project on household food security, determine levels of household income before and after implementation of CSR water projects, and compare and contrast school attendance and enrollment rates before and after CSR projects. The indices in the three objectives are directly influenced by access to water in West Koguta Sub-location. On the basis of a case study design, the study collected data from a sample of 127 households who were selected from a population of 460 beneficiaries CSR water projects. Questionnaires were administered to 127 sample household heads; key informant interviews were administered to CSR program officials at KenGen, local national government administrative officials, and traditional leaders (tribal elders); three focus groups were carried out, one each for women, youth and men drawn from CSR project beneficiaries; while the researcher used field notes and digital camera to capture observation data. Data obtained were edited, entered and stored in an SPSS system and appropriate statistical procedures applied on the dataset.

The results showed that the KenGen’s CSR water projects led to increased diversification of crops and livestock in the study area. Maize, beans, sorghum, cassava sweet potatoes and millet were the main rain fed food crops grown in the area before CSR water projects were implemented. Implementation of CSR water projects led to introduction of new crops such as tomatoes, water melon, sugarcane and other vegetables such as black nightshade, spider plant and pumpkin leaves which were grown using irrigated crop production. Availability of water inspired construction of fish ponds. Also, availability of water led to increased poultry production. The study findings showed that household income increased with a range of Ksh. 2000-4000/= after CSR projects were implemented. School enrolment enrollment rates rose
from an average of 7% to 7.8% which can be attributed to KenGen’s CSR water projects in the area. A Chi-Square test led to the rejection of the hypothesis that “KenGen’s CSR water project have no impact on the rural household poverty in West Koguta Sub-location” leading to the conclusion that the CSR water projects have had a significant impact on rural household poverty. The study concluded that KenGen’s CSR water projects in West Koguta sub-location had significantly contributed to reduced poverty levels measured in terms of household income, household food security, school attendance and enrolment rates. The study recommends more similar studies on water for purposes of replicability of the findings. In particular, we need to understand how CSR projects influence poverty in different social-cultural settings.
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<td>CIDA</td>
<td>Canadian International Development Agency</td>
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<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<td>DFID</td>
<td>Department for International development</td>
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<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GEMI</td>
<td>Global Environmental Management Initiative</td>
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<tr>
<td>GoK</td>
<td>Government of Kenya</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Human Immune Virus/ Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IRC</td>
<td>International Rescue Committee</td>
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<tr>
<td>JCC</td>
<td>Journal of Corporate Citizenship</td>
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<tr>
<td>KCB</td>
<td>Kenya Commercial Bank</td>
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<tr>
<td>KENGEN</td>
<td>Kenya Electricity Generating Company</td>
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<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
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<td>KNDR</td>
<td>Kenya National Development Report</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
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<td>RoK</td>
<td>Republic of Kenya</td>
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<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>TNC</td>
<td>Transnational Corporations</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>Acronym</td>
<td>Full Name</td>
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<tr>
<td>UNECA</td>
<td>United Nations Economic Commission for Africa</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organizations</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children Fund</td>
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<td>WHO</td>
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CHAPTER ONE
INTRODUCTION

1.0 Background of the Study

Corporate Social Responsibility had its origin in the 1920s but it was until the 1970s that organizations began to integrate the concept into their business operations (Carroll, 1999). This concept can be drawn back to as the 17th century, even though the manner in which people view the connection between corporate and the public in which they are located and thus defined Corporate Social Responsibility, has changed and transformed (Henriques, 2003; Lantos, 2001; Carroll, 1999).

Carroll (1999) noted that the footprints of Corporate Social Responsibility (CSR) were evident throughout the world and societal views of CSR were far ranging. Over the years, public awareness about CSR had grown tremendously, a phenomenon that had been attributed to environmentalism and social movements that have led most communities demand that organizations located among them accounted for the support given to them by the communities.

At the turn of the 21st century, the arrival of Millennium Development Goals (MDGs) in 2000 motivated many communities to start perceiving CSR programs in terms of their impact on those goals. Consequently communities increasingly perceived investors as partners in the fight against social vices such as poverty, hunger and disease. At the lapse of the MDGs in 2015 there came the Sustainable Development Goals (SDGs) that have a focus on social vices like poverty, hunger health and education among others.

Today communities and the world in general, has faced crisis in social vices with poverty being one of the leading and greatest threat to security and Sustainable development. The entire international community now has a focus on poverty reduction embodied in its commitment to achieving the Sustainable Development Goals. They therefore resolved to “tackle the root cause of poverty and be united to make a positive change for both people and planet”, (United Nations Development Program, 2016).

Developing countries had witnessed rising differences in income, global environmental problems, rising social inequalities, developing countries had been witnessed and these problems has posed various challenges for the private sector (Levy and Kaplan, 2007).
Therefore the private sectors are now forced to take responsibility of the societies in which they exist. Besides, they are the seen best to make positive contributions to society and take the lead role in the improvement of the well-being of the society (Visser, 2006, p. 31). These called for accountable corporate practices and business charities that are usually enclosed as CSR in any company. (Visser, 2006).

The main role of business is producing goods and services that fulfill a need in society. Therefore the emergence of CSR has been triggered by a push from the public to have businesses more accountable in the environment in which they exist. In Africa, companies have found themselves taking part in developments that may seem much unrelated to business in which they are involved in, like building classes for schools, supporting student’s tuition at different levels, digging boreholes and opening clinics (Maya 2010).

Extreme poverty has always overwhelmingly in rural zones. The majorities of the poor who live in rural parts and depended on agriculture and agriculture related small industries, the environment and its services for a living. The UNDP, (2010) report developed three dimensions of Human Development Index (HDI); health, education and income. Of these dimensions highlighted in the report, access to water by people could improve or reduce its (poverty) severity.

The report further stated that there was more water available in the world for agriculture, domestic purposes, and for industrial purposes; the problem was that some people especially the poor were systematically excluded from access by their poverty. Although it was a well-known fact that life and commerce could not exist without water, the relationship between access to adequate supplies of water and poverty reduction was less understood UNDP, (2006).

This study demonstrated the relationship that existed between factors (that define poverty) such as income, education, food availability, access and water quality with changes in household poverty and quality of life. Poverty was defined by factors or indicators that tended to monitor trends and changes over time. These indicators were essential for designing especially poverty reduction programs and outcomes. They provided a means of providing feedback for comparing progress across different countries and were needed for evaluating results of initiatives.
According to World Bank Development Indicators (2008), social indicators tabulated against poverty included, education (literacy, expenditure on education), and access to portable water and of which the study chose education, income and food security as the indicators of poverty.

1.1 Water and Poverty Reduction

Water is one of the renewable natural resources. Once the water is overused or polluted, it could not be replaced thus “Water is essential to all forms of life and must be protected as a public good and human right” (Nyangena 2008: 119).

Water is a crucial quality for socio-economic progress and development. It is crucial in health improvement, productivity and well-being of the human population as both its quality and quantity was significant in most social-economic activities (UNESCO 2009: 80).

WHO/UNICEF 2006 acknowledges that Sub-Saharan Africa has remained the area of utmost concern in achieving this target. From 1990-2011, people with improved water access in this region has increased with 24% (WHO/UNICEF 2010), figures for Kenya showed the same tendency. Provision of safe and clean water should be top in addressing issues of the region, where Kenya is included. When the available water is of poor quality, it often leads to more problems including water-borne diseases.

According to WHO/UNICEF, 2000a, rural people worldwide have a problem of acquiring adequate and good quality of water, a similar trend is exhibited in rural Kenya. 31% of the rural residents compared to 87% in the urban areas have access to clean water and more than 80% of Kenyan people live in rural areas, (WHO/UNICEF, 2000b).

The Human Development Report (2006) stressed that the demand for water tops the crisis list for the poor. It stated further that one in three living on less than US$1 a day and almost two in three people who lacked access to clean water survived on less than US$2 a day, (UNDP 2006).

(Mokgope & McGranahan 2006).

Mokgope and Butterworth, 2001, identified the following categories of water use by rural societies; human consumption needs like drinking, cooking, sanitation and hygiene; Economic undertakings like for food production, brick making and income generating activities like hair dressing; other activities; mainly religious or environmental significance.
Access to safe water was likely; to increase school attendance of children especially the girls; reduce the in search for water; reduce water borne diseases, child morbidity, expenditure on water (income) leading to improved household’s health conditions.

Studies done in Kenya confirmed those general observations. For instance, households in the highlands of Western Kenya with improved access to water reported time savings, improved health, cleaner clothes, as well as increased production of tea seedlings, milk and vegetables (Were et al., 2006). A study in Nakuru town (Kenya) showed that average crop harvests substantially increased when irrigation was practiced. Moreover, the time, energy and resources spent on some of the activities linked to poor access to water could be used on such and other productive economic activities, especially for women (UN-Habitat 2008).

1.2 Corporate Social Responsibility and Poverty Reduction

The prospective of Corporate Social Responsibilities to contribute to reduction of poverty and had long been recognized (Porter and Kramer, 2006). More than ever, it was clear that government alone could not solve the most pressing social problems of the world poverty. Civil society and private sectors must create lasting solutions to those challenges.

For the purpose of this study, European communities, 2001:4 defined CSR as; the voluntary integration of ecological, societal and human rights respects into business.

There are various definitions of CSR, and the numerous actions that the concept had been used to define, Blowfield & Frynas, (2005) considered the idea to a variety of philosophies and practices. Companies have found it difficult to have policies that govern CSR due to the discretionary nature of the concept. Thus the companies have decided to add what they ‘feel’ is right to their CSR policy.

Paying attention to environmental issues, involving the communities in which they operate are some of the justifications behind the CSR policies and programs (Banerjee, 2008). Before the 1990s, the concept of CSR was implemented by specific companies, in the late 1990s; the role was taken over by international organizations like the World Bank. The view of development being principally of money making is becoming of less important with much importance shifting to social scopes in which the adoption of the Millennium Development Goals focusing on issues like poverty eradication.
1.3 Statement of Research Problem

In spite of efforts in recent years by the central government, local government, non-governmental organizations, community based organizations and international organizations, poverty levels continued to rise whilst poverty reduction remained a formidable challenge to development efforts in most countries (DFID, 2003). The access to water has remained a challenge in Nyakach Division in Kisumu County because it is a semi-arid area of Kenya. The County has experienced drought over the last 50 years which have had a negative impact on the standards of living of the communities (GoK, 2013). Its population has increased rapidly over the years with an estimated growth of 4.5%. The growth has led to the government to struggle to keep up with the dwellers pressure on water resources for agriculture, land and energy uses.

West Koguta Sub-location residents depend on water from River Sondu which is highly polluted (Kibichi et al., 2007; and Masese et al., 2009b). River Sondu is used by the Electricity Generating Company (KenGen) for hydroelectric energy production at the Sondu Miriu Dam and hydroelectric power station. Also there were numerous agricultural, industrial and household water use activities in the downstream.

Previous studies indicated that there was prevalent poverty (80%) in Upper Nyakach division (CBS, 2003). In response to this development challenges, KenGen through its CSR program has been implementing local development projects in the sectors of water, environment conservation, health, education and sports.

Since the year 2011 in the environment conservation sector, KenGen has been planting trees, in education sector, awarded scholarships to both secondary and university students. Health sector, KenGen has boosted the Faraja trust, home based care program for people living positively with HIV/AIDS, caring and support for orphans and vulnerable children. In water sector, it has been undertaking projects in donating water pipes to water projects like the Narasha eseneto in Kajiado, Drilling boreholes to residents of Nyakach, Kasipul Kabondo, Sondu and Karachuonyo constituencies.

Although these KenGen projects have contributed to achievement of MDGs in general and poverty reduction in particular, there was little documented evidence as to what extent to this had actually happened. This study analyzed the impact of KenGen CSR water projects on household
poverty reduction of the target population of West Koguta Sub-location using income, food security and school attendance and enrollment rates as some of the key indicators to poverty reduction. KenGen has implemented a total of 7 (boreholes) water projects in West Koguta Sub-location since the year 2011 which has affected the lives of 2,486, households (1999, census) in the area. Drawing on evidence from members of the affected population, the study generated evidence on how the CSR water projects have addressed poverty in the area.

1.4 Objectives of the Study

1.4.1 General objectives of the Study

The overall objective of the study was to assess the impacts of CSR water projects on household poverty reduction in West Koguta Sub-location, Kisumu County.

1.4.2 Specific objectives

The specific objectives of the study were to:

i. Identify effects of CSR water project on household food security in West Koguta Sub-location;

ii. Determine levels of household income before and after implementation of CSR water projects in West Koguta Sub-location, and;

iii. Compare and contrast school attendance and enrollment rates before and after CSR projects in West Koguta Sub-location.

1.5 Hypothesis

\[ H_0: \] The CSR water projects have no impacts on rural household poverty levels in West Koguta Sub-location.

\[ H_1: \] The CSR water projects have impacts on rural household poverty levels in West Koguta Sub-location.

1.6 Significance of the Study

Poverty reduction is one of the millennium development goals as well as a strong component of economic pillar in the Kenya Vision 2030. Kenya is not an exception in the battle poverty
reduction and even putting enormous resources to reduce poverty, the battle has remained unsuccessful for several decades (Oluoko-Odingo, 2009).

80% of Kenya is arid and semi-arid. Agriculture is the main Kenya’s economy, providing about one third of the country’s income (World Bank, 2010). When a drought occurs, this has severe implications on the entire economy and people’s livelihoods. Thus the research has sought to yield information that will be relevant, to the Non-Governmental Organizations (NGOs), Government of Kenya, corporate firms who practice CSR and other researchers in the field of water and poverty reduction efforts in rural areas. The information will enlighten the policy makers and institutions of learning and management to be able to understand and manage the CSR water projects in sustainable manner and the impact it has to household poverty reduction efforts.

1.7 Definition of terms

**Poverty Reduction:** It is a deliberate process of targeted interventionist policies, program and projects aimed at reversing the trends of all forms deprivations (Kirui, 2003).

**Household poverty:** It’s the inability of a family to meet its basic needs or when a family’s total income is less than a family’s threshold.

**Corporate social responsibility (CSR):** The voluntary integration of environmental, social and human rights considerations into business operations over and above legal requirements and contractual obligations. (European communities, 2001:4)

**Household** is used within the definition by Shaner *et al.*, (1982) as “a social organization in which members live and sleep in the same place and share meals”.

**Food Security:*** According to World Development Indicators (2008), food security has been defined as the capacity of a household to procure a stable and sustainable basket of adequate food.

**Water access:** A household is considered to have access to improved water supply, if it has sufficient amount of water for family use, at an affordable price, available to household members without being subject to extreme effort, especially to women and children. (UN-HABITAT, 2005).
1.8 Scope and Limitation of the study

The study was conducted in West Koguta Sub-location found in Thurdibour location, West Nyakach in Nyakach Constituency, Kisumu County. The Study focused on the impacts of KenGen’s CSR water project on household poverty reduction in West Koguta sub-location. The study was limited to household heads who were the beneficiaries of water project to meet the objectives of the study which included; Identify effects of CSR water project on household food security in West Koguta Sub-location; Determine levels of household income before and after implementation of CSR water projects in West Koguta Sub-location, and Compare and contrast school attendance and enrollment rates before and after CSR projects in West Koguta Sub-location.

During the data collection process the researcher encountered quite a number of challenges the research was conducted under a financial constraint due to inadequate resources. Majority of respondents consisted of people with low literacy levels. The researcher countered the problem by involving research assistants in carrying out the study such that the illiterate were assisted by the research assistants to understand the issues sought by the study.
CHAPTER TWO  
LITERATURE REVIEW

2.0 Poverty

Ayako (1997), addressed poverty as essentially lacking the basic requirements of existence and opportunities for human growth. Poverty expresses itself in numerous forms; this makes its description more difficult. It’s prevalent among all socio economic groups threatening the very foundation of society (Ayako, 1997).

Poverty reduction has dominated many forums in the world. Consequently, at the United Nations 2013 Summit in New York, world leaders renewed their obligation to anti-poverty targets and agreed to embrace new development Goals at 2015 Summit (UNDP 2014). In addition the 2013 Global Poverty Reduction and Development Forum in Beijing were held in observance of the 21st International Day for the Eradication of Poverty (UNDP 2013). Also, a United Nations development cooperation forum in New York kicked off with emphasis on creating developments in sustainable development and poverty reduction through partnerships among civil society organizations, countries, and the private sector (IPRC, 2012).

117 nations agreed on a declaration and program of action to eliminate poverty after the Summit on Social development which was held in Copenhagen in 1995. Poverty is the lack of access to productive resources, social amenities and markets in the current Poverty Eradication Strategy Paper (Republic of Kenya, 2001). Poverty has been a difficult for both developing and developed countries (Jiaqi et al., 2004).

Despite last century experienced great development in poverty reduction progress and well-being of the members, poverty still remains an international problem of enormous magnitudes. 1.2 billion of the world’s population live on less than US $1 a day and 2.8 billion live on less than US$2 a day (UNDP, 2005). Poverty has been multidimensional; it is dynamic, multifaceted, gender and location specific occurrence. The social group, season, location and country make the design and nature of poverty to vary. (World Bank, 2000).

2.1 Poverty in Kenya

Poverty is one of the utmost challenges which the world is facing in its development efforts. According to Abbey, (1999), poverty lies at the centre of all the major problems that the
continent experiences. The decline in economic growth, coupled with increased inequality in the distribution of income has led to a rise in poverty levels. Poverty in Kenya could be estimated at 11.3 million (44.8% of the total population) by 1992. By 1997, it rose to 13.4 million (52.3%) and further in 2000 to 17 million (56% of the population) thereafter in 2005/2006 it declined slightly to 46%. This nevertheless still translated to nearly 17 million Kenyans living in poverty and taking into account the post-election violence of 2008 and the drought that hit the country thereafter, poverty levels have remained stubbornly high to date. Difficulty in getting to medication facilities; inadequate food; increased unemployment and underemployment; high literacy levels are some of the experiences that constituencies heavily affected by poverty face. Children, women, young and unemployed youth and disable people are some of the groups of people worse affected by poverty. (PEC, 2009)

The alleviation of poverty continues to evade many governments in Africa, of which of Kenya is included. Despite the use of many development approaches and huge budgeting allocations towards the provision of basic needs, many people still live in abject poverty. KNBS, (2008) estimates, for instance, that over 11 million people in Kenya live in absolute poverty.

2.1.1 Rural Poverty

Poverty is most experienced in rural areas in most of the developing countries including Kenya. Poverty in rural areas internationally translates to approximately 63%, 90% in some nations like Bangladesh and in Sub-Saharan Africa, it ranges between 65% and 90% a report by Khan (2001) and Etim (2007). Between 1992 and 2008 the number of rural poor in Africa increased to reach over 210 million people (World Bank, 2008).

In rural areas poverty is high (49.1%) compared to 33.7% in urban areas (RoK, 2008). The average national poverty incidence stands at 56%. Between the years 1997-2005 rural poverty line was established by National surveys KShs 1,239 and KShs 1,560 per month respectively. Currently the poverty line for the rural areas has lower than the international poverty line of US$ 1 per day. Moreover, evidence shows that the lower poverty line for the rural poor has not improved in the last 15 years in a majority 18 of Sub-Saharan countries; Kenya included (World Bank, 2009; Barbier, 2009). The main problem lies in the fact that regardless of the high poverty rates in Kenya there is little documentations on policy related factors of rural poverty, making it very challenging to effectively establish and implement sustainable anti-poverty policy program.
Levels of poverty vary considerably across regions, countries and within countries. Livelihoods are derived from small scale farming, livestock keeping and its production, fishing, wage labor from agricultural activities, wage from non-farm activities.

There are Poor infrastructure, high illiteracy rate and inadequate resources which contribute to rural poverty. The fact that they depend heavily on agricultural production put them more vulnerable to disasters like water scarcity or drought. The chief causes of poverty in households are sickness, poor harvests, or conflict and natural disasters (Rural Poverty Report, 2011).

Movement out of poverty is related with an individual creativity and innovativeness. It is associated with features such as literacy levels, possession of physical assets, and depends on good health. Aspects such as economic development, opportunities, infrastructure, and good governance are all important, of which they are unequally distributed within countries.

2.2 Water and Poverty Reduction

Water is a life-threatening issue to all aspects of development; water is significant in protecting the environment, reducing hunger, facilitating tourism and investment, women empowerment and girl’s education.

There are a great percentage of people who live in areas where there is water scarcity. In addition, 1.6 billion persons live in areas where the water available cannot be used in productive activities, where even though water is available, human, and financial capital limit access to water (World Bank, 2012). This has led to consequent biodiversity loss and an exceptional transformation of freshwater ecosystems leading to food scarcity.

Although ‘water is life’ in the true sense of it, by 2006, in developing countries an estimation of 1.1 billion persons had undersupplied to clean water (UNDP, 2006). By 2010, one sixth of the world inhabitants did not have access to safe drinking water of which 80% lived in rural areas. In Africa water is one of the greatest causes of poverty though overlooked.

Water is progressively more acknowledged as a major component in economic growth and poverty reduction since it’s a key input to all human livelihood activities.

Several recent papers bearing in mind the prominence of water in meeting the MDGs and now SDGs have highlighted direct and indirect contribution of clean water to all the goals and a majority of the targets. National economies could be improved by investing heavily in water
sector and its management. Pressures on water may become worse in the near future due to worldwide deterioration of the surface and underground water sources on which people depend on.

Internationally, there have been a series of important global meetings and regional conferences deliberating on poverty, including The World Social Summit 1995, Recife conference 1996 and the Habitat conference, 1996. Though, the latter two focused on urban poverty, which is growing as a result of the rapid urbanization and poor economic performance that the developing countries are experiencing (Hardoy, 1990). In Kenya, poverty reduction is a priority in policy objectives and has been in plans of the government, government policy documents and all session papers. (Nafula et al., 2005).

In a study done by Asian Development Bank (ADB), (2010), revealed that projects significantly improved household’s access to water supply, reduced drudgery among the lowest socio-economic groups, improved high school attendance of girls in middle socio-economic group and in-creased leisure time for female members of households.

Water management systems entail huge money allocation, good authority, institutional reforms and capacity building forums. Therefore progresses to sustainable water use must be fundamental to schemes for poverty reduction.

2.2.1 Water and Food Security

According to World Development Indicators (2008), food security has been defined as the capability of a household to acquire a stable and sustainable basket of sufficient food. The world yields enough food to feed everyone with at least 2,720 calories per day, which was above the Food and Agriculture Organization of the United Nation’s (FAO’s) recommended minimum of 2250 (FAO, 2003a). Paradoxically food insecurity remains internationally widespread and stubbornly high (FAO, 2006). In 2003, the FAO estimated that there were 842 million undernourished (defined by FAO, 2003b as a situation of chronic food insecurity) people worldwide.

In Sub-Saharan Africa, the number of undernourished people has been increasing: from 169 million in 1992 to 206 million in 2003, and by 2015, the FAO (2006) estimates that the region
could be home to around 30% of the undernourished people in developing world, compared with 20 % in 1992.

Food insecurity in Kenya was a common issue in the rural areas. In 2000, 51 % of the rural Kenyan households were food insecure, compared to 38 % in urban areas (GoK, 2001). Agriculture was and will continue to be a vital sector for many poor people in the rural areas. Limited and unreliable access to water was a determining factor in agricultural productivity in many regions. Rainfall variability that has increased with climate change is expected to undermine the agricultural sector. Improving the efficiency of existing irrigation and extending the irrigation area where possible, extending rainwater harvesting and improving on-farm water management in rain fed agriculture, crop diversification and improvements to crop strains are some of the Key strategies that should be employed.

2.2.2 Water and Income

Water is an important contributor to all kind of economic activities whether of large or small scale. Therefore access to water is a vital stepladder out of poverty. Lack of enough water most likely make the rural poor not only fail to satisfy all their need but also face more cost in accessing it. It leaves them spending more time in search of water, sustaining additional costs for boiling and storing of water

The lack of affordable access to water makes a household more susceptible to diseases thus affecting their labor productivity; this may hinder and eventually reduce their income generating activities.

There is a national dwindling in the availability of clean water per capita which will increase the economic cost of water and, in a situation of scarcity, limit the potential for economic development.

2.2.3 Water and School attendance and Enrollment rates

"Education is a human right with immense power to transform. On its foundation rest the cornerstones of freedom, democracy and sustainable human development."

- Kofi Annan, 7th Secretary-General of the UN
According to the World Bank (2001), education plays a significant role in human development since it empowers people by inculcating knowledge and abilities needed to improve the income earning potential and in turn quality of life. Education is a keystone to economic and social development.

According to UNDP 2006 report, about 443 million school days are lost every year, as a result of water related diseases. Lack of access to clean water causes disease which affect school attendance eventually these children are trapped in the cycle of poverty even in their adulthood. (Tay 2005; UNDP 2006, 6).

2.3 Concept of CSR and its adoption in Business

Steiner and Steiner (2006) traced the concept of CSR to the philanthropic work of business owners. They argued that the concept of CSR was first introduced in 1954 in Howard R. Bowen’s book entitled, Social Responsibilities of the Businessman; where the author stated that managers have an ethical duty to consider the wider social impacts of their decisions, and warned that the corporations that fail to encourage the broad social contract should cease to be regarded as being legitimate.

According to Whitehouse, 2006, there was no universally accepted single definition of CSR. Although CSR, as above-mentioned, was historically believed to concern only the idea of philanthropy, it has now been recognized that CSR has developed into an umbrella term which encompasses such concepts as business ethics, corporate accountability, sustainability, socially responsible investing (Ingley, 2008), corporate social performance (Wood, 1991), and corporate community involvement (Nwankwo, Phillips, & Tracey, 2007; Seitanidi & Ryan, 2007).

According to Masaka (2008), the different views of the term, were due to diverse social and societal anticipations across global perspectives. He however insisted that, despite the body of interpretations of the concept, the concept of CSR should go beyond the quest to maximize corporate profits, since they play a crucial role in solving issues in the societies where they are located (Masaka, 2008).

Flatt (2010) argued that CSR as practiced in Africa was different from CSR as practiced in America or Europe. This was because CSR has different driving forces in the different regions.
The level of environmental and social awareness among consumers and employees in such regions was not at the same intensity and expectations about how business should operate.

In Africa, companies are so embedded in the fabric of society in which they operate. Consequently, there was a large difference in the impact of CSR in Africa compared with more developed countries.

### 2.4 CSR and Poverty Reduction

The private sector is sometimes seen as the enemy of the poor (Department For International Development (DFID), 2003) despite its significant role on economic progress that is essential to poverty reduction through deliberate policies and practices. The importance of socially responsible business has been framed by one speaker as follows;

*“Foreign investors can contribute to economic growth through capital, technology transfer, access to specialized skills, and through their ability to integrate production across several countries. Those businesses that are committed to socially responsible practices can have an even greater impact. They can reinforce the poverty reduction strategies of the county in which they are operating, contribute to environmental sustainability and promote core labour standards and human standards”*

Other authors argue that lots of organizations are adopting CSR as an approach to reduce the negative social and environmental impacts of business as well as to maximize the positive impacts of their investments, especially in developing countries (Blowfield, 2005; Zadek, 2001).

A distinction has been drawn between CSR seen as philanthropy as opposed to CSR being viewed as a core business. In the former viewpoint companies conduct their business unrestricted by wider social concerns and then make charitable donations unrelated to the business to select worthy causes while in the latter viewpoint, the accent was upon operating the core business in a socially responsible way which seeks to enhance the competitiveness of the business and maximize the value of wealth creation to society.

By and large CSR in Africa was on poverty alleviation (Fox, 2004; Kivuitu *et al.*, 2005, Blowfield, 2005; Jenkins 2005, Blowfield & Frynas, 2006; Prieto-Carron *et al.*, 2006).

Carroll 1999, society expects businesses to go beyond mere compliance with law and regulations; they are expected to recognize and respect evolving ethical norms being
institutionalized in society. CSR has arguably remained a North concept and Fox (2004) points out that it was essential for CSR to be included in the development process in the south. In this regard the creation of a conducive environment for CSR in the south was needed and a public sector approach was called for to integrate business in the development agenda.

In Africa however, the tendency has been that you find mostly the subsidiaries of Multinational Companies that engage in the large CSR projects, which are mostly seen as philanthropic initiatives. Such examples are EABL (East African Breweries Limited) through the EABL Foundation, Safaricom and lately there has been the emergence of Kenyan owned companies such as Kenya Commercial Bank through the KCB Foundation. Some examples of organizations in Kenya that are undertaking CSR in Kenya are, Unilever which is a Global Fast Moving Consumer Goods Company that has branches all over the world.

In Uganda, the impact of water, sanitation and hygiene provision on micro entrepreneurs lead to reduced cost, increased production and sales, increased demand of new water related enterprises.

In Rohtas district of Bihar State in India, only 59% of schools have drinking water facilities and 11% have toilets. Motivating factors like provision of drinking water and toilet facilities significantly enhance the enrollment of girls in schools. (IRC, 1997)

2.4.1 Corporate Social Responsibility in Kenya

Kivuitu and Fox (2005) are the pioneers of CSR in Kenya. Although the term was comparatively new, the concept of CSR was established in Kenya and many corporates were already considering the social vices that affect in communities in which they were located in their CSR programs. They made contributions justified by the concept of giving back to the society in which they were located. (Hopkins, 2007, p. 175).

In Kenya, surveys suggest that the cause receiving the highest proportion of company contributions is health and medical provision, and donations are also directed towards education and training; HIV/AIDS; agriculture and food security; and underprivileged children. The picture in Zambia is similar, with surveys highlighting donations to orphanages as the most common activity identified as CSR.

Safaricom Ltd where its main areas of focus were in, education, Community development, Environment, Health, disaster funding and arts, Culture and sports. the company has established
a foundation through which all CSR activities are carried out and any efforts by staff are matched by the company.

Kenya Wildlife Service and Kenya Airways have combined their efforts to build classrooms and provided water near homesteads of the communities living adjacent to the National Parks. They have also built electric fence around the protected areas as a way of ensuring safety of those communities.

East Africa Breweries Limited has a number of projects ranging from school bursaries, provision of water, and environmental conservation like planting of trees in Ndakaine dam and sports sponsorship.

Kenya Commercial Bank (KCB), through the KCB foundations where it was committed to supporting the development of communities among where it operated its business. KCB offered support in the areas of health, education, environment, entrepreneurship, water and sanitation, welfare and sports. Their staffs have invested in the future of Kenya by planting trees in 56 forest sites across Kenya in the aim of contributing to improving the water catchments. At branch levels it has supported a number of local needy institutions, school events, charity walks and sponsorship towards deserving causes.

Kenya Electricity Generating Company (KenGen) continues to dedicate a part of its profit to social responsibility activities aimed at enhancing the living standards of those living close to its installations and all Kenyans in general. Area of focus includes school bursaries to secondary and university students, provision of water in Sondu, Karachuonyo, Kasipul-Kabondo and Kajiado areas, environmental conservation and health care provision.

**2.4.2 KenGen’s CSR Projects**

The core pillars of KenGen in its part of CSR programs include Education, water and sanitation and environmental conservation, while the secondary pillars include sports, health, economic empowerment, culture and humanitarian aid.

Regarding the Environmental sector, KenGen has actively participated in environmental protection initiatives aimed at conserving catchment areas and other delicate ecosystems. The Company also participated in tree planting activities and distributed free seedlings in various parts of the country.
In Support to Other Initiatives, The Company has also provided support to cultural and tourism initiatives which included the Lamu Cultural Week, Kenya Tourism Week and Nyakach Cultural Day. In addition, the Company sponsored the National Energy Conference and the Energy Awards organized by the Kenya Association of Manufacturers. Other sectors that the company has greatly been involved include health where it has supported hospitals like Gertrude’s children hospital and the Kenya paraplegic society.

In the water sector, which is the area of focus in this study, One of KenGen’s CSR program areas of focus is the provision of water to communities through the establishment of water collection points. The company’s projects include the supply of water to Iseneto school and community in Kajiado district. It has established water points in Sondu, Karachuonyo, Kasipul-Kabondo areas; this formed the basis of the study.

Corporate Social Responsibility (CSR), the set of standards to which a company subscribes in order to make its impact on society. The environment in which people live has a large influence on the livelihood options and in turn their welfare. There is less documentation on how the CSR projects have impacted on poverty levels in the recipient community. The study sought to fill that gap in relation to the CSR water projects.

2.5 Conceptual Framework

UNDP, (2006) report stated that deprivation in water and sanitation produced multiplier effects. These included some of the followings costs for human development. Some 1.8 million children die each year as a result of diarrhea globally. The report further revealed that millions of women spend several hours a day collecting water and lifecycles of disadvantages affecting millions of people with illness and lost education opportunities in childhood leading to poverty in adulthood.

Pruss-Ustan, (2008) found out that nearly 10% of total burden of diseases worldwide could be attributed to unsafe water, sanitation and hygiene, and the associated disease claim 3.6 million lives annually. As Bartram, (2005) says that access to improved water was important because it acts as the foundation for healthy communities, and results in significant health, economic and social gains.

Access to a safe water supply has been an indicator of levels of poverty. Water supply is an important component of one internationally accepted poverty index. The corollary that more
access to water contributes to ‘less poverty’ may only hold if other conditions such as lasting health benefits or increased productivity are fulfilled.

**Figure 2.1: Impact of Water access on Dimensions of Poverty**

![Diagram of Impact of Water access on Dimensions of Poverty]

- **Positive**
  - Increased yield
  - Decreased morbidity
  - Increased income
  - Proliferation income generating activities
  - Increased school attendance
  - Food security
  - Healthier population
  - Reduced income poverty
  - Improved income earning
  - Increased literacy level

- **Negative**
  - Salinization of soil due to irrigation - food insecurity
  - Contamination by users
  - Conflict between users

**Source:** Researcher 2015

Provision of clean water by any company as part of their CSR have had effects and eventually long term impacts on the households in the area being implemented. For instance, access to clean
water leads to improved yields of the crops being cultivated (maize, beans, cassava) which in turn leads to increased food security in the area when they harvest, consume, and store the surplus to be used during the off season like planting seasons. Care of the animals and selling and earn extra cash from the surplus and animal products.

It also leads to decreased morbidity rates as a result of reduced incidences of diseases, this leads to a healthier population. Water scarcity or less water affects sewage system because it affects its flow and therefore becomes habitat or breeding sites of disease causing microorganisms like mosquitoes. Clinics, local restaurants, public places become places of inconvenience, and this creates loop holes of food and water contamination hence incidences of diseases.

Better health for the people increases their potential to earn income from agricultural activities directly; healthier individuals increase their "effective" hours spent in wage and farm work; directly, by reducing the amount of time spent taking care of the sick. Economic activities such as home gardens, livestock, home based manufacturing (e.g. pottery, brick making) and services (e.g. laundries, hair salons, restaurants) directly improve the welfare of the community; indirectly, time gained from accessing nearby water from boreholes are invested in income earning occupational livelihood activities thus having the ability to provide basic domestic household needs.

Improved access to water also results in increased enrollment rates in schools as a result of reduces time and distance spent in search of water which will eventually results to a literate population who can made decision on other importance issues that will help them reduce poverty cycle in the area.

Water provision for irrigation may however an anti-poor element has in that poor management of irrigation systems can lead to water logging, salinization, and change in biodiversity reducing the possibilities of alleviating poverty. The water can also be contaminated (fecal contamination) by the users, either through digging a pit latrine nearby. The water too can lead to conflicts between user, some may want to use it for irrigation, house use, animal use which may result into conflict hence affecting their income generating activities and even food availability.
CHAPTER THREE
THE STUDY AREA

3.0 Location of Study Area

The study area was West Koguta Sub-location (Figure 3.3) located in Thurdibour location, Nyakach constituency West Nyakach ward, Kisumu County (Figure 3.2). The area lies between latitudes 0° 17”S, 0° 2”S and longitudes 340° 04’E, 340° 49’E. The area has a population of approximately 10,869 people (KNBS, 2009). Nyakach constituency (Figure 3.2) has a total of 133,041 persons, upper Nyakach with 64,693 persons occupying 358.6 square kilometer (KNBS, 2009). The constituency lies within the Lake Victoria Lowlands and Floodplain region.

Figure 3.1: Map of Kenya

Source: Survey of Kenya (2011)
Figure 3.2: Map of Kisumu County showing Nyakach Constituency and the bordering location.

Source: Survey of Kenya (2011)
3.1 Topography and Climate

Water shortage is usually after the short rainy season in West Koguta Sub-location, with its peak in January. Rainfall reliability is during the long rains of about 700mm during the March and May and 400mm during the September to November short rains. The annual mean precipitation varies from 1200mm to 1300mm. The maximum and minimum temperatures occurred in February and September respectively which ranged between 20.0°C to 35.0°C with a mean annual temperature of 23.1°C (Baring, 1988). Nyabondo Plateau and the Nyakach Plain are the two main topographical land formations in the area.
Table 3.4: Mean Rainfall in (mm) in Upper Nyakach

<table>
<thead>
<tr>
<th>Month</th>
<th>Rainfall (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td></td>
</tr>
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<td>Apr</td>
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<td>May</td>
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<td>Sep</td>
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<tr>
<td>Oct</td>
<td></td>
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<tr>
<td>Nov</td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

Source: DO’s office, Upper Nyakach

3.2 Drainage

Figure 3.5: Drainage of Nyakach Constituency

Source: Survey of Kenya 2011
The Sondu-Miriu River was the main source of water for all purpose, when there was a shortage resident’s walk to the river to collect water, a distance of up to 6 km. Surface and subsurface water sources include Nyakach bay, Rivers West koguta, Awach Gem, River Ombeyi, Ombeyi wetlands. The Sondu Miriu Hydro-Electric Power Station withdraws water from Sondu River for its running. 7,400 ha of irrigation systems can be supported by the Sondu river. The area has a small shoreline bordering Lake Victoria. Dams, ponds, water tanks for storing rain water and streams are some of surface water sources in the area. The underground water resources, boreholes and springs are also used by the populations. However, sufficient access to water points was a major challenge with only a third of households in upper Nyakach having access within a kilometer.

The access to water has remained a challenge in Nyakach constituency in Kisumu County because it is a semi-arid area of Kenya. Many people were forced to take water from an insecure source, which was salty and dirty. Muddy water and its inadequacy often resulted to water borne diseases such as, amoeba and typhoid (Obanago, 2011). These ailments affected families negatively, thereafter impacting on income, food security and the prospective to progress (IFAD, 2011a).

According to Kenya National Bureau of Statistics (2013), around 48% of the population living in Kisumu county access water from an improved source with the majority getting there water from surface sources. The same report shows that 10% of the population lack sanitation with over 35% using unimproved sanitation services although the situation has improved. This can be attributed to many non-governmental organizations promoting safe water usage through point of use water quality improvement by use of bleach. The solution, Water guard (1.5% sodium hypochlorite), was popularly marketed by Population Services Kenya.

3.3 People and Culture

The population in West Koguta comprises mainly the Luos. Many of Luo homesteads are polygamous (Odero 1998). This contributed to unity between the family members. Polygamy provided traditional ideas and regulations are maintained.

A sense of belonging among the Luo people was enhanced by property ownership which indicated their status in the society. The Luo entered into western Kenya seventieth century and
began to spread in Siaya and Kisumu district in 18th Century. Luos are Lake Nilotes and those of Nyakach practice farming and fishing.

3.4 Economic Activity

The main economic activity in the area was agriculture, engaging 60% of the total residents in the area and providing over 52% of the family’s earning (Kenya 2011 and 2009). Grazing and cultivation of maize, beans, cassava, millet, and sweet potatoes were practiced in many parts of the area. Fishing was also a common practice in the area in the lake and trading (Kibwage et al., 2007; Kairu, 2001).

Livestock production was also practiced in the area. Goats, sheep and poultry are also kept. Some members practiced fishing along river Sondu and in Lake Victoria. Constraints to greater economic activity in the area included Poor breeds, low productivity and inadequate control of livestock diseases, lack of water for animal use and poor fishing methods with very little formal sector employment in the area. However a small but significant proportion of the household also engaged in small-scale business activities such as fishing, basket weaving or pottery.

3.5 Geology and Soils

The geology in the area is dominated by relative flat bedrock in the plains and granite as the major rock in the escarpment. Upper Nyakach region has basic, intermediate and acidic igneous rocks the Precambrian rocks. The area is covered of predominantly fine textured black cotton clay soils. The foot slopes are dominated by highly weathered arenosols and luvisols. The soils were developed in sediments deposited when the lake water reached the escarpment of the Nyabondo Plateau (Jaetzold & Schmidt 2009).

The dominant vegetation consists of short grass with sparse bushes, trees predominantly of acacia species and other semi-arid species in the drier parts. Koguta forest is gazetted forest covering 320.5 ha. The escarpment incorporates the Koguta reservoirs which contain thickets together with minor portions of eucalyptus species.
CHAPTER FOUR
RESEARCH METHODOLOGY

4.0 Introduction

This chapter entails the methodologies that were used to implement the study. The chapter comprises of research design, target population, sample design, methods of data collection, data analysis and presentation.

4.1 Research Design

Case study design was employed by the study; Case studies emphasized detailed contextual analysis of a limited number of events or conditions and their relationships (Ibid). In the study, the particular was KenGen’s CSR water projects, their impact on household poverty in an African social organization setting called West Koguta in Kenya’s Kisumu County.

4.2 Target Population

Target populations were the entire collection elements which one had wished to make some inferences (Mugenda and Mugenda 2003). The study targeted the household heads, CSR program officials, school heads and tribal leaders. West Koguta sub-location has a population of 10,869 persons, 1110 households and an area of 23.0km$^2$ with a population density of 473 persons per km$^2$ (KNBS, 2009).

The unit of analysis was the household with a household head (man or woman) as the respondents. A household head was defined as the individual charged with the obligation to protect and provide for their family members.

4.3 Sample Design

4.3.1 Sample Size

Mugenda and Mugenda (2008) defined a sample as a representative part of a population. Thus by using a sample, one could be able to learn more about population not necessarily studying the whole population. Limitation of time, funds and energy required, a study could be carried out from a carefully selected sample to represent the entire population (Wersma, 2005).

As proposed by Peters (1996) and Neumann et al., (2003), sample ratio of 30% was obtained due to due lack of finances and time to cover the whole area. A ratio of 30% as presented in Table
4.1 was the best because it neither provided a larger size to cover nor a smaller size to provide inaccurate data.

**Table 4.1: Determination of Sample Size**

<table>
<thead>
<tr>
<th>Sub-location</th>
<th>Targeted villages</th>
<th>Target population (households)</th>
<th>Proportional contribution of each village to the sample size (using 30%).</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Koguta</td>
<td>Kowour Anganda</td>
<td>70</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Kajaka</td>
<td>60</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Katieno</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Kapila Kaguya</td>
<td>60</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Kowour Okudho</td>
<td>60</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Kokudho</td>
<td>90</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Katombo kindu</td>
<td>70</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total villages</strong></td>
<td><strong>460</strong></td>
<td></td>
<td><strong>Household survey sample size=138</strong></td>
</tr>
</tbody>
</table>

**Source:** Field data 2015

**4.3.2 Selection of members of the Population into the Sample**

**4.3.2.1 Selection of Household Survey Sample**

Purposive and systematic sampling procedures were used to obtain a household sample for data collection. West Koguta Sub-location has 16 villages (Chiefs office, 2015) with 1110 households. The study focused on a purposive sample of 7 villages in which KenGen CSR water projects were being implemented at the time of this study. The 7 villages purposively selected for study had 460 households (see Table 4.1), who were the beneficiaries of KenGen CSR water projects.

In order to select actual households into the survey sample, the following procedure was applied: First, randomized lists of households for each of the 7 study villages were developed using ‘Nyumba Kumi’ databases obtained from the local chief’s office. Second, 138 households (30%
of the 460 households) was calculated as the household sample size. Third, using the randomized lists of households, a proportion of households were systematically selected from each of the 7 villages into the household sample using every 3rd household as the sampling interval. Fourth, the actual households selected into the household survey sample were identified by village elders. Finally, the researcher carried out a survey (using a questionnaire) on the identified households.

4.3.2.2 Selection of Key Informant Interviews (KII) Sample

The population for the KII sample comprised KenGen CSR water programme officials, community liaison officer, three school heads and the three tribal elders. The study employed purposive sampling technique in order to obtain the required sample for the interview. This kind of sampling by virtue of knowledge, profession and experience of a person, the researcher to decides and sets out to find people who are willing to provide the information (Benard 2002, Lewis & Shepard 2006).

4.3.2.3 Focus Groups

Focus was applied to obtain data from beneficiaries by exploiting group dynamics. Johnson and Christensen (2004) recommended six to twelve persons per each focus group while (Langford et al., 2002) recommended six to ten. Morgan (1997) warns that focus groups with more than twelve members could be difficult to moderate for useful inputs while groups with less than six members makes it difficult to sustain a discussion.

The study obtained data using three focus groups, women, youth and men each consisting 6 members. Each focus group was constituted using community mobilizers with the assistance of the government administration in the villages. The members were chosen using criteria such as level of education, history of participation in the CSR projects, and knowledge of the development situation in the area before and after the CSR water projects. The moderator was also purposely selected based on acceptability and respectability by each focus group.

4.4 Methods of Data Collection

4.4.1 Variables, Types and Sources of Data

The independent variable of the study was implementation of KenGen CSR water project. The dependent variable was impact of CSR water projects on household poverty measured using
indicators; food availability, school attendance and school enrolment, and income levels. The focus of the study was on how the CSR water projects have influenced these indicators of poverty in the area. The study used two kinds of data: primary and secondary. Primary data was obtained from household heads, key informants, focus groups and observations.

Secondary data was obtained through review of literature and previous research work done. Published data reviewed included: academic thesis, journals, books, government articles, KenGens Newsletters regarding their CSR projects. These materials were sourced from various sources such as; University of Nairobi Libraries, KenGen’s publications and online. It also included records of schools on school enrollment rates of before and after the project. This data helped back up the data obtained from the household questionnaires and interviews.

4.4.2 Observations

According to Babbie (2007) observation is watching and recording occurrences as they happened in nature with regard to cause and effect or mutual relation. It allowed the researcher to define the existing situation using the five senses, providing a written “photograph” of situation under study (Harris et al., 1993).

Observation focused on farming activities and the crops grown as a result of the water project, status of the water pumps, types and number of animals kept by the households, visible benefits of the project such as hotels, water vending. Observed effects were in relation to the questionnaire therefore increasing validity through giving a better understanding of the impacts of water projects on household poverty levels. The researcher used field notes and digital camera to capture the observations data.

4.4.3 Questionnaire

Questionnaires are printed form which contains a set of questions for gathering information. Orodho (2004) contends that the questionnaire is a suitable method, indeed, the easiest and the cheapest way of data collection.

The study used semi structured questionnaires administered by the researcher to collect both quantitative and qualitative data from the households. 138 questionnaires were administered to household heads. Questionnaires were based on objectives of the study providing information on impacts of the CSR water projects on household’s food security, income levels and school
This information helped in assessing the impact of the water projects on household poverty in the study area. The semi-structured questionnaire allowed respondents to give their own view of the situation under investigation.

4.4.4 Key Informant Interviews (KII)

An oral interview which was a face to face encounter with the respondents was administered. In order to obtain accurate information, an interview schedule was administered to the KenGen’s CSR programme manager, assistant programme manager, community liaison officer, three school heads and the three tribal elders. The schedule was constructed in relation to the objectives of the study. There were 9 schools in the study area, and out of the nine, four schools were located near the water points thus included into the sample. This allowed the researcher to track the respondents’ responses thus be able to acquire more data and clear up vague statements. Kothari (2004) contends that interview schedule was the best because it allows room for clarification and following up of unclear answers. The researcher used this method to seek classification to some responses pertaining to as to when the project was implemented and reasons for the implementation of the water projects.

4.4.5 Focused group Interview

The study had three sets of focussed groups, the women, youth and men who provided information on household’s food security, household’s income level, morbidity and children’s school attendance rates. The moderator asked a question, giving time for the members to respond to the questions asked ensuring they don’t go out of the subject in question. Thus gave more insight on the impacts of the CSR water project to the community poverty levels comparing the before and after the implementation of the projects. Focus group data was recorded using note takers who were tasked to do so by the researcher.

4.5 Methods of Data Analysis and Presentation

Data organization started as soon as the interviews were done, in order to ensure information consistency before leaving the community. Questionnaires were checked for omissions, mistakes, errors, and entirety as well questions responded to. Once data was organized, appropriate coding was designed to capture all the information from the questionnaire. For fast, efficient and accurate data analysis, data was coded and entered into a Statistical Package for
Social Sciences (SPSS) program then various statistical methods of analysis applied to test hypothesis were done to meet the objectives of the study.

Descriptive statistical techniques were vital in understanding research work phenomena and comparisons because they are usually simpler and easily understood since they require visual examination to gain insights about the matter under investigations (Gupta & Gupta, 2006). Therefore, data was summarized into frequencies and percentages and subsequently presented in tables, charts, graphs, figures, photographs and maps.

To access the impact of the CSR water projects on rural household’s poverty, household poverty indices were measured in terms of food security, income levels, school attendance rates and enrollment rates as a result of the CSR water projects. The study measured food security by checking the new crops grown by the respondents thus increasing the diversification of crops grown, number of fish ponds constructed and animals kept. Income levels was evaluated by an increase in income levels comparing the income before and after the project, school attendance and enrollment rates was evaluated by checking on enrollment rates in the past three years and three years after the project and other indicators like distance to water points that affects children attendance rates, the group of people who used to collect water before the implementation of the water projects. The results were subjected to chi-square test to test the hypothesis that stated ‘the CSR water projects have no impact on rural household poverty in West Koguta Sub-location’.

The chi-square test is a statistical measure of the significance difference between the observed frequency and expected frequency obtained from hypothetical universe.

The chi-square tested at significance level of 0.05 was employed in validating the hypothesis. This test suited better for testing this hypothesis because all categorical variables were independent of each other and that the observations were collected and recorded on a random basis.

Chi-square formula

\[ X^2 = \sum \frac{(O - E)^2}{E} \]

\( \chi^2 = \text{Chi-square statistics} \)
E= Row total x Column total
   Grand total

O= Observed frequencies

E= Expected frequencies

All the chi-square were calculated at a significance level of 0.05

The findings obtained were discussed in relation to the objectives and formed the basis for the research’s summary, conclusion and recommendations.
CHAPTER FIVE
RESULTS AND DISCUSSION

5.1 Introduction
This chapter presents the outcomes of the study and attempts to answer the research objectives posed by the study at the onset.

5.2 Characteristics of the Sample
5.2.1 Response Rate of Household Sample
The study targeted 138 respondents, mainly the beneficiaries of the water projects. Only 127 were able to respond to the Questionnaires (Table 5.1). 100% response was therefore not achieved. 92% response rate was attained. According to Babbie (2007), any return rate over 50% can be reported, and that over 70% was excellent. Mugenda and Mugenda (2003) further asserted that in questionnaire administration, a response rate of 70% is very good and thus sufficient for data analysis, reporting and drawing conclusion.

Table 5.1: Response Rate

<table>
<thead>
<tr>
<th>Questionnaires</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responded</td>
<td>127</td>
<td>92%</td>
</tr>
<tr>
<td>Non-response</td>
<td>11</td>
<td>8%</td>
</tr>
<tr>
<td>Distributed</td>
<td>138</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data 2015

5.2.2 Demographic Information
This section presents the ages and gender distribution of the respondents. It also focuses on education levels, occupation and sources of income for West Koguta households who were the beneficiaries of the CSR water projects. The demographic information of the respondents was important in understanding the respondent’s background, experiences and their relevance in the study.
5.2.2.1 Gender of the Respondents

The distribution of the household respondents by gender was as shown in Table 5.2.

Table 5.2: Gender of the Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency(n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>48</td>
<td>37.8%</td>
</tr>
<tr>
<td>Female</td>
<td>79</td>
<td>62.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Table 5.2 indicates that 62% of the respondents were female whereas 38% were male. The high percentage of women respondents was attributed to the household gender role that confine women to household related chore such as fetching water, cooking and farm activities thus making it possible to be easily reached during the study. Most men were not available for the interview as they were not at home or gone to work some other place.

Figure 5.1: Gender of the Respondents

*Source: Field data 2015*
5.2.2.2. Distribution of Respondent’s by Age

The respondents were probed to disclose their age. Table 5.3 shows the respondent’s age.

Table 5.3: Age Distribution of the Respondents

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Frequency(n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-35</td>
<td>61</td>
<td>48.0%</td>
</tr>
<tr>
<td>36-49</td>
<td>36</td>
<td>28.3%</td>
</tr>
<tr>
<td>50-64</td>
<td>29</td>
<td>22.8%</td>
</tr>
<tr>
<td>Over 64</td>
<td>1</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

From Table 5.3, 48% of the respondents were between 18-35 years of age. 28.3% of the respondents were between 36-49 years of age. 22.8% of the respondents were between 50-64 years of age and only 8% respondents were over 64 years of age.

**Figure 5.2: Age Distribution of the Respondents**

*Source: Field data 2015*
5.2.2.3 Respondents Level of Education

The study pursued to find the level of education of the respondents within West-Koguta Sub-location. Table 5.4 shows their response.

Table 5.4: Respondents Level of Education

<table>
<thead>
<tr>
<th>Education level</th>
<th>Frequency(n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>64</td>
<td>50.4%</td>
</tr>
<tr>
<td>Secondary</td>
<td>51</td>
<td>40.2%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>04</td>
<td>3.1%</td>
</tr>
<tr>
<td>No formal education</td>
<td>08</td>
<td>6.3%</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data 2015

Table 5.4 shows 50.4% of the respondents had attained primary education followed by 40.2% with secondary level of education, 3.1% with tertiary and 6.3% with no formal education.

Education was used as one of the household’s poverty indices in assessing the impact of the CSR water project on household poverty reduction effort hence it was important to indicate the household head level of education. Poverty can affect level of education and education also affects sources of income which in turn affect food security in a given area. Those with formal education are likely to get formal employment hence do not have to entirely depend on primary production (agriculture) as the only source of income.
Figure 5.3: Distribution of the Respondents by Education Level

Source: Field data 2015

5.2.2.4 Source of Household’s Livelihood

In an attempt to find out the level of income of the households, the respondents were requested to indicate their main sources of income as shown in Table 5.5.

Table 5.5: Respondents Source of Livelihood

<table>
<thead>
<tr>
<th>Livelihood activity</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing</td>
<td>19</td>
<td>7.9%</td>
</tr>
<tr>
<td>Crop farming</td>
<td>115</td>
<td>47.9%</td>
</tr>
<tr>
<td>Livestock Keeping</td>
<td>73</td>
<td>30.4%</td>
</tr>
<tr>
<td>Business</td>
<td>19</td>
<td>7.9%</td>
</tr>
<tr>
<td>Driver</td>
<td>2</td>
<td>0.8%</td>
</tr>
<tr>
<td>Teaching</td>
<td>5</td>
<td>2.1%</td>
</tr>
<tr>
<td>Casual jobs</td>
<td>2</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>240a</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field data 2015. 240a is the total number of responses and not respondents since the variable analyzed is a multiple response variable.
Table 5.5, shows that 47.9% of the respondents practiced crop cultivation, 30.4% indicated livestock keeping, fishing (7.9%), small businesses (7.9%) teaching, casual jobs and drivers 2.1%, 2.1% and 0.8% respectively as their source of livelihood. The small businesses included salons, kiosk attendant, hotels and others were motorcyclist operators (Bodaboda).

**Figure 5.4: Respondent’s Livelihood**

![Percentage source of livelihood graph]

**Source:** Field data 2015

Figure 5.4 depicts majority of the respondents depends on crop cultivation as their livelihood activity. Sources of livelihood are important in determining household poverty and their level of dependence on water for survival. Households that absolutely depend on agricultural production are more likely to face poverty cycles due to starvation during prolonged drought than those with formal employment. This was because during prolonged drought crops fail thus fail harvest at the end of the season which subjected them to major food crisis, an indicator of poverty. Those with formal employed are able to purchase food at the time of food crisis hence became food secure.
Plate 1: Animal keeping as a Livelihood Activity

Source: Field data 2015

Plate 2: Crop cultivation as a Livelihood Activity

Source: Field data 2015
5.2.2.5: Respondent’s Income Level

Table 5.6 shows how the respondents were categorized as per their current income levels. This included income from farm produce, livestock and salaries.

Table 5.6: Respondents Current Monthly Income Level

<table>
<thead>
<tr>
<th>Income level</th>
<th>Frequency (n=126)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Ksh 5000</td>
<td>13</td>
<td>10.4%</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>81</td>
<td>64.3%</td>
</tr>
<tr>
<td>More than 10,001</td>
<td>32</td>
<td>25.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>126</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

From Table 5.6, 64.3% of the respondents had monthly income levels of between Ksh 5001-10000, 25.3% of the respondents earning more than Ksh 10000 while 10.4% earning less than Ksh 5000 respectively. This information was of importance as it helped to access the impact of the CSR water projects in their income levels.

**Figure 5.5: Respondent’s Current Monthly Income Levels**

*Source: Field data 2015*
5.3 Effects of the CSR Water Projects on Household Food Security

The study chooses Food security as one of the indicators of poverty. First objective, to identify effects of CSR water project on household food security in the study area. In order to achieve this objective, the study set out to identify the crops grown before and after the implementation of the water projects, crops grown in the study are included; maize, cassava, beans, vegetables, sweet potatoes, bananas, millet sorghum, water melon, vegetables, tomatoes and groundnuts.

The study sought to establish if the Respondents used the water projects in their crop production and their results are shown in Table 5.7.

**Table 5.7: Respondents who used the water in Food Production**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency (n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100</td>
<td>78.7%</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>21.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Table 5.7 indicates that 78.7% used the water in their food production compared to the 21.3% who didn’t use the water neither because they didn’t have mechanisms of having the water at their farms nor did not practice crop cultivation.

The Respondents were further required to identify ways in which they used the water for food production. Table 5.8 indicates their responses.
Table 5.8: Benefits of the water

<table>
<thead>
<tr>
<th>Uses of the water</th>
<th>Frequency (n=101)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water for irrigation</td>
<td>80</td>
<td>79.2%</td>
</tr>
<tr>
<td>Planting variety of crops</td>
<td>13</td>
<td>12.8%</td>
</tr>
<tr>
<td>Save time in search of water</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Construction of fish ponds</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Figure 5.6: Benefits of the Water

Source: Field data 2015

Figure 5.6 shows that 79% used the water for small scale irrigation to enhance more produce for their homes and earn extra income from selling the surplus produce, 13% were able to plant new crops like, bananas, water melon, tomatoes and vegetables which included kales, spinach, black nightshade *Solanum nigrum*, spider plant (*Gynandropsis gynandra*), pumpkin leaves (*Cucurbita species*) and cabbage that improved on the variety of food available in the study area, to others (3%) it greatly helped to save time in search of water and spent more time in their farm which
resulted in maximum yields. 5% were able to construct fish ponds which also offered alternative and easy to reach source of food to the community.

Respondents were requested to specify the kinds of new crops that were grown as a result of the implementation of the CSR water projects. The findings are indicated in Table 5.9.

**Table 5.9: New Crops Grown**

<table>
<thead>
<tr>
<th>Crops grown</th>
<th>Frequency(n=101)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>70</td>
<td>69.3%</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>28</td>
<td>27.7%</td>
</tr>
<tr>
<td>Bananas</td>
<td>03</td>
<td>03.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Table 5.9, shows that 69.3% grew vegetable which includes kales, spinach, cabbage, black nightshade (Solanum nigrum), spider plant (Gynandropsis gynandra) and pumpkin leaves (Cucurbita species). 28% grew tomatoes which they sold to the neighboring villages and homesteads that did not have an opportunity to practice irrigation, 3% planted bananas. All this lead to food diversification in the study area thus reducing food insecurity.

**Figure 5.7: Percentages of New Crops Grown**

*Source: Field data 2015*
Source: Field data 2015

The study pursued to find out the kind of animals kept by the respondents, Table 5.10 presents the findings.

Table 5.10: Animals Kept by the Respondents

<table>
<thead>
<tr>
<th>Animals kept</th>
<th>Frequency (n=123)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock</td>
<td>108</td>
<td>56.5%</td>
</tr>
<tr>
<td>Poultry</td>
<td>83</td>
<td>43.5%</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data 2015

From Table 5.10, most of the respondents 56.5% keep livestock including the fish while 43.5% keep poultry. The different kinds of animals kept by the respondents increased their dietary needs in the study area hence reducing food insecurity. The availability of water improved the health of the animals since there was enough water for drinking and general hygiene of the animals increased.
In an effort to determine if the water projects have had an impact on their household food security. Table 5.11 shows that 81.9% respondents agreed that the water projects had greatly increased their household food security compared to the 18.1%.

Table 5.11: Contribution of the Water Projects to Household Food Security

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency (n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>104</td>
<td>81.9%</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>18.1%</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data 2015

Food security was one of the factor in determining household poverty and the level of its dependence on water. From the definition of food security, after the water project, the residents were able to acquire adequate food at all the times. Through small scale irrigation in their gardens, the respondents were planting variety of crops including tomatoes, water melons and vegetables in addition to other crops like maize, beans thus were in constant supply. Fish farming further increased the dietary diversification in the area. Reduced time in search of water allowed the residents to spend much more time in crop farming and taking care of the animals which ensured their good and a constant source of food.

Small scale agriculture and non-farm activities are vital in boosting the productivity of a give community. In dry seasons, West Koguta Sub-location included, depended on rain for which farmers have little control over, resulting into low yields, trapping farmers in a cycle of poverty and food insecurity for decades (UNECA 2009a: 118).

These sentiments compare well with the findings by Benites et al., (1998) that there was a growing understanding that the major cropping system that mainly includes the rain fed agriculture in Sub Saharan Africa was not sustainable. To mitigate the effects of drought, the small scale farmers by their own limited efforts had resulted to digging and construction of manmade dams, boreholes, owing water tanks, at both household and community level. The results were that those households (30%) that were able to mitigate this water shortage through irrigation, were able to reap a harvest and sell their farm produce at very good prices. These same farmers had also become models and were used by development agencies as reference
points. The rest of the farmers (70%) suffered from the prolonged drought as was evidenced by the low agricultural production and low incomes (Benites et al., 1998).

Enhanced and impartial water availability is essential to increase and stabilizes profits from agriculture (HLPE, 2015), which in turn will break the virtuous cycle of poverty.

One of the pointers of food security is dietary diversification, which according to Hoddinott (1999), it refers to the sum of the different nutrients consumed by a person over a specified time period. Hoddinott (1999) further asserts that households become healthier if they consume a broader variety of nutrients. Livestock keeping, fish farming and the different types of poultry kept contribute to household food security.

In conclusion, the dependency on rain fed agriculture coupled with the erratic nature of rainfall is the major factors responsible for the poor agricultural output hence widespread food insecurity in the country (FAO 1994). Small scale Irrigation have impacted on poverty through increased in agricultural productivity, reduced food prices, creation of additional employment, increased household income helping the poor households meet basic needs and protection against risks of crop loss due to erratic, unreliable rainwater supplies (Lipton et al., 2004).

5.4 Effects of the CSR Water Projects on Household Income Levels

The second objective was to determine levels of household income before and after implementation of CSR water projects in the study area. Respondents were asked if the water contributed in their sources of income, Table 5.12 shows their responses.

**Table 5.12: Contribution of the water projects to Respondent’s Income**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency (n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>70</td>
<td>55.1%</td>
</tr>
<tr>
<td>No</td>
<td>57</td>
<td>44.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Table 5.12 shows that 55.1% of the respondents use the water to increase their income compared to the 45% who don’t use the water for their sources of income. Water availability enabled the
beneficiaries to acquire new opportunities for new source of income and increase their productivity.

The study sought to determine the respondent’s average income before the implementation of the water projects. Their results are shown in Table 5.13.

**Table 5.13: Average Monthly income of the respondent’s before the CSR Water Projects**

<table>
<thead>
<tr>
<th>Income level</th>
<th>Frequency (n=125)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Ksh 5000</td>
<td>51</td>
<td>40.8%</td>
</tr>
<tr>
<td>5001-10000</td>
<td>57</td>
<td>45.6%</td>
</tr>
<tr>
<td>More than 10001</td>
<td>17</td>
<td>13.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>126</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Table 5.14 shows that 45.6% of the respondents earned an average monthly income of between Ksh. 5,001 and 10,000, 40.8% of the respondents earned less than Ksh. 5,000 while 13.6% earned more that Ksh. 10,000 before the implementation of the CSR water projects in the study area.

**Figure 5.8: Average Monthly Income before the CSR Water Projects**

*Source: Field data 2015*

In an effort to understand the influence of the water project on the income levels of the respondents, the respondents were asked to indicate their average income increment after the water project. Table 5.14 shows their responses.
Table 5.1: Average Increment in Income after the Water Projects

<table>
<thead>
<tr>
<th>Income Increment</th>
<th>Frequency (n=72)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Ksh 2000</td>
<td>12</td>
<td>16.7%</td>
</tr>
<tr>
<td>Ksh 2000-4000</td>
<td>50</td>
<td>69.4%</td>
</tr>
<tr>
<td>Ksh 4000-6000</td>
<td>10</td>
<td>13.9%</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data 2015

From Table 5.14, majority (69.4%) of the respondent’s income had increased between Ksh 2000-4000, followed by 16.7% whose income increased with less than Ksh 2000, 13.9% of the respondent’s income increased between Ksh 4000-6000.

Figure 5.9: Average Increment in Income after the Water Projects

Source: Field data 2015

The study sought to determine if the water helped the residents to acquire new sources of income after the implementation of the CSR water projects. Their outcomes are shown in Table 5.15.
Table 5.15: Distribution of Respondent’s on the New Sources of Income

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68</td>
<td>54%</td>
</tr>
<tr>
<td>No</td>
<td>58</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

54% of the respondents agreed that they had new sources of income compared to the 46% as shown in Table 5.15. The new source of income included growing of new crops like tomatoes, water melon, vegetables which they sold the surplus; others got employment as drivers, motorcyclist operators (bodaboda), water vending and other casual jobs since they were relieved from spending much time in search of water.

**Plate 4: Use of water in Crop Cultivation**

*Source: Field data 2015*
Plate 5: Use of water in Fish Pond Construction

Source: Field data 2015

Plate 6: Water vending as a New Source of Income

Source: Field data 2015
Through small scale irrigation, the residents got plenty harvest for home consumption and sold the surplus to earn extra money, selling of the animals and animal products like eggs and milk, selling the water to those far from the water projects, casual jobs like taking the water to construction sites, small businesses like salons, hotels were some of the benefits the community could get from the project. From focus groups, the households were able to buy other variety of food not available in the area, paying school fees and buying cloths with the money they got from the sales.

The above findings compare well with Hoddinott (1999) that the money from the sale of foodstuffs can be used to obtaining food besides. The income can also be used to serve as resources to diversify on foods not available in the study area. Various studies carried out in different residential settings suggest that improved water generates substantial economic benefits, mainly by saving time and energy. According to a research by Were et al., (2006), done in western Kenya highlands; clean and affordable water is both essential to human requirement and an contribution into economic activity.

5.5 Effect of CSR Water projects on Household School attendance and Enrollment rates

The third objective was to compare school attendance and enrollment rates before and after CSR projects in study area. The respondents were asked to indicate whether water scarcity before the implementation of water projects affected their children school attendance. Table 5.16 represents their findings.

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency(n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>90</td>
<td>71%</td>
</tr>
<tr>
<td>No</td>
<td>37</td>
<td>29%</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

Out of the 127 respondents interviewed, 90 representing 71% agreed that children school attendance were affected by water scarcity whereas 37 representing 29% disagreed.
The study sought to identify other water related factors in the study area that were contributing to the household school attendance and enrollment rates level before the water projects were initiated.

The respondents were also asked on ways in which their children school attendance and enrollment rate were affected by the water scarcity before the water projects. Distances covered to collect water by respondents before the water projects are as presented in Table 5.17.

**Table 5.17: Distance covered in search of water before the Water Project**

<table>
<thead>
<tr>
<th>Distance</th>
<th>Frequency(n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5km</td>
<td>74</td>
<td>58.3%</td>
</tr>
<tr>
<td>Greater than 5km</td>
<td>53</td>
<td>41.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

From the description in Table 5.17, majority of the respondents 58.3% covered a distance less than 5km compared to the 41.7% who covered a distance greater than 5km.

**Figure 5.10: Distance covered in search of water before the Water Project**

*Source: Field data 2015*

When water sources are far from home, is a duty that frequently falls on the females and children of the family. Carrying heavy jericans of water over long distances is stressful, and extremely
time consuming. One of the gravest effects was that children did not attend school frequently, or they may not enroll at all.

Respondents were further required to indicate the group of people involved in water collection. The results are presented in the Table 5.18.

**Table 5.18: Water drawers before the Water Project**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men, women and children</td>
<td>32</td>
<td>20%</td>
</tr>
<tr>
<td>Girls only</td>
<td>26</td>
<td>16.2%</td>
</tr>
<tr>
<td>Women only</td>
<td>76</td>
<td>47.6%</td>
</tr>
<tr>
<td>Boys and girls</td>
<td>26</td>
<td>16.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160^a</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015. 160^a is the total number of responses and not respondents since the variable analyzed is a multiple response variable.*

**Figure 5.11: Water drawers before the Water Project**

From the presentation in Figure 5.11, majority of the respondents the women (47.6%) used to collect water for most households, this was followed closely by girls only and boys and girls 16.2% each respectively.
The respondents were further required to indicate the effects of water scarcity on children’s school attendance rate before the water projects. The findings are shown in Table 5.19.

**Table 5.19: Effects of Water Scarcity on School attendance before the Water Project**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency (n=127)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to school late</td>
<td>84</td>
<td>45.6%</td>
</tr>
<tr>
<td>Not going to school</td>
<td>32</td>
<td>17.4%</td>
</tr>
<tr>
<td>Leaving school early</td>
<td>58</td>
<td>31.6%</td>
</tr>
<tr>
<td>Drop out of school</td>
<td>10</td>
<td>5.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>184</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Field data 2015. 184 is the total number of responses and not respondents since the variable analyzed is a multiple response variable.*

**Figure 5.12: Effects of Water Shortage on School attendance before the Water Project**

Source: Field data 2015

Before 2011, the residents experienced water shortages and the situation had adverse effects on school going children. Figure 5.12 shows that 45.6% of the children went to school late because they had to look for water before going to school. This was followed by 31.6 % group of children who left school early in search of water, 17.4 % who didn’t go to school as they were left at
home to take care of the home as their parents went to look for water while others were sick (chest problems) as a result of carrying water for long distances and 5.4 % dropped out of school because the conditions were unbearable.

The respondents were further required to indicate the number of days their children were absent from school per term because of water scarcity. The findings are shown in Table 5.20.

Table 5.20: Days children were absent from school due to Water scarcity

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency(n=97)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10 days</td>
<td>45</td>
<td>46.4%</td>
</tr>
<tr>
<td>10-20 days</td>
<td>33</td>
<td>34%</td>
</tr>
<tr>
<td>20-30 days</td>
<td>10</td>
<td>10.3%</td>
</tr>
<tr>
<td>More than 30 days</td>
<td>09</td>
<td>9.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field data 2015

Before 2011, Table 5.20 shows that 46.4% of the respondent’s children were absent in schools for less than 10 days, though majority of the children went to school late and left school early. This was followed by 34% of the children absent from school between 10-20 days. 10.3% of the children were absent from school between 20-30 days and 9.3% of the children were absent from school in more than 30 days.

Figure 5.13: Range of days children were absent from school due to Water scarcity
Since the implementation of the water projects the situation has changed in terms of the number of days and hours of school attendance as shown by the respondents in the Table 5.21.

Table 5.21: Respondents view on change of situation after the implantation of the Water project.

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency(n=119)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>83</td>
<td>69.8%</td>
</tr>
<tr>
<td>No</td>
<td>36</td>
<td>30.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>119</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field data 2015

From the Table 5.21, 69.8% of the respondents agreed that the situation has changed in terms of the number of days and hours of school attendance since the implementation of the water projects and that the children were the able to attend school compared to the 30.2% of the respondents whose children still were either absent from school or missed some hours of school learning despite the availability of the water projects.

In an effort to determine some of the reasons as to why some children could not attend school daily and some missed school learning hours despite the availability of water, the respondent’s responses are as shown in Table 5.22.

Table 5.22: Respondent’s reasons for children not attending school daily.

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency(n=119)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take care of the parents</td>
<td>14</td>
<td>33.3%</td>
</tr>
<tr>
<td>Lack of enough money</td>
<td>14</td>
<td>33.3%</td>
</tr>
<tr>
<td>Children becoming sick</td>
<td>11</td>
<td>26.2%</td>
</tr>
<tr>
<td>Early pregnancy</td>
<td>03</td>
<td>7.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>119</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Despite water availability in the area, there are children who still don’t attend school daily. From Table 5.22, 33.3% of the respondents gave care to their parents who were sick and lack of enough money to facilitate their children going to school. 26.2% of the respondents agreed that
some of their children became sick from diseases like malaria that prevented them from going to school on those days while 7.1% dropped from school due to early pregnancy.

5.5.1. Primary School Enrollment Rates in West Koguta Sub-location

The water projects were initiated in 2011, the study sought to seek information about the school enrollment rates three years before the project and three years after the project. Out of the 9 primary schools found in the study area, five schools were located near the water points. The schools were purposely selected since they were the beneficiaries of the water project.

Table 5.23: Primary School enrollment rates in West Koguta Sub-Location

<table>
<thead>
<tr>
<th>School</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onego Primary</td>
<td>290</td>
<td>298</td>
<td>302</td>
<td>338</td>
<td>402</td>
<td>418</td>
<td>430</td>
<td>2478</td>
</tr>
<tr>
<td>Bala Primary</td>
<td>222</td>
<td>228</td>
<td>232</td>
<td>255</td>
<td>260</td>
<td>264</td>
<td>270</td>
<td>1731</td>
</tr>
<tr>
<td>Thurdibuoro Primary</td>
<td>142</td>
<td>149</td>
<td>155</td>
<td>158</td>
<td>165</td>
<td>167</td>
<td>172</td>
<td>1108</td>
</tr>
<tr>
<td>Nyadero Primary</td>
<td>198</td>
<td>220</td>
<td>218</td>
<td>230</td>
<td>280</td>
<td>298</td>
<td>308</td>
<td>1752</td>
</tr>
<tr>
<td>Sang’oro Primary</td>
<td>140</td>
<td>133</td>
<td>155</td>
<td>167</td>
<td>172</td>
<td>179</td>
<td>182</td>
<td>1128</td>
</tr>
<tr>
<td>Total enrollment</td>
<td>992</td>
<td>1028</td>
<td>1062</td>
<td>1148</td>
<td>1279</td>
<td>1329</td>
<td>1379</td>
<td>8197</td>
</tr>
</tbody>
</table>

*Source: Field data 2015*

From Table 5.23 clearly indicates the increase in school enrollment rate in five schools chosen purposely in West Koguta Sub-location which were located around the water projects. There was an increment in the average percentage from 7% before the water project to 7.8% after the water project.

The 0.8% increase can greatly be attributed to the water access among other factors like free primary education which didn’t have a great impact at the time of its implementation because of water scarcity.

Sick parents, low income enough to purchase books, uniforms among others, early pregnancy are some of the factors that still make the children have difficulty in attending school.
The CSR water projects in Study area has reduced the distance used by the women and girls in collecting water. It has reduced the hours lost by the learners in search of water and increased the enrollment rates in the beneficiary schools. Investment in human capital, through increased in access to and participation in education, is important to promoting development and economic growth (Lucas, 1990; Schultz, 1961). Hypotheses supporting this case include claims that the

The above supports the study finding where by 71% of the respondents were affected by the water scarce situation before the water projects in the area. 58.3% walking long distances (more than 5km), women and girls being the worse hit (64%), children school attendance affected by 45% going to school late, 17.4% not going to school, 31.6% leaving school early and others even dropped out of school (5.4%)

Teachers in school found find it easier to demonstrate smartness which the pupils could easily copy because of the availability of water. The children now had more time to read. Despite availability of water in the area there need more intervention in the area to help reduce poverty like creation of more employment opportunities, provision of water tanks to store water during rainy season.

5.5.2 Respondents view of water access on poverty indices

A chi-square test was then used to analyze the hypothesis that stated ‘the CSR water projects have no impact on rural household poverty in West Koguta Sub-location. The chi-square test showed in Table 5.23 and there was adequate evidence to reject the null hypothesis.

Table 5.24: Chi-square table

<table>
<thead>
<tr>
<th>Poverty indices</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to food</td>
<td>104</td>
<td>23</td>
</tr>
<tr>
<td>Access to education</td>
<td>90</td>
<td>37</td>
</tr>
<tr>
<td>Access to increased income</td>
<td>72</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: Field data 2015

A chi- square analysis was used to test the effectiveness of the CSR water on rural household poverty.

\[ \chi^2 = \sum \frac{(O-E)^2}{E} \]

\[ E = \text{Row total x Column total} \]
Calculated chi-square is 12.363 at 0.05 significance level. The critical value is 5.99. The results show that the CSR water projects have an impact on rural households poverty in the area of study. Therefore, the water projects initiated by the KenGen Company have greatly helped in reducing the household poverty in west Koguta Sub-location.
CHAPTER SIX
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction.

This chapter presents the summary of findings, conclusions and recommendations of the study. The first section provides a summary of the main findings of the study with regards to the objectives of the study; discussion allowed in-depth understanding of impact of KenGen’s CSR water projects on household’s poverty reduction. Section two discusses the conclusions centred on the findings of the study. The last section provides recommendations to policy makers and for further researchers.

6.1 Summary of Findings

First, it ought to be clear by now that water insufficiency severely diminish the projections for poverty reduction. If underprivileged societies do not have obtained clean water, they may have nothing to eat because they cannot produce food unless they die from thirst first. Women and children are usually locked in cycle of having to draw water every day; work and school attendance less likely. The study evaluated the impact of CSR water projects on poverty reduction in West Koguta Sub-location. Water scarcity has been a problem in the area and it has been a contributing factor to the low poverty levels in the area among other factors.

From the findings, small scale agricultural production and keeping of livestock are the major source of livelihood for the rural households in the area. Frequent crop failure as a result of low rainfall does not only cause food insecurity but also reduces income in the households. Since the implementation of the water projects, the residents were able to plant new crops like tomatoes, traditional vegetables in addition to maize, beans, millet, groundnut, bananas and watermelons, they also practiced fishing which increased the dietary and food access in the study area.

The study also revealed that increase in food availability goes along with increase in income. When respondents get their harvest, they could sell the product in the local market while some preserve them and use till the next season. Some residents also practiced non-agricultural activities like casual laboring, water vending, hotels and salons which resulted into an increase in income.
It was established that water was a scarce commodity in the study area before the water projects. The residents obtained water from River Sondu, Lake Victoria, springs and ponds that were not safe for consumption and used to walk long distances to get the water in which children and women were responsible for water collection activity. In addition to this, school dropout, poor school attendance rates and low enrollment rates were experienced during the water scarcity era which could reduce the literacy levels of the community members hence the poverty cycle from one generation to the other. Water supply by KenGen through construction boreholes reduced the distance to water points thus allowed more time for children to go to school.

CSR initiated projects have increased in past years and most organizations are incorporating it in their management. KenGen Company has had its CSR water project in West Koguta Sub-location which has had an impact to the community members. The water has been utilized in various ways in the area including domestic uses, small scale irrigation, small businesses which have reduced the poverty levels in the area in terms of being food secure, saved time and reduced the distance covered on water collection thus increased school enrollment and attendance rates, being active in economically productive activities which have lead to an increase in income and decrease in expenditure due to increased production therefore leading to poverty reduction in the area.

6.2 Conclusion

The study concludes that water and poverty reduction are intertwined and almost impossible to separate them. This is because water is a major commodity used as a catalyst to get a variety of food, boost income of the residents, in addition increase children school attendance and enrollment rates. Water scarcity to residents translates to increased work load, prolonged time in search for the commodity, poor health problems and diminished economic opportunities. Therefore with improved and reliable water supply, poverty can really be reduced.

There is no doubt that KenGen CSR water projects have had a role in poverty reduction in the study area. As far as poverty reduction is concerned in terms of food security, income levels and school children attendance and enrollment rates, provision of water have helped increase food production, income levels and increased school attendance and enrollment rates in the area.

In order to facilitate poverty reduction in rural areas, water provision programs need: to shift weight from just rural water providing for sustainable supplies of household needs to useful
water. This way, families increase generation of incomes, which would in turn offer resources for operation and maintenance for water sources. This would alleviate concerns of sustainability of most rural water programs, get communities to be at the lead of their own water development activities, be able to select suitable technology and be provided with satisfactory operation and maintenance skills training in order to significantly contribute to the lifespan of installed water points;

6.3 Recommendation

With well implemented policies, CSR plays a very suitable instrument for the implementation of sustainable development. It is significant for businesses to have interest of the local community at heart and to ensure their activities (projects) have had an impact on the people. Planners, policy makers, companies operating in the area with their interest in CSR seeking to reduce poverty in West Koguta and Nyakach constituency in general should understand that unavailability of water was the major cause of poverty in the area among other factors and give a holistic approach to the solution.

The study recommends various key approaches and actions to address poverty reduction in the area. These include to:

i. Policy makers

Since the Income levels are still low and quite dependent on the agricultural sector, the County government, companies in the area and other stakeholders need to look into other options of income generating activities for the community.

Training of modern agricultural practices to residents could positively impact on household production, sourcing outside market and exchange of farm produce will increase food production and dietary needs of the community.

Though a slight increase in school attendance and enrollment rates, the county governments and companies need to look on water and sanitation in schools.

The county governments and other companies in the area including KenGen should put measures to involve the community to embrace the practice of roof water harvesting techniques so as to collect a lot of water during rainy season.
ii. Future researchers

The findings were collected from a small sample, a replica study with large sample size should be undertaken.

A study should be carried out to determine other factors and their impacts influencing poverty reduction in the area other than the CSR water projects.

A study should be conducted on how effective can the West Koguta residents collectively own and manage the water projects in the area.

A study should be conducted to determine other factors affecting children’s school attendance and enrollment rates in the area apart from water accessibility.
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Geneva:


APPENDICES

APPENDIX I: QUESTIONNAIRE SCHEDULE

My name is Sheillah Nyanchara Ogweno. I am a Master’s student at the University of Nairobi and doing a study entitled “impact of CSR projects on household poverty reduction, the case of KenGen water projects in West Koguta, Kisumu County. In order to make my study successful, I need your participation and support. Please kindly answer the following questions as accurately as possible. Your individual responses will be treated with strict confidentiality and will be used only for purposes of this study.

PART 1: GENERAL INFORMATION

1. Gender
   Male ( )                                Female ( )

2. Age
   Under 18 ( )                           18-35 ( )                           36-49 ( )
   50-64 ( )                             over 64 ( )

3. Level of education
   Primary ( )                            secondary ( )
   Tertiary ( )                           No formal education ( )

4. Source of living
   Fishing ( )                             Crop cultivation ( )
   Livestock keeping ( )
   Others, specify
   ...........................................................................................................................
   ...........................................................................................................................
   ...........................................................................................................................
   ...........................................................................................................................

   b. what is your average current income monthly
   a. Less than Ksh 5000 ( )               b. Between Ksh 5000-10000 ( )
   c. More than Ksh 10000

   c. what was your monthly income before the project
   a. Less than Ksh 5000 ( )               b. Between Ksh 5000-10000
   c. More than Ksh 10000 ( )

PART II: Assessing the effects of water projects on household morbidity

1. What is your current main source of water for domestic use?
   River ( )   lake ( )   borehole ( )   water taps ( )
Others, specify 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5. What kind of animals do you keep? Specify.
.......................................................................................................................................................... 
6. What number of animals do you keep?
..........................................................................................................................................................
7. As the CSR water projects helped you in animal farming?
Yes (   )
No (   )
If Yes explain
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................

PART IV: Evaluating the effects of water projects on household income levels

1. Do you use CSR water projects in your sources of income?
Yes (   )
No (   )
If yes, explain
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................

2. Has CSR water projects given you opportunities for new sources of income?
Yes (   )
No (   )
If yes, which opportunities
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................

3. Is there difference in terms of new income opportunity brought about by CSR water projects as compared to the former source of income before CSR projects
Yes (   )
No (   )
b. If yes by how much did your income increase?
Less than Ksh 2000 (   )
Between Ksh 2000-4000 (   )
Between 4000-6000 (   )
More than 6000 (   )

4. Has new income opportunities brought about by the CSR water project reduced your household poverty levels?
Yes (   )
No (   )
If yes, explain
PART V: Evaluating the effects of the water projects on household literacy levels

1. How far was the water collection point before the CSR water project?
   >5km (  )  <5km (  )

2. Who used to collect water in your household before the CSR water project?
   Men, Women and Children (  )
   Girls only (  )
   Omen only (  )
   Boys and Girls only (  )
   Men Only (  )

3. Were your children school attendance affected by the water scarcity?
   Yes (  ) No (  )

4. If yes, how did the water scarcity affected the school attendance before the CSR water project?
   Going to school late (  )
   Not going to school at all (  )
   Leaving school early in search of water (  )
   Others specify
   …………………………………………………………………………………………………
   …………………………………………………………………………………………………
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5. How many days was your child absent from school per term because of the water scarcity?
   Less than 5days (  )
   Less than 10 days (  )
   Less than 20 days (  )
   More than 20 days (  )

6. As the situation changed since the implementation of the CSR water project in terms of number of days and hours of school attendance?
   Yes (  ) No (  )
   b. if No, what could be some of the reasons hindering your child from going to school all days and recommended school hours? Explain?
   …………………………………………………………………………………………………
   …………………………………………………………………………………………………
   …………………………………………………………………………………………………
   …………………………………………………………………………………………………
PART VI: Way forward with CSR water projects in terms of impact on local household poverty level

1. Has the CSR water projects helped you in any way a part from the above listed benefits.
   - Yes (       )
   - No (       )

2. In your opinion, what do you think KenGen should do more to reduce the household poverty
   ............................................................................................................................
   ............................................................................................................................
   ............................................................................................................................

APPENDIX II: KEY INFORMANT INTERVIEW (KII) SCHEDULE

For KenGen CSR personnel officials
1. Which year did you start your CSR water projects in the area?
2. How many water projects have been implemented in the area?
3. Who are your target beneficiaries?
4. What was the water situation in the area before the project (in terms of clean water, its accessibility)?
5. In your opinion, do you think the water projects could be used to address household poverty? Explain?
6. Who manages the water projects?

Interview schedule for tribal elder
1. What was the poverty situation before the CSR water project?
2. Do you think the CSR water projects have an effect on the poverty levels in the area?
3. In what ways have the CSR water project impacted on food availability, children school attendance and enrollment rates, income levels in the area.
4. Who manages the water projects?

Interview schedule for schools head teacher
1. What was the enrollment of the students before the implantation of the water projects?
2. Was there children school absenteism before the implementation of the water project?
3. If yes, what were some of the reason for children school absenteism.
4. Has the enrollment rates changed in relation to the availability of the water?
5. Has the situation changed since the implementation of the water project in the area?
**APPENDIX III: OBSERVATION SCHEDULE**

1. Status of the water projects
   ✓ Functionality of the water projects

2. Setting of the area (population activities)
   ✓ Number of households
   ✓ Location of trading centers
   ✓ Spread of the physical structures

3. Visible benefits of project
   ✓ Income generating activities (presence of restaurants/hotels, salons, water kiosks, laundry)
   ✓ Farming activities and crops grown

**APPENDIX IV: FGD TOPIC GUIDE**

1. Effects/impacts of CSR water project on household food security in West Koguta sub-location.

2. Effects of CSR water project on household income levels in West Koguta sub-location.

3. Effects of CSR water project on household morbidity rates in West Koguta sub-location, and;

4. Effects of CSR water projects on household children school attendance and enrollment rates.