Community Participation in the Management of Forest Resource

A Means to Reduce Poverty for Sustainable Development
The case of Kakum National Park

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Abstract

The purpose of this research is to investigate community participation in the management of forest resources and the relationship it has with poverty. It also highlights on some conflicts that arise in the management of forest resources and how to manage them and some ways to involve the communities in the management of the forest.

The management of forest resources in Ghana falls mostly in the hands of the government although communities surrounding these resources are recognized stakeholders. With such rich forest resources, communities living around these resources happen to be poor, generally peasant farmers and petty traders since the creation of the reserves has limited their interaction with the forest. Communities surrounding the Kakum National Park in the Central region are of no exception. Before the creation of the reserves, members of the communities could freely go into the forest and collect products like mushrooms, snails, grass-cutter, medicinal herbs to mention but few. Some of these products were sold to earn some additional income. In creating such profit oriented reserves, it is expected that communities surrounding these reserves get some benefits which would help improve their living conditions.

The result of the research indicates that few members around the Kakum National Park participate in the management of the forest. It has also been revealed that when communities participate in the management of the forest resources, the employment opportunities created as a result would enable them earn some revenue which would help them improve on their living conditions and reduce poverty in the long run. To ensure the sustainable use of the resource it is shown that there should be benefit sharing which would also improve collaboration. Although some of the members from the communities were in collaboration with the management others were not. Furthermore, most members of the communities were interested to participate in activities like snail rearing, mushroom cultivation, selling seedlings and hosting tourists in which some of the visitors also shown interest.

The communities around the Kakum Park need more education as to the areas in which they can participate in order to reduce poverty and ensure sustainable use of the forest. There should also be benefit sharing for all stakeholders and improved communication and dialogue which can help in managing conflicts.

Declaration

I hereby declare that except for references made to the work of other researchers which have been duly acknowledged, this work is the result of my own original research and that this dissertation has neither in whole nor in part been presented for any other degree or non-degree in any institution in the world. However, I am solely responsible for any errors or omissions that may arise in the work.

Signed

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Fatima Eshun

Date

Dedication

To my parents, Dr. Alex K. Eshun and Madam Janette H. Entsie, my Aunties, Uncles, siblings and my in laws who have assisted me to climb up to this stage in my education. I also dedicate this piece to my husband Dawood Abbas and daughter Saleha who have to cope without a wife and a mother and to all my friends and love ones.

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I am very grateful to the Almighty God for giving me the strength and sustaining me throughout my educational life up to this level. Having assembled and put the various pieces of materials together, required the time, patience and experience of my supervisor, Professor Jan Hesselberg to have read through my thesis several times right from the scratch. I am indebted to him for his probing questions, challenging criticisms and suggestions which finally brought this write-up to an accepted standard.

My sincere gratitude goes to my mother for taking care of my daughter whilst on field work, my parents in law Madam Hameeda and Alhaji Kaiser Abbas and brothers and sisters in law for taking care of my daughter whilst finishing my studies. I am also grateful to my husband for his care and support and my siblings for their encouragements. My sincere gratitude also goes to Mr. Maurice Kukuri for assisting me with the SPSS programme, the Managers and staff of Kakum National Park for their wonderful contribution which has helped me to produce this piece. I am also grateful to the research assistant and Janet Zackariyya for writing down proceedings from the Focus Group Discussions not forgetting Mr. Sam Nketiah for his assistance.

My sincere gratitude goes to all the NGOs and other Institutions that provided me with information for this thesis. The last but not the least, I am grateful to all community members of the Kakum National Park whose contribution has resulted in this write up.

Chapter One: Introduction

The purpose of this study is to examine community participation in the management of forest resources and the relationship it has with poverty. The study also discusses some forms of conflicts that arise in the management of forest resources and some ways of solving them as well as some activities which communities can undertake as part of their participation in the management of the forest.

1.0   Necessity of community participation for sustainable development

Issues concerning forest and the environment are to some extent everybody's business. In recent years, there have been increasing interests by researchers in matters concerning the environment. These include environmental degradation and its impacts, global warming and its effects as well as safeguarding the environment and minimizing impacts caused by human operations and other activities. Both government and non-governmental agencies are not left out in the search for community participation in environmental sustainability issues and reduction in poverty. There is the need to investigate into community participation in forest resource management and the relationship it has with poverty and the forms of conflicts that arise in these issues as well as areas to involve the communities in order to derive some benefits from the resource.

The idea of community participation in the management of forest resources is gaining some attention although much is not done in this field. Human beings interact with their environment more often so as to make ends meet. Such human interactions with the environment can build or destroy it. However, since resources are dynamic and keep changing with time and as humans continue to interact with their environment, it is very essential that in the management of such environmental resources, and forest in particular, the community is not left out so as to ensure its sustainable usage for development.

The individuals that make up the community need to make informed choices about themselves during their day to day interaction with their environment. The

community members may be aware of some effects of their actions but are forced to do things that are harmful to the environment. Therefore, there is the need to make them aware of other effects of their actions that they may not be aware of. For such awareness creation to be undertaken successfully, the management body of these forest resources should incorporate the community in the management of the resource in what ever way possible so as to reduce conflicts of interest and contribute to a reduction in poverty. The concept of poverty includes lacking the means to meet basic materials in life be it food, shelter and clothing and others to make life comfortable. All these can be met by using resources from the environment. It is, therefore, possible that poverty can be reduced when communities interact better with their environment and are able to make better choices that will help improve their living conditions. It is also through such interactions with the environment that can destroy the forest resources when proper care is not taken. Henceforth, it is essential that in the management of such resources the community take part in it in order to ensure its sustainable usage for development.

Again, they are able to develop their own understanding on their aspect of management and control and are confident on which activities they undertake. Since the communities reside closer to the resource than the management, their participation in the management of the resource can increase the communication links between the community and management and can report any unwanted activities that go on or with which the resource is being used for. They can also contribute in their own small way by helping to stop certain disasters that can occur for instance, fire outbreak.

Besides, by participating in the management of the resource, the community is able to take part in the decision making process and are able to point out decisions that affect their lives negatively and to decide on other areas where decisions should be geared towards in order to improve their living conditions.

Participatory Natural Resource Management (PNRM) entails the managing of resources by the pertinent stakeholders. It necessitates the discussion on objectives and suitable tradeoffs among various stakeholders, who may comprise researchers and other

educational organizations. It also includes participatory problem description, discussions on future issues and structuring a shared program for action. Sharing the same opinion on regulations on resource management and how to put into effect conformity is an essential constituent of participatory resource management (Pound 2003).

Moreover, this will enable policy makers to enact policies that incorporate community participation in forest resource management. This will further encourage other researchers interested in issues concerning communities and forest resources to also undertake research in these areas. This will henceforth, go a long way to help the nation as a whole in increasing awareness on community participation in the management of forest resources as a tool for reducing poverty and cut down government spending on poverty issues.

The community within which the resource is found must value it as such. Henceforth, there is the need for them to benefit from that forest resource, be it artificial or natural. The ability of the community to benefit from the resource enables them to appreciate that resource and use it sustainably. This can successfully be done when the community is engaged in the management of the forest resource.

1.1   Problem Statement

In Ghana, the management of forest resources falls in the hands of the government, who takes full control and ownership of the resources. Apart from government having ownership and control of such resources, the chiefs on whose land the resources are found are also stakeholders. At the normal circumstance, the chiefs represent the community hence the entire community own the resource as such. It is expected that as one owns a resource, he gains some benefits from it. However, this is not always the case. Benefits from such resources more often than not centre on certain groups of people and do not trickle down to the entire community.

The Central region of Ghana with its regional capital, Cape Coast is endowed with numerous environmental resources of which the Kakum forest is one of them. The region used to be the former National capital of the Republic of Ghana, thus the Gold Coast and was where the colonial masters first settled. The region is noted to have good schools, castles of historical interest and the only canopy walk way across the Kakum forest reserve in West Africa. The region is also well noted for its high recordings in international tourists' arrivals due to the presence of these environmental resources and historical monuments, thus the forest reserve, the canopy walk way and the castles.

Despite all these environmental resources and the attractions, the region experiences high poverty rate and it is counted among one of the poorest regions in the country. At the moment it ranks third after the Upper East and Upper West regions out of the ten regions in the country (Ghana Poverty Reduction Strategy 2003-2005).

The villages surrounding the Forest Reserve thus the Kakum National Park are not exempted from the poverty incidence in the region. They have such resource and all the basic things in life; food, shelter and clothing can be acquired from their interaction with the environment. After creating a reserve from such resource to attract tourists, it is expected that revenue flows to the communities to assist them improve upon their living conditions and to reduce poverty in the area.

Questions, therefore, arise as to whether the communities are not aware of what the resource is being used for, whether they do not participate in the management of the resource and whether the community lack knowledge concerning how best to use the resource in order to reduce poverty. It is, therefore, worth researching into in order to find out whether the communities participate in the management of the resource and to identify areas or ways to involve the communities in order to benefit from the resource so as to reduce poverty.

1.2   Objectives

The main objective of this study is to analyze community participation in forest resource management in the Kakum National Park.

The study will, specifically look at the following:

- Find whether the communities participate in the forest resource management or not and their reasons
- Find whether there is any relationship between community participation and poverty
- Find whether there are any collaboration or conflicts between management and the communities and ways to manage them
- Identify ways to involve the communities in the management of the forest resource.

1.3   Background to study area
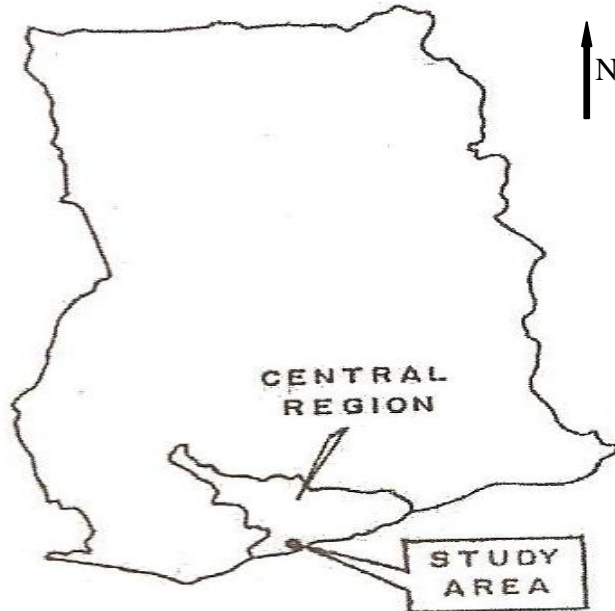
Figure 1.1: Map of Ghana showing the study area.

Source: Cape Coast Municipality.

1.3.1   Environmental resources

Ghana is a lowland country, except for a range of mountains on the eastern boundary. The sandy coastline is supported by a coastal plain that is crossed by numerous rivers and streams, usually passable only by canoe.

In the west the topography is disserted by heavily forested hills and several streams and rivers. To the north lies an undulating savanna country that is drained by the Black and White Volta Rivers, which converge to form the Volta, which then flows south to the sea via a narrow gap in the mountains.

1.3.2   Plants and animals

Most of the natural vegetation of Ghana has been damaged by land clearing for agriculture, but such trees as the giant silk cotton, African mahogany, and cedar are still widespread in the tropical forest zone of the south. The northern two-thirds of the country are covered by savanna-grassland with scattered trees.

Southern Ghana consists of evergreen and semi deciduous forests, which are made up of tall silk cottons, kolas, and valuable West African hardwoods such as mahogany, odum and ebony. The northern two-thirds of the country are covered by savanna tropical grassland with a scattering of shrubs and trees, featuring shea trees, acacias and baobabs. The oil palm can be seen all the way through the south and the Ashanti uplands, and the lagoons of the coast contain mangroves. Although there used to be more of these animals throughout the savanna, large mammals such as elephants and lions are now rare and largely confined to nature reserves. Other Non Forest Timber Product like mushrooms snails and grass-cutter are also widely found in the forest. The forest regions are habitats for monkeys, snakes, antelopes and some of the major rivers contain crocodiles. There are more than 725 bird species in Ghana.

1.4 The Kakum National Park

1.4.1 Establishment and history

The Kakum national park was established in 1920 during colonial administration. It was managed by the Forest Service and the main focus was for timber extraction. A survey conducted by the wildlife division in 1989 revealed that some key animals are globally endangered and hence the need to convert it into wildlife protected area. In November, 1991 it was gazetted as a no go area. The idea of formation was spearheaded by one Ato Austin who saw that the central region of Ghana experience poverty and yet has the potential for tourism. Hence there was the need to conserve areas like the castles and other monuments that were to be blended with the natural environment to develop the tourism potential in the region.[1]

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[1] Revealed during interview with the manager in charge of collaborative resource management unit.

1.4.2 Location and size

Kakum National Park is a priority area for conservation in Ghana. It is located just 20 kilometres from Cape Coast in the central region of Ghana and covers about 360sqkm. It lies within longitude $1°5'$ East and $1°2'$ West and on latitude $5°39'$ North and $5°20'$ South. This is shown in the figure 1.2 below.
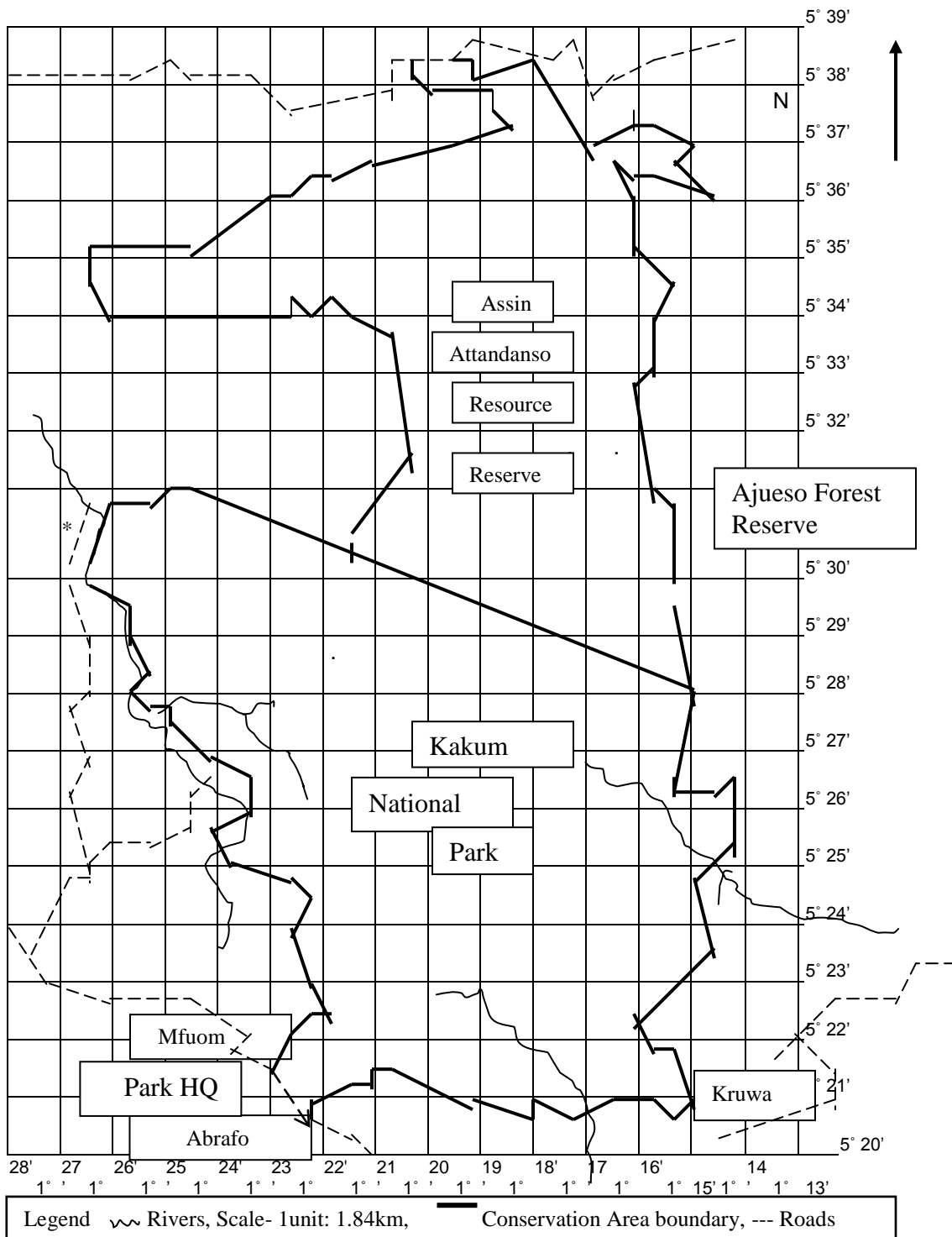
Figure 1.2: Map of Kakum Conservation Area showing locations of some of the communities.

Source: Based on Danquah (2003). Soft copy received from Manager of Park.

1.4.3 Tourism potential

The Kakum National Park is home to elephants, monkeys and elusive bongo antelopes which roam among over 800 rare species of birds, butterflies, reptiles and amphibians. But beside its vast natural endowment of plant and animal species, the presence at Kakum Park of world class receptive facilities for visitors such as the 333 metre long tree-top walkway and a multi-purpose visitor centre, have accounted for the park's status as an irresistible destination for eco-tourism.

Kakum National Park protects plant and animal treasures of the African tropical forest and is a heaven for the casual visitor, birdwatcher, amateur botanist and eco-tourist alike. Thirty kilometers north of Cape Coast via a paved road, you will find rare plant species in a spectacular environment where some trees reach heights of over fifty meters. After viewing the exhibits at the Visitor's Center, the drama of the jungle comes alive as park guides provide insight into this complex ecosystem. You will learn about traditional forest product uses for medicine and daily village life. The flora at ground level may be familiar to you as houseplants, and be sure to watch for one of the estimated 550 butterfly species. A beautiful butterfly, new to science, was discovered in Kakum in 1993, and has been appropriately named Diopetes kakumiú!

Looking carefully, you will see signs of life, much of which thrives well overhead in the forest canopy. Trails provide self-guided day hiking opportunities where you may sight some of the over 200 bird species represented: the parrot, bee-eaters, blue plantain-eaters, hornbills, and kingfishers. The dense vegetation provides cover for globally endangered species such as the forest elephant and bongo - the largest forest antelope, as well as various types of monkeys. Chances of viewing wildlife are increased by allowing time to sit quietly in the forest staying at one of the free-standing camps, or by taking advantage of some upcoming attractions such as the canopy walkways, viewing stations and birds. [2]

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[2] www.ghanaweb.com

Figure 1.3: Kakum National Park showing the canopy-walk way.
Source: Own picture 2007.

1.4.4 Managerial activities.

According to the manager in charge of community participation, the main *activities* of the management of the national park include the protection and law enforcement unit which ensures that the reserve is protected from poachers and other illegal activities. There is also the tourism unit which ensures the ecotourism activities in the reserve. The collaborative resource management unit makes sure that the general public understands the use of the reserve. Their objectives include the need to conserve biodiversity. Promoting environmental education and eco-tourism and making sure that the communities are not left out in the management. Another area is the protected area management advisory unit which advises management on activities. There is a local

NGO called the National Heritage Conservation Trust which manage some part of the reserve especially the canopy walk way.

1.4.5 *Ownership*

According to the manager in charge of the community participation, the national park is owned by six paramount chiefs and four districts. The paramouncy includes the Assin Attenduase, Hemang, Abura, Assin Apemanim, Afutuakwa and Denkyira paramount traditional areas. These paramouncies and districts are made up of several communities that surround the forest. There are over 400 communities including hamlets and about 60 to 80 major communities that surround the forest. Some of these communities include Mfuom, Abrafo, Adiembra, Bobi, Afulkrom, Antwikwaa, Gyaware, Mesomagor to mention but a few.

1.5 **Districts characteristics**

The Kakum National Park as has been mentioned earlier covers four districts which are the Assin North, the Assin South, Abura Asebu Kwamankese and Twifo Heman Lower Denkyira.

1.5.1 *Demographic characteristics*

The Twifo Heman Lower Denkyira district has a population of 107,787 people as at the 2000 population census. The age dependency ratio is about 75% indicating that there are few people there who are not working. The district is a typical rural. There are 1,510 settlements in the district. Twifo Praso and Hemang currently have population of 11,853 and 8,240 respectively and are statistically urban. The urban population constitutes only 14% of the district's population.   Other larger Communities are Jukwa, Mampong, Wawase, Krobo, Nyenase, Ayaase, Mfuom, Apenkro, Wamaso, Ntafriwaso and Nuamakrom. Most of the rest are farmsteads, usually with populations below 300 people. The Assin North district has a population of about 116,349 and 500 settlements as at the

2000 population census whilst Abura Asebu Kwamankesse has a population of about 90,093.[3]

1.5.2   *Occupational distribution and economic activities*

A sample survey conducted in 1994 by Department of Planning, Kwame Nkrumah University of Science and Technology (KNUST) shows that as much as 51% of the labour force is engaged in agriculture which shows that the district is an agriculturally oriented. This is followed by service, which employs 28% of the working population. Commerce comes third with 16% and finally, industry with 5%.

Other occupational activities in the district include rice milling located in Aklomah, Twifo Praso, Benponso, Agona, Ampekrom, Nuamakrom, Yao Annany No 4, Asarekwaku, Benpongya. There is also the extraction of palm oil which is carried out mainly at Mampong, Hemang, Ampenkro Eduaben, Ntrafrewaso, Jukwa and Nuamakrom. The source of the raw material, which is palmnut is from local farmers in the district. Cassava processing industries are located mainly in Kenkuase, Nuamakrom and several parts of the district. Averages of 2 people are employed in each of the establishment.

One of the main locally produced Alcoholic drinks in the District is *akpeteshie* which is brewed from palm wine tapped from palm trees. The distilleries are located in Twifo Praso, Agona, Benpogya, Mampong, Hemang, Jukwa, Wawase, and Bukrusu. Soap production is concentrated at Twifo Praso and New Mampong. This could be attributed to the presence of the raw material thus palm oil in the areas. Averagely, 6 people are employed and about 7200 cakes of soap produced in a day, employing almost half of the youth in the areas. The occupational structure in the Assin North district are agriculture 69%, industry 5%, services 8%, commerce 18%.[4]

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[3] www.ghanadistricts.com
[4] www.ghanadistrict.com

1.5.3   Social infrastructure

The District has 119 pre-schools (nursery/kindergarten). Pupil population is 5,165, comprising 2,613 girls. There are 85 Junior Secondary Schools in the District with an enrolment rate of 68%.   There are only two senior secondary schools in the District located at Jukwa and Praso.   The district has one hospital which is located at Twifo Praso and twelve rural clinics some of which are located at Heman, Nuamakrom, wawase, Jukwa and Frami.   The district in addition to all these facilities has acquired a mobile health van that provides remote communities with health care. In the Assin North district, there are 85 pre-schools, 103 primary schools, 73 junior secondary schools, 4 senior secondary schools and 1 teacher training college. Although, there are availability of electricity and gas, about 76% of the inhabitants in the Assin North district rely on firewood for their household. Abura Asebu Kwamankesse has 312 schools 35 of them are privately owned.[5]

1.5.4   Other tourism potentials

The Assin North District has about five Forest Reserves which include the Bimpong Forest Reserve, the Supong Forest Reserve, the Assin Forest Reserve, Wawahi Forest Reserve and Krochua Forest Reserve. These reserves serve as protective cover to some of the major rivers in the district. The district also habours bamboo orchestra and the Slave River. The Twifo Hemang Lower Denkyira district habours the anemia cave, River Pra islands, bonsaben forest reserve, buraso archaological site, Jukwa cultural village, the ancestral cave, odum Kwaku sacred shrine, cahopy shaped rock, Mbem waterfall, bird sanctuary, oven shaped cave to mention but few. In Abura Asebu Kwamankesse, there are Wulling, Rock pedestals - Mushroom shaped stones having features of a human face, Gbare, footprints of the donkey of the legendary Dootoraa on a rock surface.[6]

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[5] www.ghanadistrict.com
[6] www.ghanadistricts.com

1.6   Climate and vegetation

The Park falls within the moist deciduous forest vegetation.   The area has an annual rainfall of between1500 to 2000mm.   Annual temperatures range between $30°$ C from March to April and about $26°$C in August. Average relative humidity range from 60% to 70%.[7]

1.7   Definition of terminologies

Community: It refers to a group of people who live in a geographically defined area and share common values and interests.

Participation: This refers to the inclusion of people in the management and decision making regarding activities that concern them.

 Forest resource: It refers to areas with trees and animals including non timber forest products like mushrooms, snails, grass-cutters and other things that people can collect from the forest.

Poverty: This refers to a state in which one is not able to meet all the basic things in life because of insufficient income (Bass 2005).   Insufficient income here refers to those whose income is below the average daily income of 1.7^8 Ghana cedis.   In the new currency 1 Ghana cedis is equivalent to 1.058 US dollars.

Management: This means taking care of the forest resource. It also refers to the kinds of activities that communities can undertake which will not destroy the forest and which can help support themselves and not depend so much on the forest.

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[7] www.ghanadistrict.com
[8] State of the Ghanaian Economy, 2005.

Sustainable development: This is defined by the Brundtland Commission Report (1987) as a type of development that fulfills the requirements of the current population without reducing the capacity of future generations to accomplish their own desire.

1.8   Summary

Community participation in management of forest resources is gaining grounds in recent studies. Communities that reside close to forests are supposed to derive much benefit from the resource. However, these communities are rather poor with little knowledge on sustainable use of the resource. The central region of Ghana is classified as one of the richest in terms of environmental resources and the first in terms of tourism activities yet the third poorest region in the country. The Kakum National Park is the most prominent tourism area and attracts tourists all over the world. It is therefore, interesting to know if the communities around this area participate in any management activities and how that could reduce poverty in the area.

This research combines qualitative and quantitative methods of data collection and reviews existing literature in order to get a deeper understanding of the topic. The results from the fieldwork are discussed along with the literature and conclude with some highlights on the results and some recommendations.

Chapter Two: Methodology

2.0   Introduction

This chapter presents the methods and materials used to collect relevant data in order to satisfy the research objectives. The research sampling processes, sources of data, selection of communities to be sampled, organization and presentation of the result as well as the limitations to the study are presented. Within each method the specific data collected and its usefulness to the research are explained.

2.1   Preparatory Stage

A reconnaissance survey of the Kakum National Park and the communities that are closer to the park was carried out, in order to obtain a first impression of the study area. During this phase, contacts were made with some stakeholders, namely the manager of the park, some workers, some community members and some NGOs. The design of the questionnaire was done at this stage. The communities that were surveyed were Abrafo and Mfuom.

2.2   Pre-testing of questionnaire

The questionnaire was tested with 10 respondents in Abrafo. This was done in order to check whether the questions conveyed a similar meaning to both respondents and research assistant. The pre-testing aided in deciding how the questions suit the local situation and how easy the questions were to be answered by respondent in order to receive the required answers for the stated objectives. It also helped to facilitate the administration of the questionnaire since some respondents were not happy responding to some of the questions for instance their marital status. Furthermore, it helped in knowing the amount of time that would be needed to solicit the ideas of a respondent.

2.3 Methods of data collection

2.3.1 *Data Collection procedure*

For this study, both quantitative and qualitative research methods were used. According to Trochim (2006)[9] to do good research we need to use both the qualitative and the quantitative methods since qualitative research allows for a detailed explanation of event and quantitative research is good at summarizing more data and making generalizations. Trochim continues that, in using qualitative method one needs to consider the kind of information that would be generated, thus if the research seeks to produce new theories, whether it seeks to attain a detailed understanding of phenomenon and whether the research would be used for generalization. These methods were employed to collect, organize and analyze all information for this research. Furthermore, these methods were also used to derive a detailed understanding of the topic. This was done through the use of questionnaire, interviews, Focus Group Discussions as well as observation.

Information on quantitative data collected using structured questionnaires, made available some useful information on household variables such as age of respondents and number of those who participate in the management of the forest and those who do not as well as the number of those who would like to participate in certain types of management activities. Data on qualitative method also helped to uncover some traditional practices for protecting the forest, reasons why they participate or do not participate, areas of participation as well as the problems they face. Due to the complexities of issues, one research approach might not be enough to investigate the topic at hand therefore, qualitative and quantitative research methods were used in order to obtain the benefit of each method.

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[9] www.socialresearchmethods.net/

2.4   Selecting the study area

This fieldwork was done in the Kakum National Park which due to its size covers a lot of district paramouncies as have been mentioned earlier.   The forest Kakum, named after a river that passes through it is the most famous forest and tourism attraction in the region which attracts both local and international tourists. The issue on community participation seems to be gaining greater attention in the country and therefore, its link to poverty reduction is quite relevant.

The selection of the district was based on the fact that there were some on-going programmes geared towards improving eco-tourism in the area. It was also based on my interest to examine people's participation in forest resource management and poverty in the area. In addition, this district was selected because of my desire to examine the topic in an environment where I can freely interact with the people in their own dialect and understand them as well. Besides, availability of resources, financial constraints and time frame for the research were additional issues that led to the selection of this district.

2.4.1   Selection of the communities

Five communities where information on community members would be collected were identified. These were Abrafo, Mfuom, Adiembra, Mesomagor and Seidukrom but in the final analysis three communities were chosen for the sampling process. This was because the two other communities Mesomagor and Seidukrom were virtually inaccessible physically during the time for the research. Several attempts were made in order to sample these communities but there were no vehicle available and taxi drivers at that station were not willing to go to these communities because it was not possible to come back the same day and also that their vehicles could be damaged. They would only go but on exorbitant fares. Given the time constraints and inadequate financial resource it was not possible to sample these communities.   Abrafo is about 400 metres away from the visitor centre and Mfuom happens to be about 600 metres away from the visitor centre whilst Adiembra is about 80 kilometres from the visitor centre but close to the reserve as

well. The directions to locate these communities were obtained from the manager of the site and some of the guards during the reconnaissance survey.

2.5   Technique of data collection

The technique used in collecting the data was stratified sampling. In this research work, the various communities were divided into four sections, A, B, C and D. In each section, a house was picked at random to begin with. From there, every third house was selected and the head of household was interviewed. The head of household here was defined as a member of the house who is aged 18years and above and whom the researcher meets in the house. This method was used so as to prevent the research work from being biased. According to Trochim (2006) stratified sampling helps to represent the entire population as well as some key subgroups of the population more importantly small minority groups. Besides this method has an advantage over simple random sampling due to the fact that it can provide statistical precision for homogeneous group.

2.6   Sampling size

Questionnaire was administered on a cross section of members of the communities. At the initial state 150 questionnaires were targeted to be administered. However, during the questionnaire administration some of the members from the communities were not willing to respond to the questions when approached. Hence a total of 100 questionnaires were sampled at the end of the research period. In Adiembra, a total number of 23 respondents were interviewed whilst in Abrafo there were 46 respondents and Mfuom a total number of 31 respondents were interviewed. Although some members from all the communities were hostile, the highest of such attitudes was recorded in Abrafo followed by Mfuom and then Adiembra. Abrafo has a population of about 1000, Mfuom about 800 and Adiembra about 400.

2.7   Research assistant

The help of research assistant was needed for some period. Some members of the communities' unwillingness to respond to the questionnaire were detected the first day during the pre-testing stage. On the second day research assistant from Abrafo was hired. The main idea was that when the community members see someone from their community with the researcher, their attitude would change and they would be interested to respond to the questions when they are approached.

The research assistant was also supposed to get acquainted with the research items on the questionnaire so that he can assist in redirecting the attention of the respondents in case they respond outside the realm of the particular item in question. This worked for the community in which the research assistant is from thus Abrafo, hence, even though the highest number of those who did not want to respond to the questionnaire was from Abrafo, the highest number who at the end responded to the questionnaire also came from Abrafo. Mfuom is about 500 metres close to Abrafo and the research assistant who is a trained teacher at a high school happens to know some people there which helped to get some people who responded to the questionnaire even though there were some who were reluctant. In Adiembra, few people were reluctant but due to its distance from the park and the place of residence of the research assistant and resource constraints, fewer days were spent there in collecting the data.

2.8   Primary data collection

Collection of primary data was mainly done through interviews with the different stakeholder groups. These include the household, management, NGOs and visitors. These interviews were based on structured questionnaires, with a set of fixed questions with open and closed answers and also an open section to allow for comments by the interviewees. Other sources of primary data were Focus Group Discussions, observations and unstructured in-depth interviews.

2.8.1 Household Survey

In order to assess the current and potential level of community participation in forest management in the communities a set of household questionnaires were used. The definition of a household used was "people who live under the same roof and eat from the same pot". In practice, a household was considered to comprise of all the individuals living in the same compound. The questionnaire consisted of six sections. The first section sought the general background of the respondents including age and sex which are important during decision making and policy implementation, the subsequent sections sought their knowledge about the forest and the activities there, their participation, income level, ways to participate as well as issues on conflicts.

An initial exploration of the area was carried out to locate spatially the houses comprising the three communities. Subsequently, each area was divided into sections, so that all the compounds from a sector would be approached in a working session. A working session comprised the hours between 10.00am and 4.00pm to enable the researcher travel to the study site from the place of residence. At the initial stage, when a compound is approached an introduction is made for respondents to familiarize themselves with what they are about to respond to and what their responses would be used for. This made some of them elaborate further on a particular item which is of interest to them and that resulted in lengthening the time used for the research during some of the days. Instead of closing at 4.00pm sometimes it was extended until 6.00pm.

When there were no members of a household present at a certain time, the next compound was approached. Also, most of the respondents could neither read nor write and so the researcher had to translate the questions to them in the local language and write down their responses. This was done in the form of an interview following the items on the questionnaire. In all the communities some items which consisted of cakes of soaps and some cookies were given to those who responded to the questionnaire.

Figure 2.1: The researcher interviewing a member of a household.

Source: Fieldwork 2007.

2.8.2   Focus Group Discussions

To gain much understanding of issues regarding community participation in forest resource management and its relationship with poverty in the area of study, a Focus Group Discussion was carried out in Abrafo. This community was chosen for the discussion because of its closeness to the visitor centre and the possibility that if there is any participation programmes the members of this community would not be left out. Another reason for this choice was that majority of those who were not willing to respond to the questionnaire were from this community and I wanted to know more about that attitude and if any suggestions could be provided to reduce their hostility towards researchers.

Moreover, based on a preliminary analysis of the data collected through the household questionnaires, it became necessary to undertake a Focus Group Discussions in order to crosscheck the information derived from the household survey as well as the management questionnaire and also to obtain additional information in order to achieve the stated objectives. The criteria used for the selection of the various groups participating in the Focus Group Discussion were based on the level of influence, benefits and uses of forest products, gender differences and relevance for community

involvement. Accordingly, the following members were part of the discussion; farmers, teachers and women, mostly sellers. About 20 participants were expected to participate in the discussion however those who attended were 10, which allowed for a controlled discussion. Almost all the participants seemed to have common interests and so issues raised were discussed in a peaceful way and each participant shared his or her view on every topic that was raised.

The discussion was held along unstructured topics that were selected from the household questionnaire as well as that of the management. The time that was scheduled for the discussion was 10.00am to 12.00pm. However, the interest of the participants in the topics under discussion elongated the time until 2.00pm. Snacks and soft drinks were provided by the researcher so participants did not complain of hunger but rather responded more to the questions after the snacks. A polytechnic student was recruited to write down their responses. This person was not from the community. The purpose of recruiting someone from outside the community was to enable the person write down exactly what was said and to be objective as possible. The discussions did not religiously follow the topics that were listed because their responses resulted in asking additional questions in order to get a detailed understanding of the issues. According to Trochim (2006) unstructured interview is used to investigate a topic broadly and it also allows for flexibility of discussing topics along certain line of interest. The discussions ended successfully mostly due to the way the researcher interacted with the participants.

Figure 2.2: The researcher holding Focus Group Discussions with some members of the community.

Source: Fieldwork 2007.

2.8.3   Direct observation

In order to get a brief understanding of the attitudes and a confirmation of some responses that were provided during the household survey, field observation was carried out.   Because of time limitation, direct observation was favourable as compared to participants' observation.   Different aspects of community participation in forest management as well as other issues on village life that respondents might not be willing to discuss were observed.   Several visits were made to the visitor centre to observe activities that go on around the area and went on trails as a tourist to also observe what goes on in the forest.   Transect walk was also taken in order to see whether there were encroachment as well.   Trochim (2006) asserts that a direct observer needs to be unnoticeable as possible whilst watching and sample situation instead of becoming engrossed in the whole process.

2.8.4 Visitors Survey

Perceptions from tourists on community participation on forest management were assessed using a visitors' questionnaire administered to some visitors who came to the park during the period that the researcher was there. The purpose of collecting data on the visitors is to assist in determining whether visitors to the park will be willing to purchase some of the activities that communities would be engaged in and to get their suggestions as well. Although 30 visitors were given the questionnaire to fill just 12 visitor questionnaires were retrieved. This was because most of the visitors preferred to take the questionnaire away and so addresses as well as telephone numbers were collected from them but it was still difficult contacting them for the questionnaire during the research period. The initial idea was to leave the questionnaire at the visitor reception to be filled out when visitors leave the park but it was difficult for the guards to accept this since they needed to make several consultations.

2.8.5 Management Questionnaire and Interviews

Holding interviews is one of the qualitative methods of collecting data which enables one to get large amount of data quickly. Trochim (2006) is of the view that, in-depth interview could be 'one–on-one' as well as in a group. The data can be taken in different ways including stenography, audio recording, or writing down notes. Here, it is accepted that there is a questioner as well as interviewee(s). The aim of the interview is to ask more questions about areas of interest. Information on current and future management strategies and practices applied in the Kakum National Park was obtained by means of questionnaires, together with in-depth interviews with the different parties involved. In view of this an interview was held with the manager in charge of the communities' participation issues and also some forest guards. The interviews with the manager as well as the guards were not structured.

However, before this could be done an introductory letter was sent to the national headquarters of the Forestry Division, the section in charge of the management of the Kakum National Park to obtain permission. It was my idea to conduct management interviews only but it became so difficult contacting the manager in charge of community

participation and no other person would like to be interviewed hence, I left a questionnaire for the manager. Several appointments were therefore, made before I could get the chance to interview the manager. It took about two weeks after the permission was granted to see the manager. Unstructured interview was also held with the general manager at the national headquarters.

2.8.6   NGOs/Organizations Questionnaire

Questionnaire was administered on NGOs namely the Social Support Foundation (SSF), Network for Health and Relief Foundation (NHRF) and other organizations including the Human Ecology Department of the Vrije Universiteit Brussels and the Ministry of Tourism and Diaspora Relations who were interested in community participation in forest management issues to ascertain their views on the subject and also to find out if they were interested in sponsoring any of the communities to undertake forestry management activities. I have observed that most of the activities in communities' participation in natural resource management were undertaken by NGOs and in order to get a better understanding of the topic it became necessary to solicit their views as well. Getting in touch with some of these NGOs was difficult, however, it became possible when the researcher attended a five day international conference on management of natural parks and biodiversity conservation in Africa. For some of them an introductory letter was necessary before they could respond to the questionnaire. 10 questionnaires were given out to be filled by the NGOs and other governmental organizations representatives but only four of them were retrieved.

2.9   Secondary data

Various kinds of secondary data were collect from published as well as unpublished sources from national, regional and district levels. Information on poverty situation in the country was retrieved from government statistical departments whereas information on history as well as managerial activities on the Kakum National Park was received from the management of the Park at the regional and district level. Information regarding

access to the communities and the map of the area were also retrieved from the management of the Park at the district level. According to Trochim (2006) secondary data can be gotten from written documents which include newspapers, magazines, books, websites, memos, transcripts of conversations. Other sources of secondary data for this research were retrieved from literature reviews mainly from books and websites.

2.10   Duration of the data collection

The entire fieldwork was structured to last for about two months. However, it took three months before the necessary data was collected. Primary data collection from the various communities and that of the visitors took two months. It also took two weeks to collect secondary materials related to the site although some secondary data were collected during the primary data collection period and another two weeks for collecting data from NGOs.

2.11   Data Analysis

2.11.1 Primary data

Information from the household questionnaires was adapted to a Statistical Programme for Social Sciences (SPSS) as well as Excel format. Open and close answer questions were categorised and coded. Frequencies were derived from the coded categories that were computed and these are presented in the form of figures (bar, cones and pie chart) and tables. These are further described according to the results and along the stated objectives. The visitors' questionnaire was analyzed in a similar way. Focus Group Discussions were used in the way of qualitative information compared with that obtained from the household survey and interviews with management. Issues that were observed were used as qualitative information which was used to verify information received from the household survey, the focus group discussions as well as the management interview. Information from the management questionnaire was qualitatively analyzed. The results

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from this questionnaire and interviews were presented in a table format. Data collected from NGOs and other organizations was analyzed in a similar way.

2.11.2 Secondary data

Information that was retrieved from secondary sources were qualitatively analyzed and are discussed along with the primary data.

2.12   Validity and reliability

There are errors in using questionnaires during data collection. This is because most respondents might not respond according to what they do but according to what is ethically or generally accepted. There is the fear that one might report them on certain actions that they undertake and they end up telling lies. Holding interviews is of no exception. This may lead to poor validity and reliability of the research. According to Trochim (2006) saying that, a sample or measure has a strong validity is theoretically not right because measures or samples do not 'have' validity but only propositions can be said to be valid. The methods used in collecting data for this research include the use of questionnaire and interviews which are all prone to errors and hence the results might not reflect the true picture on the ground and making generalizations might not be valid. Some respondents may give correct answers to the questions whilst others may not. For instance, when respondents were ask to give their monthly income, some of them may not provide the accurate answer because they might think that they could be assisted financially.

Furthermore, the validity of data depends on some other factors such as the extent to which the respondents understand and agree with the idea in which the data would be put into use. At all the stages of the data collection processes I presented myself to them as a student and the research is meant for my thesis and also the use of introductory letter especially for the collection of secondary data which I believed helped me to win the confidence of those who provided both the primary and secondary data. Despite the fact that there could be errors during the data collection process, the data collected so far has helped me to investigate and derive an understanding of community participation in the

management of forest resources and the relationship their participation has with poverty. The research methods that were used provided the foundation to achieve the research objectives. I am convinced however, that the data I collected has some amount of truth and I am confident that it is reliable since most of the respondents answered as honestly as possible. Besides, in most of the questions that were asked, the researcher probed their responses by asking further questions and it was also crosschecked through observation. Even though the data collected is not sufficient, I am quite sure that the validity of this data is fairly high and provides a good presentation of the communities' participation in the forest management in the Kakum National Park.

2.13 Limitations of the Study

One of the main constraints the researcher encountered was related to the timing of the questionnaire administration in the communities which was chosen to enable the researcher travel from the place of residence to the field. The questionnaires were administered during the day thus from 10am to 4pm. However, because the villagers are mostly farmers, it was difficult to meet them in their homes. Subsequent visits however, were made on several occasions before the questionnaire was finally administered.

Another problem the researcher encountered was with the distance of travel to the communities for the questionnaire administration. The researcher had to travel a distance of over 80km each day to the communities to administer the questionnaires. This made the researcher tired but it was still possible to complete the questionnaire administration although it lengthens the estimated time for the field work.

Moreover, some members of the communities were not willing to attend to the researcher in order to answer questions. Most of these people claim to have attended to so many research questions but have not had any direct benefits. Henceforth, even though some houses were approached, the researcher could not get responses and had to spend more time walking round and round in order to get the household questionnaire done.

Furthermore, it was so difficult accessing some of the communities that were initially part of the design. According to the guards whom the researcher interviewed, it was not going to be possible to go to those communities without hiring a four-wheel drive, fuelling it and providing daily allowance to those who would accompany the researcher. Since the researcher was working within a budget it was not possible to solicit information from all these communities. Although attempts were made to get to some of these communities, the drivers change their mind in the middle of the journey. For one of the communities that were sampled the taxi driver would not move the car until it was overloaded. It was very scary travelling in such overloaded vehicles on the rough road.

In addition, it was not easy acquiring secondary data from government agencies and institutions. An introductory letter is most of the time needed and before a piece of information would be disclosed, frequent visits had to be made.

Moreover, most of the respondents took about 30minutes each in responding to the questionnaire and that was the least. This was due to the fact that the researcher always had to translate to them in the local language and since some of the words do not have a direct translation in the local language, the researcher had to redirect their responses, sometimes asking further questions before a specific item on the questionnaire is responded to correctly. During the household survey most of the respondents could not give the exact amount of their income since their income is not fixed and they do not keep record of their income. In almost all the households, the researcher had to assist them determine the amount of money they spend in a day.

The item 12 on the questionnaire where respondents were supposed to tell whether it is possible to undertake certain activities in the communities and if they were interested to participate in that activity was always misunderstood to mean that 'the research is bringing them job' and demanding that their names and addresses should be written on top of their responses. In almost all the households the researcher had to explain that the research is not intended to bring them job but for academic purpose. The recruitment of research assistant, the provision of some incentives to the community members who responded to the questionnaire and the friendliness of the researcher

helped to reduce the unwillingness of some of them to respond to the questionnaire. This notwithstanding, the research is limited since it was collected from few people from the communities.

2.14   Summary

The methods used to collect data on community participation in forest resource management were both qualitative and quantitative. The purpose of using these two methods was to reap the benefits of the two. Primary data were obtained mainly through household survey, Focus Group Discussion and interviews with management. Secondary data was also obtained from both published and unpublished sources, literature review and web sites. Despite the fact that there were some limitations during the data collection process as well as the issue of validity and reliability of data collection, the researcher was able to collect some information that would be useful in understanding community participation in the management of forest resource and its relationship with poverty.

Chapter Three: Theoretical Framework

3.0   Introduction

This chapter presents the various literature and conceptual framework that are relevant for this study. It is subdivided into various sections and presented along the research objective with some insights into the definitions and concepts of community participation in resource management and relationship with poverty.

3.1   The concept of community participation in forest resource management

Many definitions have been given to community participation. These include *corporate* participation, *local* participation, *people's* participation, *integrated management* and the like. All these however denote that there is an interaction of particular group with others so as to achieve certain specific outcomes as far as the management of forest resource is concerned. Many people participate for several reasons. According to Cernea (in Akitanda 1994) local participation is when people are given the power to gather together their own efforts so that they become public actors rather than inert subjects, to take care of their resources, make decisions and organize the activities that affect their lives.

Sayer (2004) views community participation as a deliberate procedure of bringing together the various aspects of natural resource utilization into a structure of sustainable management to meet the expectations of those who utilize resource, managers and others who have a share in the resource. To accomplish its objectives, an incorporated natural resource management strategy is essentially adaptive, among various disciplines and includes a different group of stakeholders. Lisk (in Meela 2001) described 'popular participation' as the interaction of large group of people in choices, implementation and assessment of programmes and projects intended to bring about imperative progression in the levels of living. Pretty (in Meela 2001) put across an additional view of participation where 'two schools of thought and practice' have developed regarding participation. One

sees community participation as a way of enhancing competence, the innermost opinion is that if people are engaged in the activity then they are more probable to have the same opinion with and agree to the new development or service. The other sees community participation as a privilege where the most important objective is to instigate mobilization for cooperative action, empowerment and organization building. Pretty has further divided different types of participation and explain them as illustrated in the table below.

Table 3.1: Pretty's typology of people's participation.

Typology	Characteristics of Each Type of Participation
Passive Participation	People participate by being informed on what is going to take place or has already taken place. It is independent pronouncement by an administration or a project management without paying attention to people's reactions. The information being shared belongs only to external professionals.
Participation in Information Giving	People participate by responding to questions asked by extractive researchers using questionnaire surveys or similar procedures. People do not have the chance to control what is happening, as the results are neither shared nor checked for precision.
Participation by Consultation	People participate by being consulted and external agents pay attention to views. These external agents identify both, problems and solutions, and may change these in the light of people's reactions. Such advice-giving procedure does not grant any share in decision-making and professionals are under no compulsion to take on board people's ideas.
Participation for Material Incentives	People participate by giving resource, for example labour, in return for food, cash or other material enticement. Much of on-farm research fall into this category as farmers provide the field but are not involved in carrying out tests or the method of acquiring education. It is very frequent to see this called participation, yet people have no interest in extending the activities when the incentives end.
Functional Participation	People participate by organizing groups to achieve predetermined aims connected to the project, which can include the improvement or

	support of externally initiated societal organization. Such participation does not tend to be at early stages of project cycles or planning, but rather after most important decisions have been taken. These organizations tend to be reliant on exterior initiators and facilitators, but may become self-dependent.
Interactive Participation	People participate in combined analysis, which results in action plans and the development of new local institutions or the intensification of existing ones. It tends to include methodologies from various disciplines that search for numerous viewpoints and make use of organized and ordered learning procedures. These groups have authority over local decisions and so people have interest in preserving structures or practices.
Self Mobilization	People participate by taking initiative independent of external organization to modify systems. They extend contact with external organizations for resources and methodological advice they require, but maintain authority over the way resources are used. Such self-initiated mobilization and cooperative action may or may not confront existing unbalanced distribution of wealth and power.

Source: Based on Pretty (in Meela 2001, 9).

In Pretty's typology of participation, participation in information giving, passive participation and participation for material incentives would be used for this study.

With reference to the types of participation mentioned above, Hagmann (in Meela 2001) is with the opinion that, the first four groupings in Pretty's typology of participation show influential participation in the 'Transfer of Technology model'. Only the interactive participation, self-mobilization and partially functional participation are directed towards a condition where local people may be in charge as a form of them gaining authority.

3.1.1 The need for community participation in resource management

It has become quite necessary for communities to participate in the management of forest resources because their participation can improve the value of the resource. Since most

of these forest communities live close to the resource, their participation will encourage them to take good care of the resource so as to ensure its sustainable use.

According to Pound (2003) participation increases the significance of the resource management in numerous ways. These include the following:

- By bringing forward innovative information and responses into participatory learning and adaptive management
- Through increasing the power to deal with difficult issues and in various ways
- By adding some information that have been put down in the recognition of problems and monitoring a transformation
- Allowing different stakeholders to test an established knowledge, whether lay or skilled
- By reducing the dominance view of 'one version of the truth', which is often that of the leading elites, and which can diminutive the path of cooperative action
- By means of assisting to set up conformity concerning what information stakeholders require and be capable of using them to formulate cooperative decisions
- Through structuring public asset which affect cooperative action
- Expanding the capability for new ideas.

He continues that participatory learning is an important element of research for growth and adaptive administration of complex ecosystems. Participatory research has a very important function to perform in creating awareness of the learning procedure, the force which organization can draw on various types of information or ideas and is not influenced by just one clarification of major cause-effect relationships. When power relations in the participatory research procedure are discussed in a place, where diverse opinions of 'cause-effect' can be aired, then research increase the importance of participatory management as a result of conveying innovative information which all stakeholders can employ towards building an agreement. He adds that using participatory technique allows for:

- Increasing a common visualization of the way natural resources are supposed to be catered for
- Building self-assurance and competence for cooperative action, support and innovation
- The utilization of a learning procedure to search and make reflection
- Recognizing, developing and integrating local ideas, way of life and principles

- Getting knowledge from and dealing with the awareness of a larger group of stake holders

- Including less authoritative stakeholders, like women and underprivileged groups, addressing issues concerning their rights to use a resource and communal justice

- Encouraging the flow of information between groups as a way to solve problems, looking for latest organizational arrangements and encouraging learning procedures

- Examining the outcomes that result from events that have emerged due to the 'learning-reflection' procedures

- Working at diverse scientific, managerial, environmental and sequential scales or levels

- Organizing transformation in local societies that need better livelihoods and ecological management.

Furthermore, there is the need for communities to get involve in the management activities so as to learn from other stakeholders the new innovation and techniques in resource management.

> 'Research on integrated natural resource management should aim to help large numbers of people explore the full range of options that are available for dealing with their local resource management problems. This means creating an environment where science and knowledge help people to develop a diversity of locally appropriate resource management solutions. Integrated natural resource management research should emphatically not be about the discovery of single technological solutions, produced on research stations and made available for widespread application. Consequently, the problems of getting uptake of the results of integrated natural resource management research are quite different to those associated with promoting the adoption of a new technology produced in the research laboratory. Widespread adoption of integrated management techniques may involve changing entire farming, forestry and fishery systems. There are rarely any silver bullets; what is required is often the synchronized change of policies, institutions and technologies: the entire production system has to evolve' (Sayer and Campbell 2004, 191).

Makela (1999) is of the view that, in the last ten years, there has been an increasing awareness that one of the main potential means of preserving nature is to reinstate, under contemporary regulation, the privileges that communities have over land and its resources. Community-based natural resources management and preservation have turned out to be an imperative area that needs to be stressed in international development and conservation in the last decade as the method used in revealing information on bio-diversity in small parks, whilst little or no attention is paid to the larger societal and political certainties has shown unproductive. The innovative approach pursues the shift in international growth circles to community-based rural development and their involvement approaches: the attention is geared towards the people, their means of living and local associations, native ideas and local organizational structures. The argument continues that, a lot of co-management plans and programs are in progress in the field of natural resources management, particularly in the departments of 'fisheries, wildlife, protected areas and forests'. Different interconnected expressions are used to explain the management corporation; some of these expressions include 'co-operative management, joint management, participatory management and multi-stakeholder management'.

Berkes et al. (in Makela 1999) assert that the rationale for the evolution of co-management preparations are generally similar to the motive behind the revitalization of community-based approaches; an additional rationale is the reality that merely local-level organization is well thought-out unproductive by governments, donors or environmentalists in the multifaceted work of stakeholders. Government has a specific responsibility in building the conditions for efficient local management through descriptive group defensive rights, ruling territorial differences and offering technical support to local organization that make the effort to strengthen management. They suggest that co-management is the distribution of authority and responsibility among the government and the local communities who utilize the resource. They propose four major circumstances when aspiring to have flourishing co-management:

- The establishment of suitable organization ,that should include local communities and the government
- The level of confidence among the groups involved
- Lawful fortification of local privileges and

- Economic enticements intended for local people to safeguard the resource.

According to Lawry (in Makela 1999) the fundamental suppositions of the co-management clarification are the local populace be required to have a stake in preservation and management and the cooperation of government organizations with local communities as well as other resource users is important in order to succeed in resource management.

Co-management promotes corporations, offers local enticements for sustainable utilization and also focus on distributing power as well as responsibility for resource organization and preservation.

Borrini-Feyerabend (in Makela 1999) describes co-management as a circumstance where several pertinent stakeholders within a certain protected environment take part in a considerable way in organizational activities. The World Conservation Congress in 1996 supports a definition of co-management as a corporation where governmental organizations, local groups as well as those who utilize resources, non-governmental organizations and different stakeholders share, as suitable to every situation, the power and responsibility designed for the organization of a particular regions' resources. Borrini-Feyerabend et al. (in Colfer 2004) asserts that, the management of forest resources in tropical regions is a key political concern since various stakeholders take such resources and several conflicts crop up regarding the remuneration that would be gotten from the forests. In most situations, stakeholders comprehend that collaboration is essential in order to manage forest resources efficiently and successfully, and they consent to work together in the interest of all and sundry.

Moreover, Fisher and Jackson (in Colfer 2004) hold the opinion that, action research has a lot to present to efforts that put into operation cooperative management of protected areas. Nevertheless, the relationship linking 'Participatory Action Research' (PAR) and partnership in different stakeholder environments has up till now not been deliberated upon to a large extent. Furthermore, Selener (in Colfer 2004) emphasizes that, in participatory procedure, people in the group do not merely play a part as data suppliers or beneficiaries of research results. They vigorously contribute by putting into practice all actions throughout the research process. They form the major performers in

jointly discovering the research problem, the method that those problems needs to be deliberated on, the techniques selected to evaluate data, the execution of the research activities in particular, and the alteration of outcome into action. Besides, Buck et al. (in Colfer 2004) has noted that, participatory research can encourage group learning as a result of bringing diverse social groups together through a deliberate and decisive cycle of searching, monitoring, contemplating, focusing on and implementing activities. On the other hand, the procedure brings forth knowledge within the groups. This mutual or communal learning (distribution of information and skill) improves opinions of inter-confidence and collective approval. Consequently, it enhances working jointly in the direction of issues that have been agreed on and building self-assurance among and within the group to improve efforts at partnership.

In addition, Mitchell (1997) asserts that various explanations can be given for including the community in resource and environmental organization. Through discussions with those residing in the area that will be affected by certain guiding principles and other programs, it is likely to:

- Describe the problems in an efficient way
- Acquire certain knowledge and perception which are remote in the world of science
- Look for different means of explanations that will be suitable for the entire community
- Generate an idea of ownership in favor of the plan or solution that enhances its realization.

The arguments continue that, although a participatory approach might lengthen the duration required through the early stages of analysis and forecasting such issues are generally revisited afterward in the procedure by staying away from or reducing conflict. Whereas various selected and technical officers might experience some difficulties or be endangered by a participatory approach, they may also consider that it is their duty to describe the problem and find out explanations. The majority of independent countries now understand that the complication of problems signifies that it is reasonable to count on all potential sources of information and ideas.

3.2   Local Communities Participation

The protection and management of parks cannot be achieved without the active participation of the millions of minute farmers and landless people who every day depend on forests and trees for their existence. It has been progressively recognized that effective local participation is an important component for sustainable management of national park, which can relate wildlife tourism to conservation and development IIED (in Domfeh 2007).[10]   Participation has been acknowledged as an indispensable component of sustainable development in general and national park protection in particular. In theory, local people may benefit under one or two scenarios. First of all, it links local people residing outside protected areas to tourism initiatives through benefit sharing schemes. And secondly, it creates community-based tourism initiatives on areas owned by the community members which are officially outside protected areas. Evidence demonstrates that there is small or no enticement for local people to sustain conservation within protected areas Drake (in Domfeh 2007).   Local communities therefore have a communal duty to facilitate the protection of national parks. Henceforth, every community is expected to:

- 'Establish community conservation norms in line with national policy
- Undertake community education to create awareness of the importance of national parks
- Maintain a clean, safe and pleasant physical environment in their settlements
- Under the leadership of Urban/Town/Area Councils, undertake participatory neighborhood monitoring and evaluation role to protect national parks located within the locality
- Sanction citizens who undertake activities that undermine the objective for establishing parks, or who omit or commit acts contrary to the sanity of maintaining useful parks

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[10] Kwame Ameyaw Domfeh (PhD) 2005. The Role of Major Groups in the Management of National Parks and Biodiversity Conservation. A paper presented at a Conference on Management of National and Natural Parks.

- Take the necessary steps to develop appropriate local infrastructure such as domestic and public toilets and waste disposal sites
- Promote measures that will reduce soil, water and air pollution in national parks' (Domfeh 2007,8).

3.3 The concept of sustainability in forest resource management.

The concept of sustainability is inevitable as far as forest resource management is concerned.   Since forest resources can diminish over time and most importantly community participation is gaining grounds, there is the need therefore, to make it possible for all and sundry especially communities around the forest to understand the concept and to use the forest to suit it purpose.   It is through this that sustainable development in resource management can be achieved.

According to Mitchell (1997) the regularly used definition of sustainable development from the Brundtland Commission is that kind of development which satisfies the desires of the current generations and at the same time makes it possible for those who are yet to come to also fulfill their needs.   Nevertheless, it has been less connected with the statement that sustainable development consists of two major ideas.   These are needs, particularly the needs of the poor people in the world, to which superseding major concern was necessary and restrictions produced as a result of technology and societal association concerning the ability of the environment to meet both current and future need.   The Brundtland Commission further categorized seven significant objectives for environment and development guiding principles.   These were:
- Revitalizing development
- Altering the value of growth (highlighting on development more than growth)
- Fulfilling the necessary desires for employments, food, power, water and hygiene
- Guarantying that the level of population is sustainable
- Preserving and developing the resource base
- Re-adjusting technology and minimizing risk
- Integrating environment as well as economics during decision making.

The Global Possible Conference Repetto (in Ulhoi et al. 1996) view sustainable development as an objective that discards strategies and actions which consent with present living values by exhausting the productive base, such as the natural resources, whilst the future generations are left with poorer resource base than the present. On the other hand, present ideas must not damage the projections for preserving or developing future living principles. Further emphasis was made that many important changes are essential so as to understand sustainable development:

- A steady demographic change of the world population to low birth and death rates
- A power conversion of proficiency in production, utilization and growing dependence on renewable sources
- A resource change to dependence on profits from the environmental resources with no destruction to the environment
- An economic change to sustainable development and an extensive distribution of its profit and
- A political change to an international cooperation based on balancing interest involving the North and South, East and West.

Pearce and Markandya (in Ulhoi et al. 1996) assert that sustainable development can be achievable only when the current ecological barriers have been detached. The techniques for realizing this include the utilization of appropriate expertise, management of renewable resources to achieve increase natural yields, investment in absorptive ability, reprocessing and moving away from the use of resources that wear out such as oil and coal. This relates the idea of sustainability to resources and the utilization of skills, and socio-economic development and growth. A difference between sustainable utilization and sustainability has been recommended by O'Riordan (in Ulhoi et al. 1996) that the former is perceived as an optional growth and development theory. On the other hand, sustainability is considered as an extensive phenomenon, that accepts moral customs for the endurance of living matter, the privileges of future generations and the organizations accountable for guarantying that such rights are completely in full use in the making of policies and their implementations. Subsequently, sustainable development is essential, yet inadequate tool to achieve sustainability. The aims of sustainability could not be achieved when the ideologies behind sustainable development are not integrated.

Goodland et al. (in Ulhoi et al. 1996) describes four components of sustainability which are; poverty, population, expertise and way of life, but excludes the dilemma of procedure which could be used to produce the political will for painful yet, essential, transformation to others. The definition of sustainable development by the Brundtland's commission as have been described has brought about two contrasting responses. One uses a different description of sustainable development, as a usual development although at a lesser rate, whereas the other is of the opinion that, sustainable development is that kind of development where there would be no growth when the carrying ability of the environment is exceeded. These not withstanding, it has been asserted that:

> 'Natural resource management aims at sustainability: sustainable resource management has been defined in the Brundtland Commission Report (Our Common Future, 1987) as a kind of development that should 'ensure that it meet the needs of the present without compromising the ability of future generations to meet their own needs'. Sustainability is not only ecological or economic but also social. There is an emerging consensus that the implementation of sustainable development should be based on local-level solutions derived from community initiatives' (Leach et al in Makela 1999, 30).

The International Labour Organization (in Ulhoi et al. 1996) declares that, sustainability can be described in different ways:

- A moment in time, that is the current as well as the future
- Needs, especially fulfilling the desires of the poor
- Restrictions of knowledge and cooperative association
- Incorporated methodologies to strategies and their implementations
- Management of environmental resource.

Glimour (in Odoi 1996) believes that the idea of sustainable development aims completely to relate the preservation of some specific resources to the developmental requirements of the population whom to some extent rely on that resource for their subsistence. The argument continues that sustaining this relation usually has three dimensions:

- If the development requirements of the society could be achieved from different sources, it would reduce the effects of their actions on the resource to be preserved. '(Alternative livelihood approach)'

- It cannot be anticipated that societies which are poor would be engrossed in preservation when they have not been able to satisfy their basic needs. As a result, there should be attempts to enhance their social and economic welfare in order that they will be in a situation to become more interested in conservation. '(Economic development approach)'

- It is more probable for local communities to consent to preservation and management of resource utilization if they can derive some profits from it. In this manner the resource can be preserved whereas some of the fundamental requirements of the population are achieved from sustainable consumption of the resources. '(Participatory planning approach)'

Moreover, it has been stated that:

'In the minds of many people, the concept of sustainability is closely linked to the concept of lack of change. Their notion of sustainability of the world's forests involves the idea of no reduction in forest area, forest condition, or the multitude of resource and non-resource values that forests provide for humans. In the past, this has been illogical. As the human population has grown from an estimated 1 to 10 million 12,000 years ago to approximately 1 billion 200 years ago to approximately 6.5 billion in 2004, as much 40% of the world's forest cover has been removed (Salim and Ullsten 1999). Agriculture, cities, roads, power lines, reservoirs, and other land uses that serve the expanding population have replaced forest-related land uses. Sustainability of forests at the global level has been an attractive but unattainable ideal as long as human populations and their per capita impact on forests have continued. ... It is now time to design ways to overcome the social and political impediments to achieving the ecologically possible sustainable relationship between people and forests' (Kimmins 2004, 3).

3.3.1 Eco-tourism

Koch (in Makela 1999) assert that, Eco-tourism is defined by the Eco-tourism Society as purposeful voyage to natural places with the intention to get a considerable knowledge of the traditions and natural history of the environment. The objective of this journey is not supposed to modify the reality of the ecosystem, and local populace ought to be given the economic situations to create opportunities to enable them benefit from preservation of natural resources. Mowforth and Munt (2003) describe community based tourism as the type of tourism that seeks to boost people's participation and ownership at the destination. Local communities should benefit from profits from the activities that go on in the forest. Brandon (in Makela 1999) is of the opinion that travels to places for adventure is one of the rapidly emerging areas of the world's travel industry. It is alleged that tourism is the single industry in the world that permits the direction of wealth from developed countries to developing countries.

Furthermore, the prospective gains that eco-tourism can make available to local communities include:

- 'The generation of revenue for continued efforts to maintain biological diversity in a particular area
- The simultaneous generation of revenue that can be used for the benefit of people living in or around the conservation area
- The encouragement of people's participation in the management of enterprises that use natural resources for the purpose of sustainable development
- The provision of appropriate institutions and skills to facilitate this kind of 'empowerment'
- The enhancement of appreciation and understanding on the part of outsiders, tourists as well as conservation specialists, of the local knowledge and culture involved in the protection of the environment, and
- The growth of awareness by members of local communities of the need for environmental protection and sustainable development and an acceptance by local people of techniques, imported by scientists and specialists that can enhance this objective' (Makela 1999, 76).

3.3.2 *Principles behind sustainable development*

Mowforth and Munt (2003) are of the opinion that, the methods used to identify a sustainable tourism is to find whether the reserve is sustainable environmentally, socially, culturally and economically. It is also essential to find whether it has any educational component, local participation and a guide to conservation. Bergmans (in Deelder et al. 2004) asserts that, the fundamental ideology behind sustainable development is searching for the right stability between three main features (3 Ps): 'People', 'Planet' and 'Profit'. It is difficult for all parties concerned to consent to issues and deliberate on them. The genuine stability between the idea of People, Planet and Profit is illustrated in a triangle, in which additional value is produced. 'People' denotes the 'socio-cultural welfare', 'Planet' signifies environmental quality and 'Profit' stands for economic benefit. The triangle represents the idea that one of the Ps must not surpass any of the other Ps. This is shown in figure 3.1.
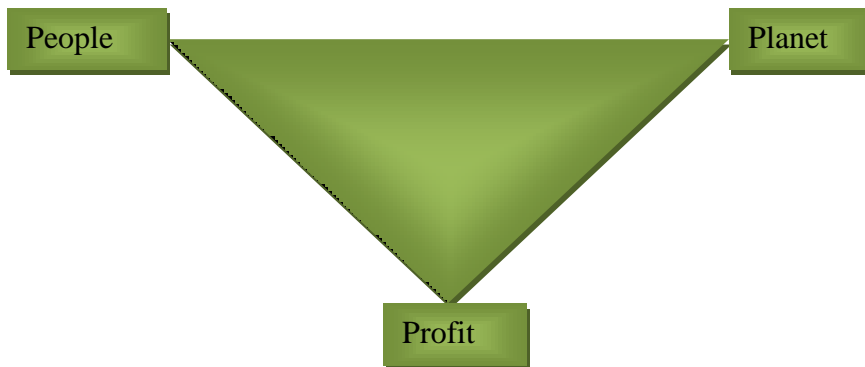
Figure 3.1: Triple P Model.

Source: Bergmans (in Deelder et al. 2004, 15).

3.3.3 *Concept map of sustainable development*

This research is adopting this principle as its conceptual framework. In the concept map used for this research, the different criteria of sustainability in resource management are covered within the three Ps. This model has been extended with the community participation, community education, the benefits sharing, and alternative livelihood,

improve collaboration and the sustainability aspects in order to achieve the objectives of the research. This is presented in figure 3.2.
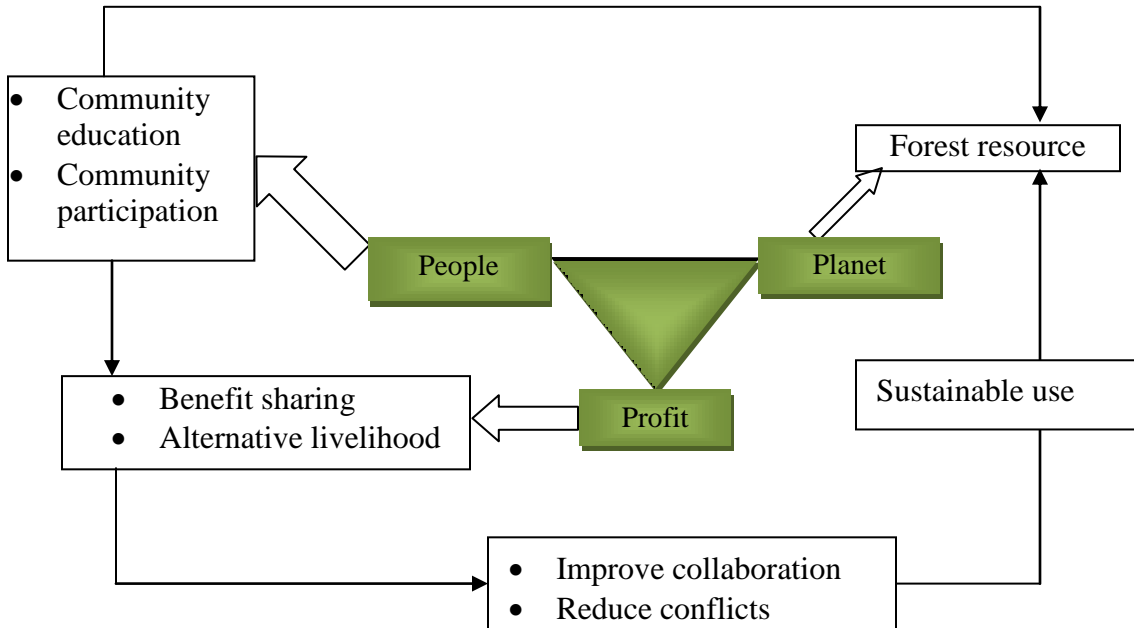
Figure 3.2: Concept map.

Source: Based on Bergmans (in Deelder et al. 2004).

The concept map depicts that the 'People' including members of the communities need to participate in the management of the forest resource which is the 'Planet' in order to ensure its sustainable use. Before the community can adequately participate, they need to get more education as to areas in which they can participate. This would enable the communities to be involved in other alternative livelihoods activities which will improve their economic welfare thus the 'Profit'. The communities can also derive profits when management share benefits from the forest with them. These would help improve collaboration between communities and the management and hence reduce conflicts. All these will go a long way to ensure that forest resource is used sustainably. In the same way the ecological quality of the Reserve can be achieved when protected area management systems are reinforced.

3.4   Poverty reduction and forest resource management

Forest resources are of enormous concern to the people who reside around it. This is because communities that reside close to such resources are mostly poor and that almost all their livelihoods depend so much on these resources. When communities are involved in the management activities, they can make informed choices and improve on their interaction with the forest including activities to undertake in order to reduce poverty. Therefore, there exist a link between poverty reduction and forest resource management.

> 'The environment matters greatly to people living in poverty. The poor often
> depend directly on a wide range of natural resources and ecosystem services
> for their livelihoods; they are often the most affected by unclean water, indoor
> air pollution, and exposure to toxic chemicals; and they are particularly
> vulnerable to environmental hazards (such as floods, prolonged drought and
> attack by crop pests) and environment-related conflict.   Addressing these
> poverty-environment linkages must be at the core of national efforts to
> eradicate poverty' (UNDP, EU, DFID & WB 2002, 2).

3.4.1   Opportunities for poverty reduction and environmental development

According to (UNDP, EU, DFID & WB 2002) there are several chances to decrease poverty by developing the environment although there are relevant and often extremely well-established guiding principle and organizational obstacles to their extensive implementation. Incidence from the last ten years since the 1992 Earth Summit in Rio shows some significant ideas that can assist to determine the future. Three extensive lessons are shown below:

1. The prime and most important message is that, those who are poor should be taken as a component of the solution more than being part of the problem. In attempts to develop environmental management in certain circumstances that would promote sustainable development and decline in poverty, the main concerns of the poor needs to be incorporated. Useful guiding principles and

organizations are desirable, as well as the right to use information and creation of decision that would increase the possibilities of poor people to participate in the management of environment in ways that would improve their living conditions. Similarly, there is the need to tackle the actions of the privilege ones, because they cause more harm to the environment.

2. The value of environmental development is of major concern to the poor. It could be considered that development in the environment would be delayed till when growth has reduced income poverty and increasing revenues create substantial resources available to preserve the environment. This does not take into consideration the relevant products and services to people's living conditions as well as their well being and the manner in which the different products and services enhance the chances of the poor to get out of poverty. Moreover, there exist numerous instances where terrible environmental management can slow down development, and how poor people have bad experience from environmental deterioration. Disregarding the sound impact that the environment could have on development even though it can result in economic benefits within a shorter period, can destabilize development itself as well as its efficiency in decreasing poverty.

3. The management of the environment could not be discussed independently without linking it to other issues of development. On the other hand, it is essential to incorporate into sustainable development issues and other forms of poverty reduction initiatives so as to attain relevant and permanent results. Developing environmental management in certain situations that would be profitable to the poor needs guiding principle and institutional transformations that affect sectors and that generally falls outside the power of environmental organizational transformations, in 'governance', 'domestic', financially viable and societal guiding principles as well as international and industrial-country strategies.

3.4.2 Relationships between poverty and the environment

IBRD/WB (in Odoi 1996) reveals that, modifications and interactions between poverty and the environment have usually been regarded as 'direct and straight forward', one functioning as the cause and the other as the effect and the other way round. This notion is extensively held currently in numerous significant reports and publications for instance the World Development Report asserts that, reducing poverty is mutually crucial and indispensable for environmental sustainability, and increasing as well as well-built evidence of the relations between poverty alleviation and environmental objectives creates difficult setting for programmes to decrease poverty and population growth. Furthermore, it has been noted that:

'Poverty and environmental degradation have become a part of an ever deepening cycle of underdevelopment. Poverty leaves people with little option but to extract what they can in the short term from the resource base; the resulting depletion of soils, forests and groundwater increases rural poverty and so the cycle continues". Rees also notes a direct relationship between poverty and environmental change, poverty leading people to deplete natural resources and thus degrade their environments. The World Conservation Strategy states that, "the vicious cycle by which poverty causes ecological degradation which in turn leads to more poverty can only be broken by development' (IUCN in Odoi 1999, 25).

Besides, Leach (in Odoi 1996) is with the opinion that, a two way relation has been noticed between poverty and environmental modification. Poverty has a negative effect on the environment particularly because it compels people to misuse natural resources to fulfill urgent desires without considering the lasting results for the natural resource base. In addition, a reduction in the resource base results in more poverty and as a result, the process goes on 'downward spiral'. The poor people are considered as those who suffer most from environmental depletion. While in some situations information seem to be accurate in the downward spiral model, it is not obvious or well investigated. Several studies demonstrate that the causal relation seem to move the other way. The studies propose the demand for a further new method to comprehending on the relationship

between the procedures and the results of environmental transformation, deeply rooted in the analysis of specific people in particular places.

There are no direct relationships between poverty and the environment since they are arbitrated by different types of factors which have influence on the ideas of the poor. The concept of environmental privileges has been initiated, which presents a constructive way in dealing with the circumstances under which people get the right to use and control natural resources, and increases the prospect of how environmental resources can increase poverty. Leach emphasizes that:

- 'People's livelihoods are based more or less on the management and use of natural resources
- Poverty and environmental change have a direct causal relationship and can feed each other in some kind of cumulative causation process
- Poverty is the principal or only cause of environmental change and environmental change is the principal or only cause of poverty' (Leach in Odoi 1999, 26).

Nevertheless, most poor people depend greatly on the environment in order to make ends meet. The kinds of activities that they undertake in order to fulfill their daily needs could have adverse effect on the environment to some extent. It has been noted that:

'The rural poor live mainly off natural resources. Poverty forces them to make out a living which sometimes degrades their environment. They have to cut down forests for fuel wood and at times to make room for farmland, though the major cause of deforestation is commercial felling of trees. The poor, however, get the blame. Unfortunately, the poor are pushed into growing crops on erosion-prone terraces and foothills. On the other hand, degradation of the environment puts enormous pressure on the rural poor. They are forced to migrate once soils are rendered barren by over exploitation, or to walk even farther to collect firewood when nearby trees have been cut down. The great physical effort coupled with environment-related problems such as lack of clean water and inhaling of fuel-fumes from indoor stoves

reduce the life span of many Third World women. These damage their health and jeopardize their ability to earn adequate income' (Rahman et al. 1998, 2).

Dowdeswell (in Rahman et al. 1998) asserts that, poverty and environment are closely inter related while environment and development contribute to growth. It is the poor who have been gradually providing their portion of resources for environmental and international benefits yet they frequently do not gain much as a result of unauthorized social arrangement and they are being compelled to migrate to more environmentally susceptible areas. This is non-influential of organizations in the North or in the South. Nonetheless, the poverty in the North is understood to be in comparatively lesser pockets whereas in the South it is persistent and widespread.

The poor suffer most and yet are the cause of environmental depletion. Concurrently, they often are the foragers and perform their duty in reusing resources especially those ones that would be wasted. They are compelled to fulfill their immediate desires resulting in reduction and deterioration of natural resource bases and physical environment in the long-run. At the other end, they are usually more susceptible and are incapable to deal with the environmental transformations. Approximately half of the world's poor reside in rural areas and depend on natural resources and the majority of the minor farmers have no choice but to cultivate inappropriate areas resulting in a sudden depletion of the soil. They also cause harm to the forest and water resources. The poor have insufficient right to clean drinking water, environmental hygiene and health amenities. They do not have adequate shelter, food and clothing. They experience different types of illness, industrial toxic waste, emission and catastrophes. The poor most of the time experience the most environmental hazard and are likely to be more susceptible to those hazards. The poor peoples do not have resources to stay away from debasing their living conditions and the environment.

The poor always make great effort in order to survive. Their delicate and inadequate resources, their deprived property rights and their restricted right to credit and markets stop them from improving their livelihood and this increase their susceptibility to environmental depletion. Population increase and poverty condition give rise to the excessive use of natural resources and consequently debase the stability of the physical

environment resulting in severe irregularities in the social environment (Rahman et al. 1998).

3.4.3 *Linkages between natural resource, environment and poverty*

It can be said that life on earth without living things depending on the other would be terrible. Nature has made it such that living beings depend on their environment in order to make a living. Poor people most often than not depend on their immediate surroundings in order to meet their basic needs. Rahman et al. (1998) has observed that, human survival on the earth is supported 'directly' as well as 'indirectly' on natural environment. This is factual for the industrialized and the less industrialized countries. The ecological units of the earth have been interrupted by the extensive activities resulting from trade, production and social amenities that outline the living conditions of the wealthy countries whereas for the poor countries greater part of the population make their living from the natural resources thus cultivating the soil for food, fetching water from the rivers and streams, energy from firewood and fodder for their animals from farmhouses around them. Unfortunately, the deprived ones are held responsible mainly for causing damage to their environment. The majority of people rely on the natural resources such as soil, water and forest as their means of survival. When there is increase in the population, pressure on the natural resources increases. The poor and underprivileged ones exploit all the potential of land, forest, water, fisheries and human effort. The over-utilization of the natural resource base, subsequently, results in their susceptibility economically, socially and physically.

There is more or less a procedure of decreasing population, predominantly in the developing countries. The consequence is over utilization of land, water, air and forest resulting in natural inequality and environmental depletion. Nature also in turn pays back in the form of flood, hurricane and famine and the poor turn out to be those who suffer most from the natural catastrophes. Hence, poverty and the environment curve move from 'bad' to 'worse'.

> 'The link between environment and poverty and environment and employment
> are interlinked and each of them has implications for the other. Protection of

the environment can be directly linked to the process of economic development which, in turn, gives employment and reduces poverty. It has been envisaged that poverty puts pressure on natural resources leading to environmental degradation and merely growth-oriented measures might do some harm to environment. On the other hand, well planned poverty alleviation measures could help protect environment. It was also held that there were many facets to the linkages between environment and employment. While over exploitation of natural resources can give employment, it might cause environmental degradation but sound environment protection measures can have some positive impacts on employment generation.

Environment-poverty-employment linkages could be further examined to bring about a process of sustainable development which may contribute to poverty alleviation. An appropriate food security measure could help relieve pressure on natural resources and protect environment. It is also viewed that pressure on land has to be reduced and non-farm activities has to be increased for employment generation. Environmental impacts of growth-oriented technologies need to be re-examined carefully so that an environment-friendly growth path could be charted' (Rizwanul in Rahman et al. 1998, 84).

3.5   Conflicts on forest resource use and management

Various conflicts arise in issues that concern forest resource use and management. Members of communities that are close to a forest depend greatly on the forest for their survival. Attempt to preserve the forest more often leads to misunderstandings on one issue or the other. There is therefore the need for parties involved to manage these conflicts amicably.

According to Pendzich et al. (in Makela 1999) misunderstandings in organizations are natural, and a procedure that is worth having however, the actual difficulty lies in the way to deal with these conflicts. Discussions could be enhanced inside or amid associations

as well as among association and the community (or among various stakeholders). The IDS Bulletin on Community-based sustainable development (in Makela 1999) propose that conflict, instead of agreement might be the main essential characteristic of rural development conditions, where the societies are seldom uniform and consensual, the 'environments' are not steady and the connection amid these is not peaceful.

> 'Apart from inner conflicts, another conflict area is the relationship between local people and governmental resource management institutions, such as forest or fisheries departments. In most countries there is little trust between the government officials and communities, the former being trained to apply the 'fine and fences' approach Utting (1993) and to respect only scientific knowledge, and the latter being accustomed to be suspicious about the government's intentions and the policing role of officials' (Makela 1999, 43).

According to Feryarabend (2000) major component of contemporary methods to solving conflicts should include the following:

- Some community members who show concern
- A general area of concern and some issues of conflict (diverse values, welfare and desires of the different groups involved)
- A discussion for cooperation and some fundamental regulations for the members involved to assemble and debate on issues together
- Some dependable information on the points of conflict
- Different alternatives for action created by the groups involved and confer among them
- A stated agreement on one of these alternatives
- The legalization of the agreement
- The execution of the agreement.

During times when the conflicts are severe and the different groups involved are far-away and unfriendly, there is the need for a facilitator or mediator to be present. An instructor who can deal with conflict issues can also be invited. Their responsibility is alike, although not precisely the same. These people can come from bureaucratic agencies or non-governmental organizations. They might as well be confidential individuals (religious organizations, pensioned judges and clever men and women in the

community). Conflict resolution is a peaceful procedure that encourages conversation and concession. It entails:

- 'Taking care of disagreements before they generate hostility
- Helping the institutional actors to explore a multiplicity of options for agreement and subsequently select an option everyone can live with
- Recognizing and intervening on the underlying causes of conflict, with a view to preventing them in the future' (Babbit et al. in Fayerabend 2000, 8).

Conflicts arise over the use of natural resources for numerous reasons. The most fundamental reason is the reality that natural resources are entrenched in the environment where the activities of one group can have unexpected consequences somewhere else or on another resource. Resources can be utilized by others whether intentionally or not, in ways that undermine the living conditions of others. Political factors are frequently caught up in conflicts over natural resources. Those who have more access to authority can best control or manipulate natural resource decisions to suit themselves. For the majority of people, conflict, predominantly violence conflict is to be shunned. (Daniel Buckles).[11] He continues that, "Conflicts can have many negative impacts, but they can also be catalyst for positive change".

In peaceful situations, conflict can be a visible expression of the general public becoming accustomed to a new political, economic and physical environment. For marginalized groups seeking to restore injustices or inequities in resource allocation, conflict is an intrinsic characteristic of their struggle for change and can make available the influence required to declare their claims. Even though confrontation can results in violence, avoiding and shunning conflict can be similarly dangerous since unresolved conflicts can crop up again with renewed vigour. The key according to Buckles "is not necessarily to resolve conflict, since that may not be possible, but to manage conflict so that it achieves change instead of leading to violence". Conflict management may in reality, present a better possibility of attaining a more lasting and meaningful peace[12].

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[11] A specialist at IDRC and editor of the article 'Cultivating Peace'.
[12] Cultivating Peace: From Conflict to Collaboration in Natural Resource management. 1999. www.idrc.ca/en/ev-

Indeed, issues on conflicts cannot be underestimated. However little the misunderstanding might be, it is important to discuss it in a way that will suit the interest of all the parties involved since managing these conflicts can enhance the sustainable use of the forest resource.

3.6   Summary

There are different definitions for the term community participation. A few of them are corporate participation, integrated management and local participation. All of these denote that there is a deliberate inclusion of all or some of the community members as well as other stakeholders in certain management activities that would benefit not only the community but all stakeholders involved.

The use of local participation in this study denotes involving the local communities deliberately in the activities that concerns the management of the forest and in ways that would benefit them. To ensure the continuity of benefits there is the need for sustainable management of the resource as well as the activities. The use of sustainability implies using the resource whilst making provision for future use. When communities interact with their environment and use resource in the best way, it is possible to reduce poverty. Issues on conflicts in participation and management of forest resources are inevitable, what is really important is how to manage these conflicts amicably.

Chapter four: Results and Discussions

4.0 Introduction

This chapter comprises the results of the field work and presented according to the specific objectives of this study. The data sources on which the results are based include the households and visitors' questionnaires as well as outcomes of the interviews and Focus Group Discussion. This is discussed alongside with some literature.

Community participation in the management of the forest here denotes involving the communities in taking care of the forest. This includes participating in decision making and undertaking some activities which would not destroy the forest but would assist them to support themselves so that they would not depend solely on the products from the forest for their survival. Thus, in managing the forest, the communities can get some products from the forest that would not destroy the tree species. These products can be snails, grass-cutter and bees which they can rear at home and sell instead of going to the forest every day to collect these products.

4.1 Background of respondents

4.1.1 Age groups of respondents

Several age categories were gotten at the end of the household questionnaire administration. The ages of respondents ranges between 18 and 70. The distribution is presented in figure 4.1.
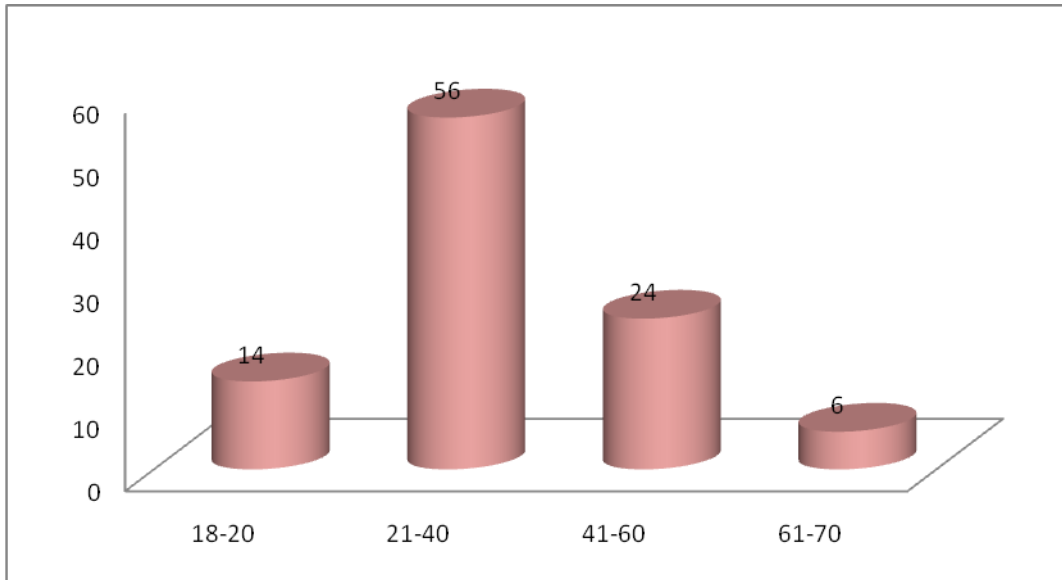
Figure 4.1: Ages of respondents in percentages.
Source: Fieldwork 2007.

From figure 4.1, the highest age group that were interviewed were those from the ages of 21-40 who are 54% followed by those within the ages of 41 and 60 who are 24%. 14% of the respondents fall in the age group 18-20 and the least age group are 61-70 with total of 6%. The highest age group forms the working population and it is important that they are included in decision making that will affect their lives. It is also important to incorporate the ideas of the aged since they have had more experience living in the area.

4.1.2 Sex of respondents

The distribution of male and female respondents is shown in a pie chart in figure 4.2.
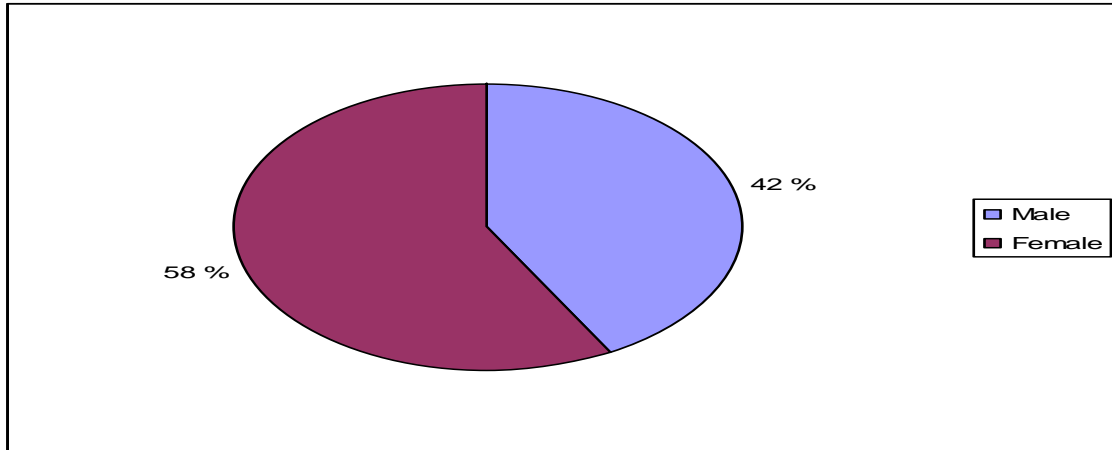
Figure 4.2: Sex distribution of respondents in percentages.

Source: Fieldwork 2007.

The figure shows that more females were met in the house than males. The female constituted 58% and the males 42%. This could be due to the fact that the women spend most time of their day in the house performing household duties (cooking and cleaning) where as the men would be out probably working or with some friends. Women also play major roles in forest resource management. As 'homemakers' they fetch the firewood and cook the household food and know the amount of Non Timber Forest Products like snails and mushrooms that they would need at home and have to collect from the forest. During the household data collection as well as the Focus Group Discussion, most of the women had knowledge about several kinds of trees that can be used as medicines for different ailments. Involving them in management activities and also in the decision making can help improve their living conditions and that of the community in general.

4.1.3   Educational background

The educational background of respondents is presented in the bar chart in figure 4.3.
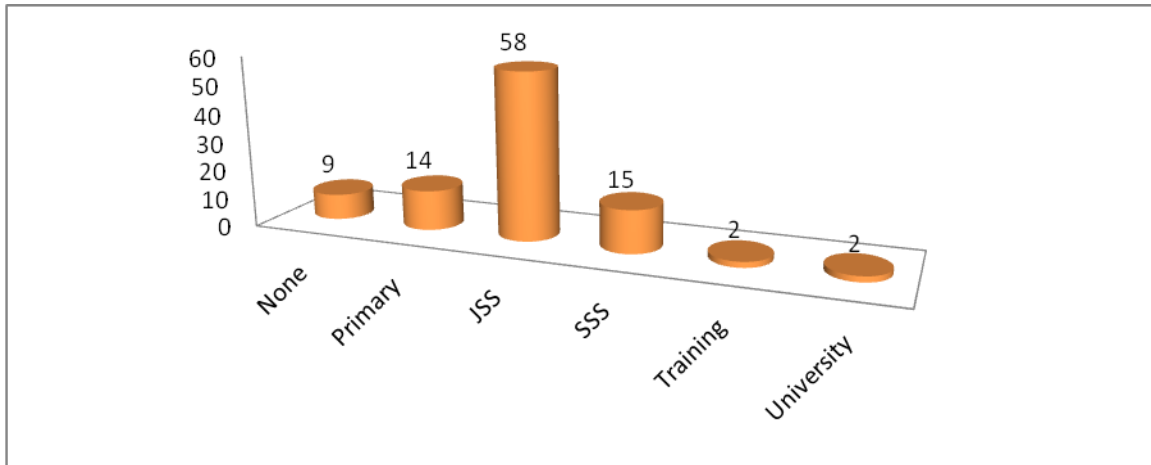
Figure 4.3: Educational level of respondents in percentages.

Source: Fieldwork 2007.

Majority of the respondents can be said to have low education. About 58% have Junior Secondary School certificates (JSS). This is followed by those with Senior Secondary School certificates (SSS) who were 15% and 14% having had Primary education. 2% of the respondents have been to the Training College and 2% too have had University education. Those who have not been to school at all are 9%. With such a high level of low education, it is quite impossible to get a 'white collar job' and therefore depend on their environment especially the forest. Since they can no longer get the products they used to get from the forest, there is the need for them to be engaged in other alternative activities so that they would not depend so much on the forest resource.

4.1.4 *Occupational distribution.*

Members from the three communities have various occupations from which they make their living. Their occupational distribution is presented in figure 4.4.

Figure 4.4: Occupational distribution of respondents in percentages.

Source: Fieldwork 2007.

The greater percentages of the respondents are farmers who are 43% and 34% are traders. Most of the farmers after harvesting their crops would go to the market and sell them whilst most of the traders sell their products in small quantities. For the category 'other', some of them were students and primary school teachers. For such farming communities, forest resources matter greatly to them since they would need more land for farming. During the household interviews some of the farmers were interested in getting more land to expand their farming activities and would want part of the forest to be cleared so that they can farm on that side since they believe that part of the land is fertile. Hence it is important for management of the forest resource to cooperate with them to ensure sustainable use of the resource.

4.2 Community participation in the management of forest resource

The intention here is to find whether the community participate in the management of the forest and their reasons. The result from the household questionnaire from the three

communities however, indicated that few people participate in the management of the forest resource. The result is presented below in figure 4.5.
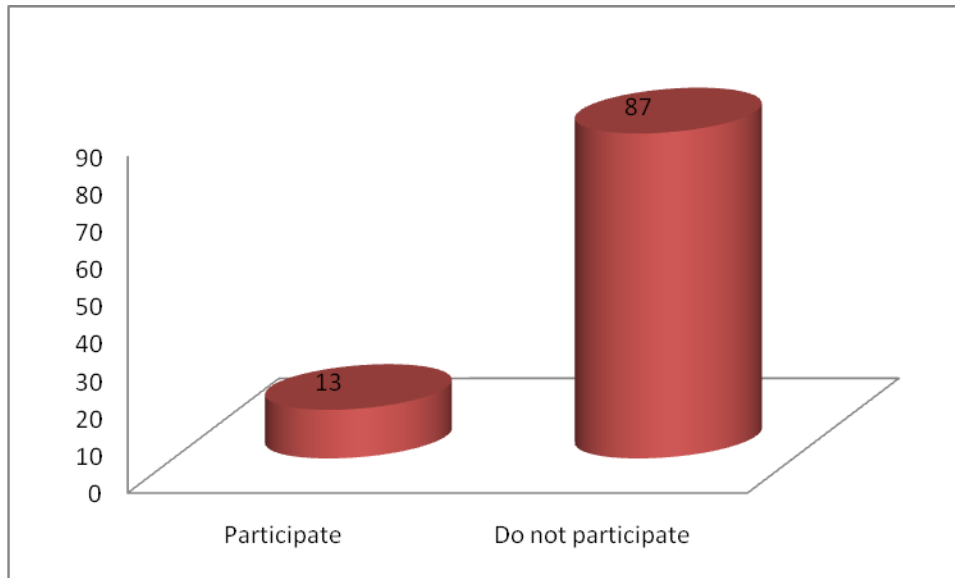
Figure 4.5: Participation in the management of the forest in percentages.
Source: Fieldwork 2007.

From the result presented above, 13% of the 100 respondents participate in the management of the forest resource whilst 87% do not participate in the management of the resource. The result henceforth shows that a higher percentage of the community members do not participate in the management of the forest and there is the need to get them involved in some forest management activities. According to Cernea (in Akitanda 1994) local participation is when people are given the authority to gather their own efforts to take care of their resources, make decisions and manage the activities that affect their lives.

Sayer (2004) is of the opinion that community participation is a deliberate procedure of bringing together the various aspects of natural resource use into a structure of sustainable management. IIED (in Domfeh 2007) asserts that it has been progressively recognized that effective local participation is an important component for sustainable management of national park, which can relate wildlife tourism to conservation and development. Drake (in Domfeh 2007) is of the view that participation has been

acknowledged as an indispensable component of sustainable development in general and national park protection in particular. Furthermore, Pound (2003) asserts that community participation can help increase a common visualization of the way natural resources are supposed to be managed, build self assurance and competence for cooperative action, recognize, develop and integrate local ideas, ways of life and principles.

Berkes et al. (in Makela 1999) suggest that co-management is the distribution of authority and responsibility among the government and the local communities who utilize the resource and in aspiring to have flourishing co-management there should be the establishment of suitable organization which should include the local communities. Besides Borrini-Feyerabend (in Makela 1999) describes co-management as a circumstance where several pertinent stakeholders within a certain protected environment take part in a considerable way in management activities.

Selener (in Colfer 2004) emphasizes that in participatory process, people in the group do not merely play a part as data suppliers or beneficiaries but contribute dynamically by putting into practice all actions throughout the process. Mitchell (1997) gives various explanations for involving communities in resource management among which is to acquire certain knowledge and perception which are remote in the world of science. The communities surrounding the Kakum National Park require a deliberate involvement in the management of the forest, share their ideas with management concerning the use of the forest and how their ideas can help boost management activities. Even though they have low education, it is possible that, they have certain indigenous knowledge which can be useful in managing the forest successfully. After their deliberate involvement, they can then be given the authority to manage their own activities with guidance from the management. It can be said that the kind of participation according to Pretty's typology in which the members from the communities are engaged in is the participation in information giving. It was noted during the data collection and at discussion that most student researchers frequent there to collect data for their studies however, since the community members do not get any benefit in return, some of them are reluctant to provide information for researchers.

Despite the fact that there are few people who participate in some management practices, it shows however that, the community are not completely left out in the management of the forest resource. This also explains that since community participation in the management of forest resources became a knowing tool for resource preservation, Ghana has at least started involving her communities in some aspects of forest resource management although the results shows that it is not enough.

Makela (1999) asserts that in the last ten years, there has been an increasing awareness that one of the main potential means of preserving nature is to reinstate, under contemporary regulation, the privileges that communities have over land and its resources. Community-based natural resources management and preservation have turn out to be an imperative area that needs to be stressed in international development and conservation in the last decade. The innovative approach pursues the shift in international growth circles to community-based rural development and their involvement approaches: the attention is geared towards the people, their means of living and local associations, native ideas and local organizational structures. Interview with the manager in charge of community participation reveals that there are on going programmes to involve the communities in the management of the forest. Their participation however can be said to be passive. According to Pretty's typology of participation, passive participants are informed on what is going to take place or has already happened. It was noted during the discussion that community members are informed of what to do and what not to do and they have to abide by that.

The distribution of the 13 respondents who said they participate in the management of the forest from the three communities is shown in figure 4.6.
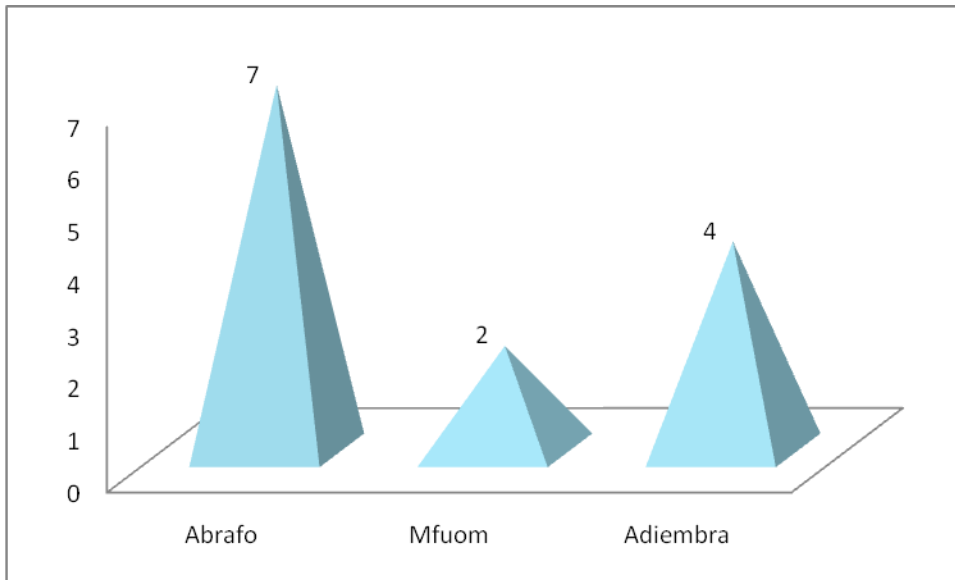
Figure 4.6: Number that participates in the management of forest from the communities.
Source: Fieldwork 2007.

A greater number of those who said they participate in the management of the forest come from Abrafo with a total of 7 respondents followed by Adiembra with a total of 4 respondents and then Mfuom with 2 respondents. The reason why Abrafo happens to have a higher number of people participating in the management of the forest is because many of the workers at the park reside in Abrafo and the main gateway to the tourism site is also in Abrafo. Involving more people from Abrafo would help improve their living conditions since they come into contact with visitors and can sell traditional products, seedlings and other products that they were interested to undertake. In the same way, similar opportunities can be created at the other communities in order to reduce conflicts. Moreover, several reasons were given as to why they participate in the management and why they do not. This is shown in figure 4.7 below.
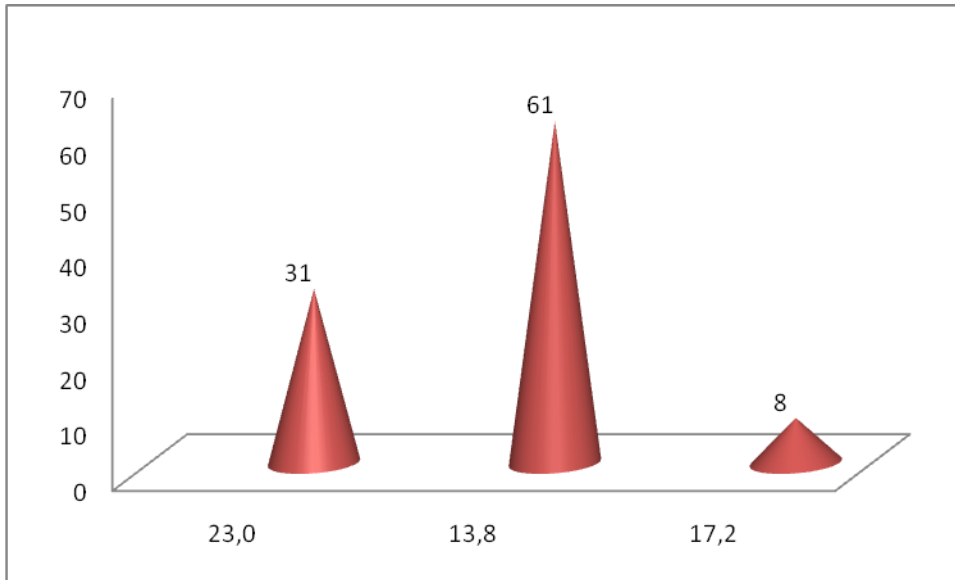
Figure 4.7: Reasons for participating in forest resource management in percentages.
Source: Fieldwork 2007.

For those who participate in the management of the forest, 61% (8) gave reasons that they participate in order to protect the forest 31% (4) were of the view that they participate in order to preserve their heritage and 8% (1) also gave a reason that he participate to aid tourism activities. Their forms of participation were educating others on the importance of the forest resource whilst others are tour guides and forest guards.

Those who said they do not participate in the management also gave their reasons which are shown in figure 4.8.
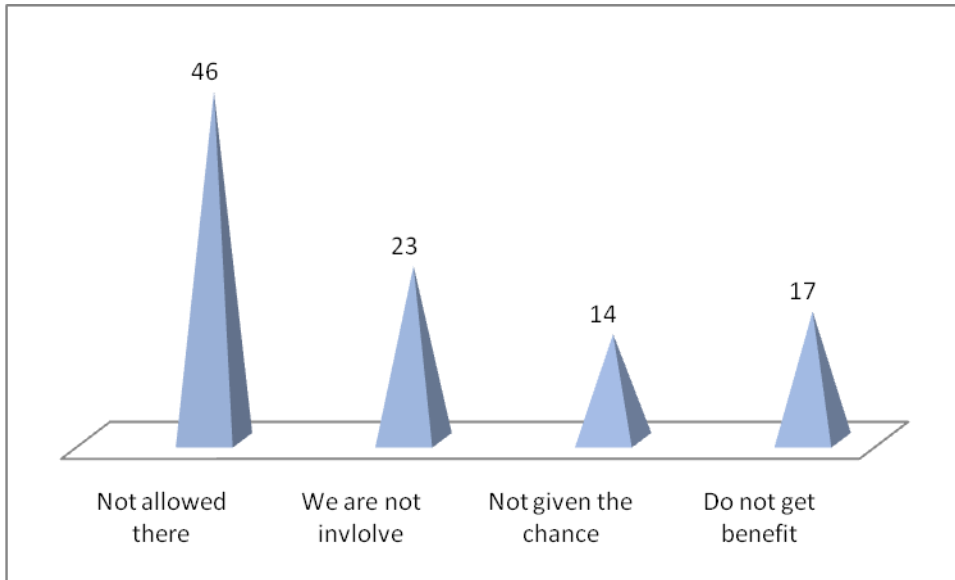
Figure 4.8: Reasons for not participating in forest management in percentages.
Source: Fieldwork 2007.

The greater number of them said they are not allowed to go to the forest 46% (40). Those who said the officials do not involve them were about 23% (20) followed by those who said they do not get any benefit from the forest 17% (15). The least was 14% (12) who said they were not given the chance to be part of the management activities.

During the interview with the manager, it was revealed that the members of the communities are not allowed to sell at the reception because if all interested members in the communities are allowed to sell there, the place would be so clumsy and it would not give a good impression of a tourism site. I observed that, there was no member of the community selling at the reception. Even though there is a shop where artifacts are sold, it was revealed during the Focus Group Discussion that it belongs to a member of the management but not anyone from the communities. A coconut seller was observed selling fresh coconut to tourists when coming from the canopy walkway on one of the trail routes. His position was strategic in the sense that, when one is coming from the trails, the person who is very tired would not hesitate buying a fresh coconut. A conversation with this person however revealed that he came from one of the communities though he did not mention the name of the community. According to

Mowforth and Munt (2003), for a tourism reserve to be sustainable, there should be some education as to how the human and natural environment work and also on local participation. Makela (1999) is of the opinion that the benefits that ecotourism can bring to the community include the encouragement of local participation in the management of the natural resource and increase awareness by local members on the need for environmental protection.

From the conceptual framework in chapter three, the community members need to participate in the management of the forest resource so as to ensure its sustainable use. However, to ensure their adequate participation, they need to get some education. From the field studies, the majority of the people (46%) think that they cannot participate because they are not allowed to go to the forest since it is a reserve and they are not supposed to cut pestles and collect other forest products from it. It has also been shown that, majority of the people have low level of education. This can be changed through community education so that they would become aware that it is not just going to the forest that would bring about their participation. The same can be done for those who think they are not involved in any other activities, not given the chance to be part of the management as well as those who think they cannot participate because they do not derive any benefit from the resource.

The communities alone cannot succeed in their efforts to participate whereas the management alone cannot also succeed in urging the communities to participate without the two parties cooperating and sharing ideas as to how their forms of participation should take. For such communities with low level of education, they need more information, ideas, knowledge and the learning process in order to gain much understanding of issues regarding forest resource management and the roles that they should play.

According to Sayer and Campbell (2004) research on integrated natural resource management should intend to make possible large numbers of people to discover the full range of options that are accessible for dealing with their local resource management problems. This means building an environment where science and knowledge assist

people to broaden a variety of locally appropriate resource management solutions. Pretty (in Meela 2001) presented the opinion of one school of thought that sees community participation as a way of enhancing competence, the innermost idea is that if people are engaged in the activity then they are more probable to have the same opinion with and agree to the new development or service. It is apparent from the field studies that when members from the communities are engaged in some management activities, it is possible that they would adhere to and welcome innovations and policies that would enhance the conservation of the resource. This would however, require cooperation from both management and the communities. Since members of the communities have low education, they would need educational assistance in order to discover the different opportunities that are available within their environment.

During the Focus Group Discussions, participants from the communities aired their views that, they would want to be involved in some alternative activities. Some of them gave examples of other forest communities in other regions, where communities are engaged in some alternative activities and concluded that their involvement would help them improve their living conditions and learn more about the resource and other management activities. Pound (2003) asserts that, participatory research increases the significance of the resource by bringing forward innovative information and responses into the participatory learning and adaptive management. According to Pretty's (1995) typology of people's participation, some people participate for material incentive. It can be said that the people around the Kakum National Park would be interested to participate when they are able to get some benefit from the resource. Their participation can stop when the benefit cease. Hence, there is the need for them to be engaged in management activities which can be sustainable to ensure their continuous participation.

To ensure sustainability of participation Makela (1999) is of the opinion that there is the need to generate revenue for continued efforts to maintain biological diversity in a particular area. In addition, there should be simultaneous generation of revenue that can be used for the benefit of the people living in and around the conservation area. The Brundtland Commission (in Mitchell 1997) brings out the idea that for sustainable development to be achieved there is the need to preserve and develop the natural resource

base and also integrate environmental issues in decision making. Rapetto (in Ulhoi et al. 1996) asserts that certain changes are essential in achieving sustainable development and these include a resource change to dependence on profits from the environmental resources with no destruction to the resource base. Pearce et al (in Ulhoi et al. 1996) believe that sustainable development can be achieved when the current ecological barriers have been detached and the techniques for realizing this is include the use of appropriate expertise, management of renewable resources to achieve increased yields.

Furthermore, the International Labour Organization (in Ulhoi et al. 1996) describes sustainability to include fulfilling the needs of the poor and managing the environmental resources. Constanza (in Ulhoi et al. 1996) creates a link between sustainability and human activities where human beings can prosper and survive for ever. However, for all these notions on sustainability in development and in natural resource management to be achieved require the participation of members of communities in which the resource is found. Since resources are dynamic and changes in time and since human needs are also unlimited they would continue to interact with their environment in order to satisfy their needs so that they can continue to survive.

Members of communities around the Kakum Park with such low education and few people participating would need more education and increase participation in order to sustainably use the forest resource. From the conceptual framework, when communities participate in the alternative activities there is the likelihood that they would earn some income which can be reinvested to sustain the activities. Moreover, through community education, members of the community would become aware that their source of income is as a result of the forest and that would give them the pride to do whatever possible to protect the forest and use it at a sustainable rate.

4.3 Relationship between community participation and poverty

It was also an objective of this research to find whether there exist at all any relationship between community participation and poverty. Respondents were asked whether they think by participating in the management they can reduce poverty. All respondents

answered in the affirmative. This shows that even though few people participate in management of the forest and majority of them have low education, they are aware that when they participate they can reduce poverty. Their reasons were sought as to why they think that their participation can reduce poverty and the following responses were given. This is presented in figure 4.9.
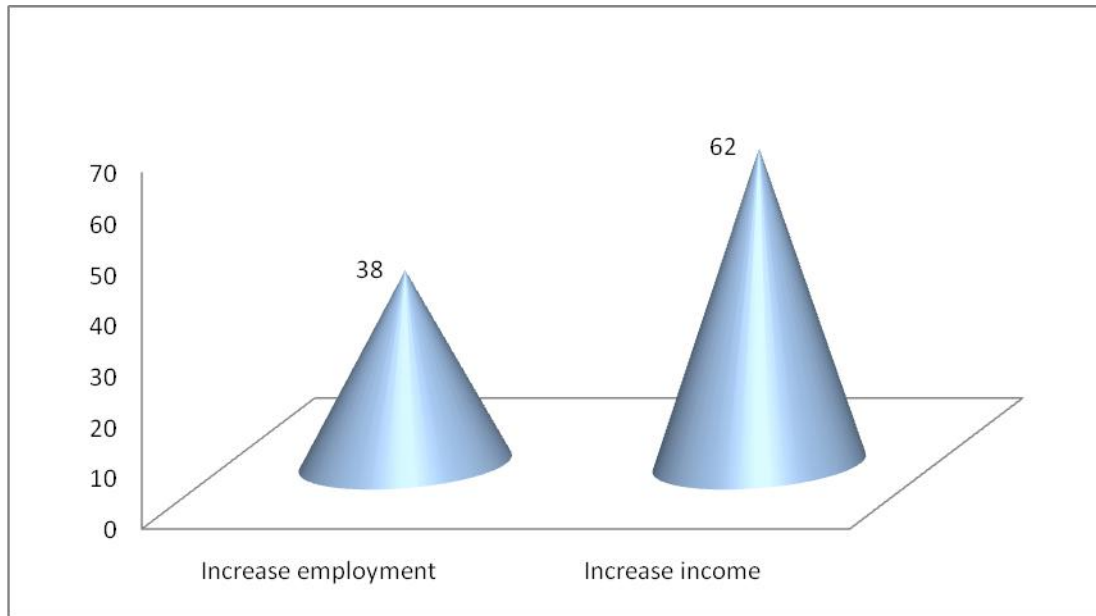
Figure 4.9: Reasons for link between participation and poverty in percentages.
Source: Fieldwork 2007.

Most of the respondents were of the view that their participation is going to make them get jobs and that will increase their income. 62% (97) said their participation will increase their income whilst 38% (60) said that it will increase employment. Most of them gave more than one response.

Similar questionnaire was administered to the visitors as well as the NGOs and they were all of the view that community participation has a relationship with poverty and also provided their reasons. This is shown in figure 4.10.
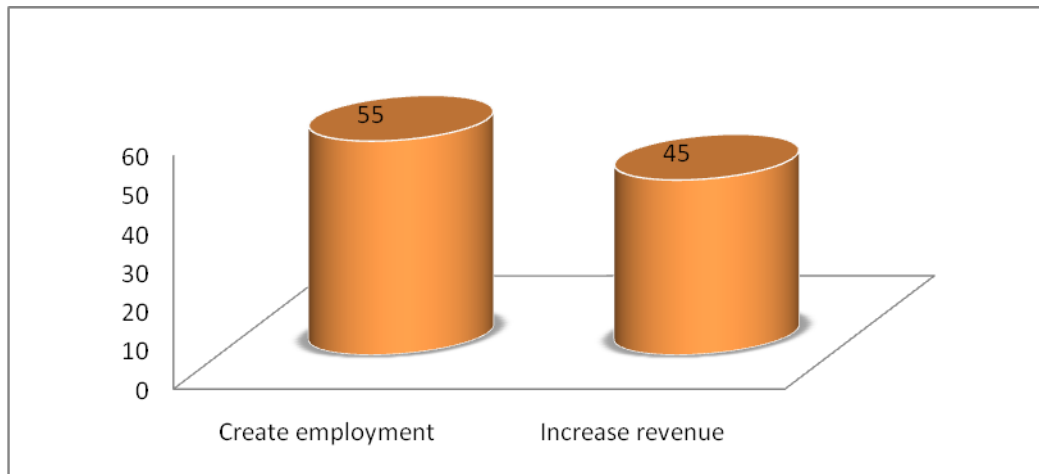
Figure 4.10: Visitors' view on relationship between community participation and poverty in percentages.

Source: Fieldwork 2007.

Majority of the visitors 55% (11) said it was going to create employment and 45% (9) said it will increase revenue. Majority of those who said it was going to create employment also said it will increase revenue through their engagement in other profit oriented activities like the sale of seedlings, snail rearing and mushroom cultivation. Some of them gave multiple responses.

Some of the responses from NGOs include the following. 'It can, and it has to because that is one of the main objectives of all community participation of forest management.' (One Professor from Human ecology department, Vrije Universiteit Brussel). According to the Social Support Foundation (SSF), communities involved with forest management are improving their livelihood. Ownership and involvement in alternative livelihood activities increase their income. A member from the Ministry of Tourism and Diasporal Relation thinks that community participation will help redirect the community from over dependence on forest resource exploitation to alternate livelihood.

This shows however, that community participation has a link with poverty because when the community members are able to undertake the various participation activities, they can increase their income. For instance those who will be rearing animals like snails,

grass-cutter, bees and cultivating mushrooms would be employed by doing so and can sell them to get revenue and also make sure that these activities go on throughout the year to ensure sustainable income generation. When the community members are able to get income from these activities, the pressure on the reliability on the forest for their survival would reduce and that would go a long way to ensure the sustainable use of the forest resource. Similar views were derived from participants during the Focus Group Discussion. Glimour (in Odoi 1999) believes that it cannot be anticipated that societies which are poor would be engrossed in preservation when they have not been able to satisfy their basic needs. As a result, there should be attempts to enhance their social and economic welfare in order that they will be in a situation to become more curious in conservation.

Rizwanul (in Rahman et al. 1998) assert that, the relationship between environment and poverty and environment and employment are connected to each other and each of them has some effect on the other. Safe guarding the environment can be straightly connected to the process of economic development which in the end creates employment and reduces poverty. Members from the three communities would be employed by participating in the alternative activities which would improve their financial conditions.

Besides, the research showed that most of the respondents have low income level and that can be explained from the fact that few of them participate in the management of the forest resources and this can improve when community members participate more in the management of the forest. This is shown in a cross tabulation with level of participation and monthly income of respondents in table 4.1.

Table 4.1: Monthly income and participation of forest cross tabulation.

Monthly income in Ghana cedis	Participate (%)	Do not participate (%)	Total (%)
Less than 50	61	86	83
Between 50 and 100	23	8	10
100 and 150	8	1	2
>150	8	5	5
Total	100 N=13	100 N =87	100 N=100

Source: Fieldwork 2007.

From table 4.1, 86% of the respondents who do not participate in the management of the forest receive less than 50 Ghana cedis as compared to those who participate thus 61%. Majority from this group rated their monthly income between 10 and 30 Ghana cedis for those who do not participate and 30 to 45 Ghana cedis for those who participate which is less than the average daily income or the minimum wage of 1.7 Ghana cedis. In the new Ghana cedis, 1 Ghana cedis is equal to 1.058 United States dollar hence, majority in this group can be said to be living below the average daily income.

On the other hand, 23% of those who participate rated their salaries between 60 and 90 Ghana cedis and they can be said to be over the average daily income as compared to 8% of those who do not participate. Those who participate are employed as tour guides and security guards who ensure that people do not go to the forest illegally.

According to (UNDP, EU, DFID & WB 2002) the management of the environment could not be discussed independently without linking it to other issues of development. The prime and most important idea is that, those who are poor should be taken as a component of the solution more than being part of the problem. In attempts to develop environmental management in certain circumstances that would promote sustainable development and decline in poverty, the main concerns of the poor needs to be incorporated. Useful guiding principles and organizations are desirable, as well as the right to use information and creation of decision that would increase the possibilities of

poor people to participate in the management of environment in ways that would improve their living conditions.

From the conceptual framework, community education would enhance their participation in alternative livelihood activities which would enable them to get employment and increase their income and hence reduce poverty. When the community is made aware that the job creation is as a result of the forest it is possible that illegal poaching and logging in the forest would reduce and that would go a long way to ensure sustainable use of the forest. This indicates that there is a link between participation and poverty. There should however be cooperation between the communities and the management to ensure the continuity of these alternative livelihoods activities. Since majority of the community members have low education and most of them are farmers, their quest for land to farm on would be very high.

According to Rahman et al. (1998) the majority of people rely on the natural resources such as soil, water and forest as their means of survival. When there is increase in the population, pressure on the natural resources increases. The poor and underprivileged ones exploit all the potential of land, forest, water, fisheries and human effort. The over-utilization of the natural resource bases, subsequently, results in their susceptibility economically, socially and physically. The poor always make great effort in order to survive. Their delicate and inadequate resources, their deprived property rights and their restricted right to credit and markets stop them from improving their livelihood and this increase their susceptibility to environmental depletion. From the field studies, the communities surrounding the forest do not have adequate finances or credit to start their own business. Without engaging them in any participation management activities it would be difficult to prevent poaching in the forest.

The IBRD/WB in Odoi (1996) asserts that reducing poverty is mutually crucial and indispensable for environmental sustainability. Leach in Odoi (1996) in a two way linkage stresses that people's means of living are based more or less on the management and utilization of natural resources, poverty and environmental transformation have a direct causal links and can feed each other in away that signifies a causal relation. The communities around the Kakum National Park with their low level of education depend

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so much on the environment for their survival. There is therefore, the need for the communities to benefit from the management of the resource but before they can reap any benefits, they would need some guidelines from the management to enable them undertake the activities that can generate income.

4.4   Collaboration or conflicts between management and the communities.

The research also covered whether there is collaboration or conflict between the management of the forest and the communities. When respondents were asked whether there are any conflicts or collaboration between them and the management, a greater number of the respondents were in collaboration with management although some were not at peace with them. This is shown in figure 4.11.
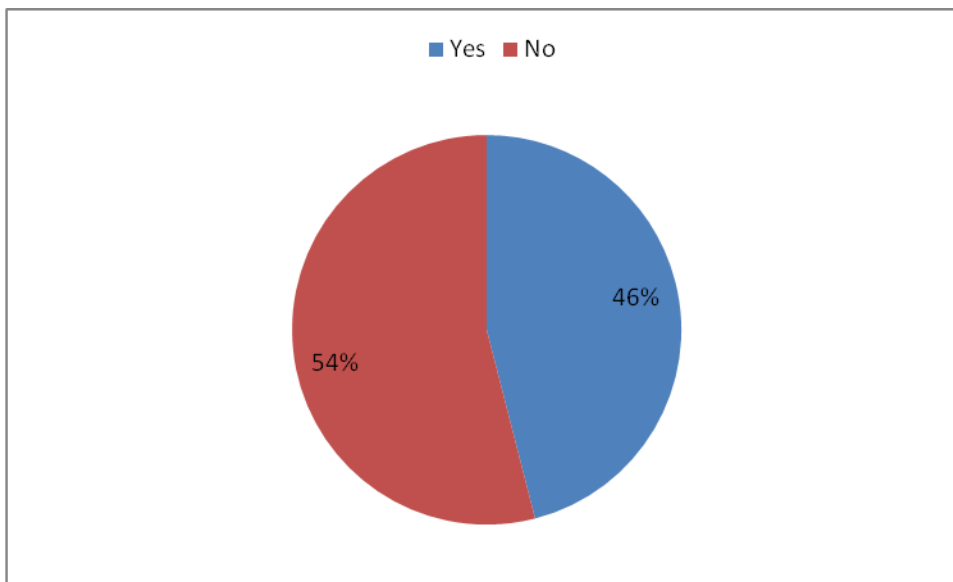
Figure 4.11: Conflicts between management and the communities in percentages.
Source: Fieldwork 2007.

About 46% of the respondents said they are not at peace with management whilst 54% said no they rather have good collaboration with management. Although majority of them said they were in collaboration with management, it was realized during the Focus Group Discussion that they were not happy with activities of the management. All the

participants at the Focus Group Discussions expressed their dissatisfaction with the creation of the reserve which has not brought any potential benefit to the communities. Most of them commented on the dismissal of workers from the community who were working on the park and lamented that it does not give a good impression of the relationship between management and the communities. They were also of the opinion that if such misunderstandings should continue they are never going to be at peace with management.

Those who said they are not at peace with management were asked to give their reasons and to state the forms of conflicts that exist; they gave several responses which are presented in figure 4.12.
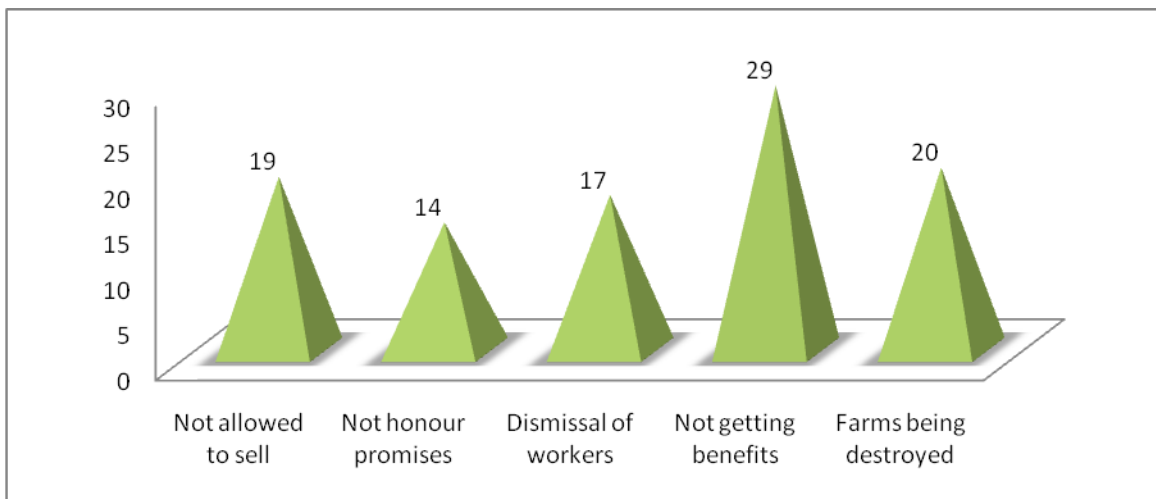
Figure 4.12: Forms of conflicts between management and communities in percentages.
Source: Fieldwork 2007.

A greater number of the respondents 29% (20) said they are not at peace with management because they do not get any benefit from the reserve as well as the tourism activities. 20% (14) said the conflicts arise as a result of elephants destroying their farms. 19% (13) of the respondents also have problems with management because they prevent them from selling at the reception. Those who said the conflicts arise as a result of management dismissing some workers from the community were 17% (12) and 14% (10) were not happy with management because they failed to fulfill the promises they made to

the communities when the forest was taken from them. Some of them gave more than one response.

It is interesting however, that the management is aware of only one conflict. From table 4.2 below, when management were asked whether there exist any conflict, the response was yes but only one conflict exist and that is the conflict on elephant raiding crops of farmers around the park. The result from the management questionnaire is shown in the table below.

Table 4.2: Result from management questionnaire.

Question	Response
What is your goal	To protect this rainforest with its biodiversity, habitats and the natural processes whiles promoting economic development in the fringe communities.
How do you work towards achieving your goal	There are three units/departments here; the law enforcement unit protects the park from encroachers and poachers. The collaborative resource management/community participation unit works with the fringe communities whilst the tourism unit handles the visitors that come.
Do you engage the communities in the management of the resource and why	Yes. Because before the creation of the park they used to benefit from the park by way of collecting Non-Timber Forest Products and therefore to manage this park sustainably they must be involved in its management.
How do you engage the communities in the management of the forest	We have two main structures through which we work with the communities. The protected area management advisory units and the community resource management committees.
Do you think community participation in the management can bring about poverty reduction and why	Yes. Their contribution and involvement open other avenues for supporting them either directly or indirectly.
In what ways are funds generated from the resource used	Currently all funds generated from the park directly goes to the government. However, the government from time to time allocates funds to support the two structures for community participation.
Is it possible to use some of the funds to sponsor some participation activities and why	Yes. Community participation has become one of the core activities of the park.
Are there any conflict between management and communities and what are	Yes. Only one conflict; elephants raiding crops of farmers around park.

they	
What should be done to manage the conflict(s)	The park has now introduced a low tech, cost effective system of protecting farms and this has drastically reduced the conflict
Comments	Working with communities take a lot and one needs to bear that in mind.

Source: Fieldwork 2007.

An interview with the management of the Park revealed that the communities especially Abrafo, have benefited indirectly from the reserve. This is because the current market structure and the primary school in the community were built as a result of the forest. However, it was disclosed during the Focus Group Discussion that the community is not satisfied with just a market structure and the school. They were of the view that, they need to have something to sell before they can go and use the market structure and also, they have to pay fees for their wards to go to the school. Therefore, they would need some items to sell in order to make money so that they can pay for their wards fees. Furthermore, it was made known during the interview with the management that, the communities have been informed not to farm close to the reserve to prevent the elephants from raiding their crops. It was however observed that some farms were close to the forest and even shares border with the forest.

Figure 4.13: Oil palm and orange plantation close to the forest reserve.

Source: Fieldwork 2007.

The various NGOs and Organizations whom the researcher administered questionnaire on also admitted that they do have conflicts with the forest communities in which they work. Some of the conflicts include poaching, encroachment, communities' forest management conflicts, complaints of communities not having fair share of tourists' proceeds.

Conflicts arise over the use of natural resources for numerous reasons. The most fundamental reason is the reality that natural resource are entrenched in the environment where the activities of one group can have unexpected consequences somewhere else or on another resource users. Resources can be utilized by others whether intentionally or not, in ways that undermine the living conditions of others. Political factors are frequently caught up in conflicts over natural resources. Those who have more access to authority can best control or manipulate natural resource decisions to suit themselves IDRC (1999). [13] Some members of the communities around the Kakum National Park are not satisfied with the management of the Park because they feel they are not treated well as far as the management of the forest is concerned. Some of the members especially those from Adiembra complained that they are often beaten up by the forest guards when they go to the forest but they often see these guards with grass-cutters and other forest products. Because these guards have been given the power to go to the forest, they use it to their advantage and this does not give a good impression of a reserve.

Community members were asked how they think these conflicts could be solved and the following responses were derived. This is presented in figure 4.14.

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[13] www.idrc.com
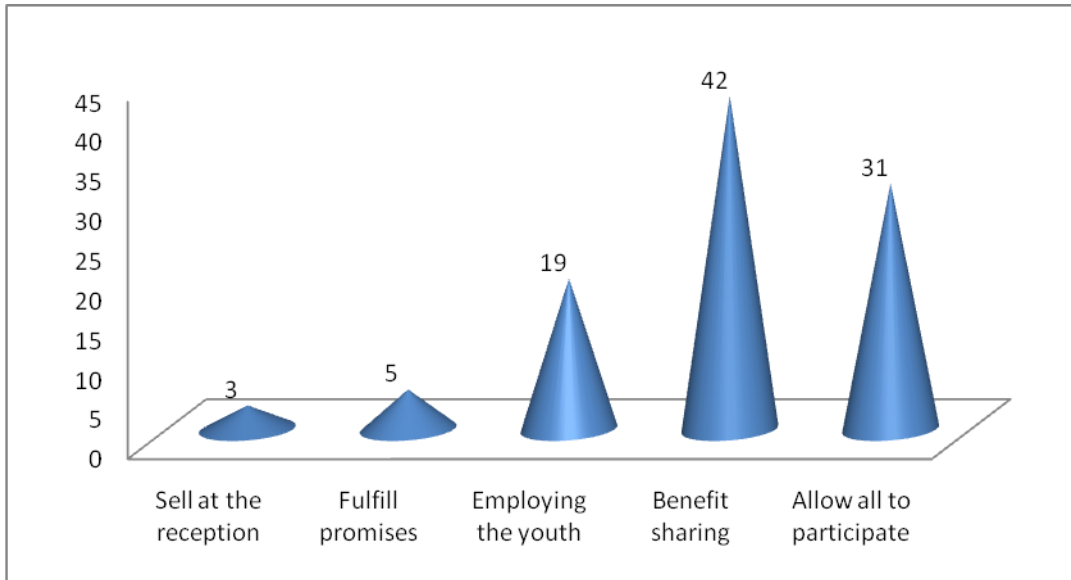
Figure 4.14: Ways to manage conflicts, perception of respondents in percentages.
Source: Fieldwork 2007.

Most of the respondents 42% (42) were of the view that by sharing benefits from proceeds the conflicts will be resolved. 31% were of the view that the conflicts can be managed when all members of the communities are allowed to get involve in the management of the forest or be engaged in other alternative occupation. 19% of the respondents also thought that management should employ workers from the communities. Those who want management to fulfil their promises were 5% whilst those who want management to allow people to sell at the reception were 3%. These suggest that when communities are able to derive benefits from the forest through their participation in the management the conflicts on the resource will reduce. The community members have the interest to collaborate with the management but will however, do so when they are able to get the benefits they request for.

At the Focus Group Discussion, most of the participants were not happy with management because they feel that they have been cheated in some way. They continued that, during the days when they could go to the forest, their living conditions were better than now since they could cut timber to build their houses, canes to weave basket, cut bark of trees for medicines, collect snails and mushrooms and so many benefits that they

cannot get today but instead have to buy them from somewhere so expensive. They argued that, they would however, be satisfied and be happy with management if they can get alternatives or other sources of income which they can use to purchase these items elsewhere.

For the NGOs, their ways of solving the conflicts included education and capacity building, shared roles, community participation and community ownership. Other solutions involved private investors to employ local people and to create micro-credit for local people to develop micro enterprises.

Although a higher number of the community members were in collaboration with management, it is however not surprising that, others had conflicts with management. Before the creation of the reserve, members of the communities had free access to the forest and collect Non-Timber Forest Products including mushrooms, snails, grass-cutter and other medicinal herbs for sale and also for their consumption. They now have to buy these items elsewhere whilst these items exist abundantly in the forest close to where they live. Without providing the communities with alternatives, it is quite easy that conflicts will arise. However, the most beneficial thing is how to manage these conflicts amicably.

According to Pendzich et al. (in Makela 1999) misunderstandings in organizations are natural, and a procedure that is worth having, however, the actual difficulty lies in the way to deal with these conflicts. Discussions could be enhanced inside or amid associations as well as among associations and the communities (or among various stakeholders).

The IDS Bulletin on Community-based sustainable development (in Makela 1999) propose that conflict, instead of agreement might be the main essential characteristic of rural development conditions, where the societies are seldom uniform and consensual, the 'environments' are not steady and the connection amid these is not peaceful. Borrini-Feyerabend et al. (in Colfer 2004) emphasize that, the management of forest resources in tropical regions is a key political concern since various stakeholders take such resources and several conflicts crop up regarding the remuneration that would be gotten from the forest. The conflicts between the communities of the Kakum National

Park can be resolved when these parties meet to discuss the conflict issues and how best to solve them. Although majority of the members from the communities seem to have collaboration with management, it was evident during the Focus Group Discussion that most of them are not satisfied but could not freely express it. Two participants who said they did not have any problem with the management during the household data collection expressed their views during the discussion that they indeed are not satisfied. This indicates that when there is open dialogue between the management of the Park and the communities they can freely expressed themselves and knowing that their views have been carried across can even minimize the conflict.

According to the conceptual framework when communities participate in the management of the forest through their involvement in alternative livelihoods activities, they are going to gain some profits and that would help reduce conflicts between them and the management. Again, collaboration would improve when there is benefit sharing between the communities and the management. From the field studies about 42% of the respondents were of the view that with benefit sharing conflicts with management would reduce whilst about 31% of the respondents want the management to involve all the communities in the management of the forest or provide them with alternatives. These views were not different from those who participated in the Focus Group Discussion. According to the management, some actions have been taken to reduce destruction of farms by elephants by the introduction of chilli-smeard rug on ropes around the farm. But this action according to members of the communities is concentrated in other areas other than those that this research covered. This is shown in figure 4.15 below.

Figure 4.15: Some farmers hanging a piece of chilli-smeard rug on the nylon rope.
Source: Forestry Commission, 2006.[14]

In dealing with forest resources where conflicts is virtually inevitable, it is necessary that the management try to consider the desires of the communities. There should be even distribution of incentives or include all communities in the management of the activities. In reducing conflicts, Buckles[15] is with the opinion that, it "is not necessarily to resolve conflict, since that may not be possible, but to manage conflict so that it achieves change instead of leading to violence". Conflict management may in reality, present a better possibility of attaining a more lasting and meaningful peace. Pound (2003) is in the opinion that encouraging the flow of information between groups, encouraging learning process and increasing the power to deal with difficult issues in various ways can contribute to managing problems.

According to Feryarabend (2000) conflicts can be managed when there is discussion for cooperation and some fundamental regulations for the members involved to assemble and debate on issues together and executing the agreement. It is possible that community members around the Kakum Park would not be fully satisfied with activities of the management or their level of involvement but with dialogue and communication, it is possible that the conflicts can be managed.

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[14] Report on activities undertaken to improve food security and farmers' livelihood around Kakum Conservation Area.
[15] www.idrc.ca

4.5   Ways to involve the communities in the management of the forest resource

After getting to know that there is a relationship between community participation in forest resources management and poverty, it is essential that management of forest resources, government and NGOs collaborate with the communities and find out ways to involve them in the management aspects.

This research tried to find out from the respondents the forms of activities that they would like to be engaged in as a way of their involvement. From the research that was conducted, community members were asked to give ways in which they would want to participate in the management of the forest. Thus if they are to be engaged in the management process, what kind of activities would they like to undertake. Several responses were given and this is presented in figure 4.16 below.
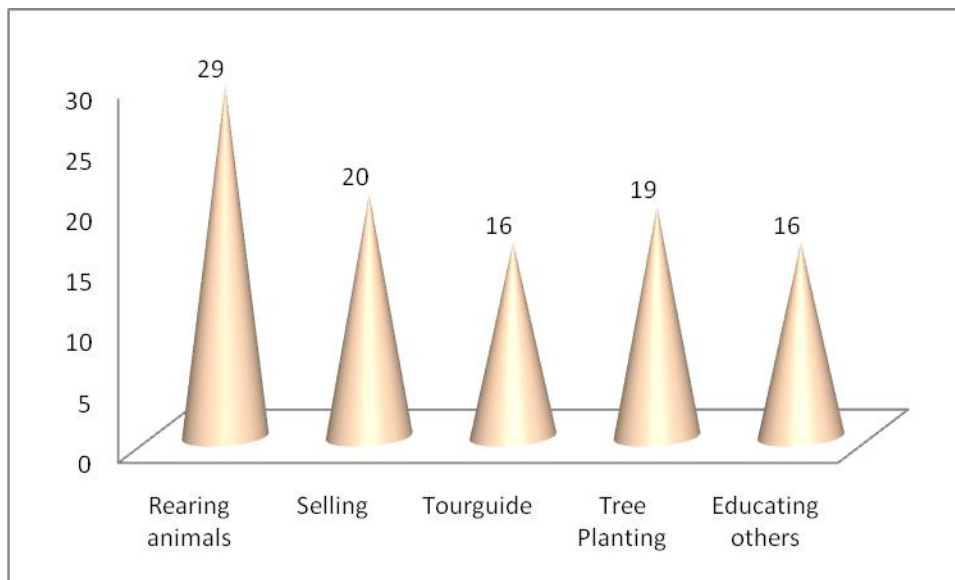
Figure 4.16: Ways to involve the community in the management of the forest, perception of respondents in percentages.
Source: Fieldwork 2007.

The highest amongst them was the idea that they would be interested in rearing animals for consumption and also for sale 29% (48). According to them, rearing the animals will

stop them as well as others from going to get it from the forest illegally. The next activity with about 20% (34) was those who were interested in selling to visitors at the reception. They were interested in selling food items like banana and oranges. Others were interested in selling seedlings and Non Timber Forest Products like snails and mushroom whereas others would like to sell traditional products like kente and beads. They were of the view that since the forest is now a reserve and they are not allowed to go and get what they want from it, they should be allowed to sell to visitors who come to visit the park so that they can earn some money. 19% (32) of the respondents were of the view that they will like to plant trees when given the chance so that they can rely on that instead of the forest. For them to do that, they would need land and seedlings from the forest. 16% (27) were also interested in tour guiding exercise and they would need to be employed and trained in order to fulfil that and 16% (27) again were interested in educating others on the importance of the forest. Most of the respondents gave multiple responses.

Moreover, the research solicited the views of visitors (12) on the activities that they would want to see the communities undertake. Various activities were recorded which is presented in figure 4.17 below.
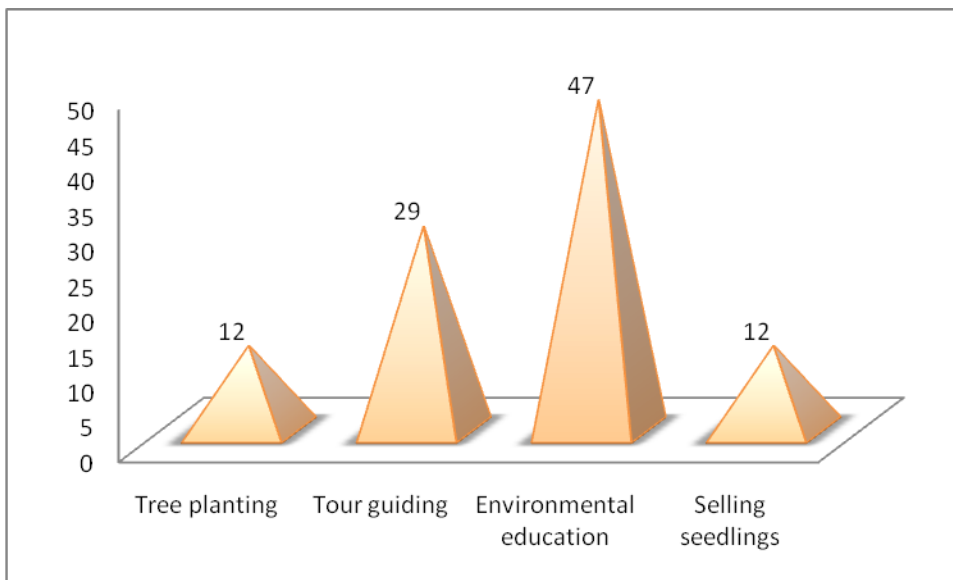
Figure 4.17: Ways of community participation, the views of visitors.
Source: Fieldwork 2007.

The highest amongst the activities is that communities should perform environmental education 47% (8). This is followed by tour guiding with about 29% (5). Tree planting 12% (2) and selling seedlings had 12% (2) as well. It is a good thing however, that visitors are also interested in seeing the communities undertake some management activities and have made some suggestions, and it is possible that they will patronise the activities.

Furthermore, the research tried to find whether it is possible to undertake certain activities and whether the community members will be interested to undertake such activities. There were several positive responses for possibilities of undertaking such activities as well as interest to undertake such activities. The result is presented in figure 4.18 below.
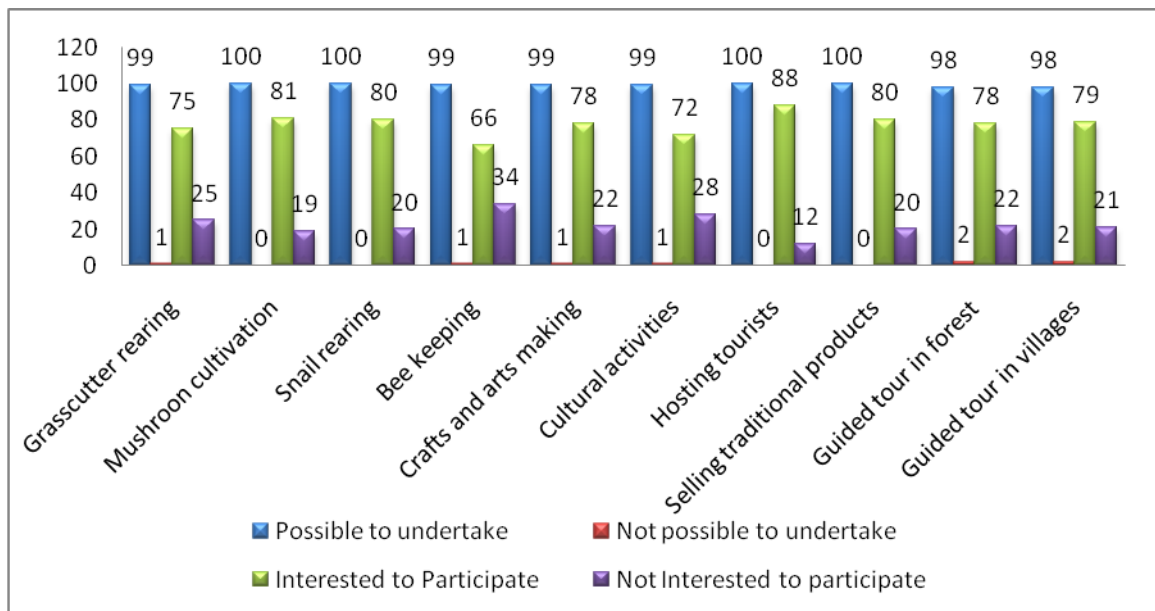
Figure 4.18: Possibilities and interest to undertake activities in percentages.
Source: Fieldwork 2007.

The highest value recorded for possibilities of undertaking the activities was 100%. Such activities included mushroom cultivation, snail rearing, hosting tourists and selling traditional products. This was followed by grass cutter rearing, bee keeping, crafts and

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arts making, cultural activities all with 99% each with guided tour in the forest and the villages scoring 98%. Although there were higher scores for possibilities to undertake such activities, not every one was interested to participate. The activity that most people want to participate in is the hosting of tourists 88%. This was followed by mushroom cultivation whilst snail rearing and selling traditional products scored 80% each. During the Focus Group Discussion all participants were of the view that it is possible to undertake these activities and most of them were interested in all the activities.

Visitors on the other hand were asked if they think some of these activities were possible and if they will be interested to purchase them. The results are displayed in figure 4.19.
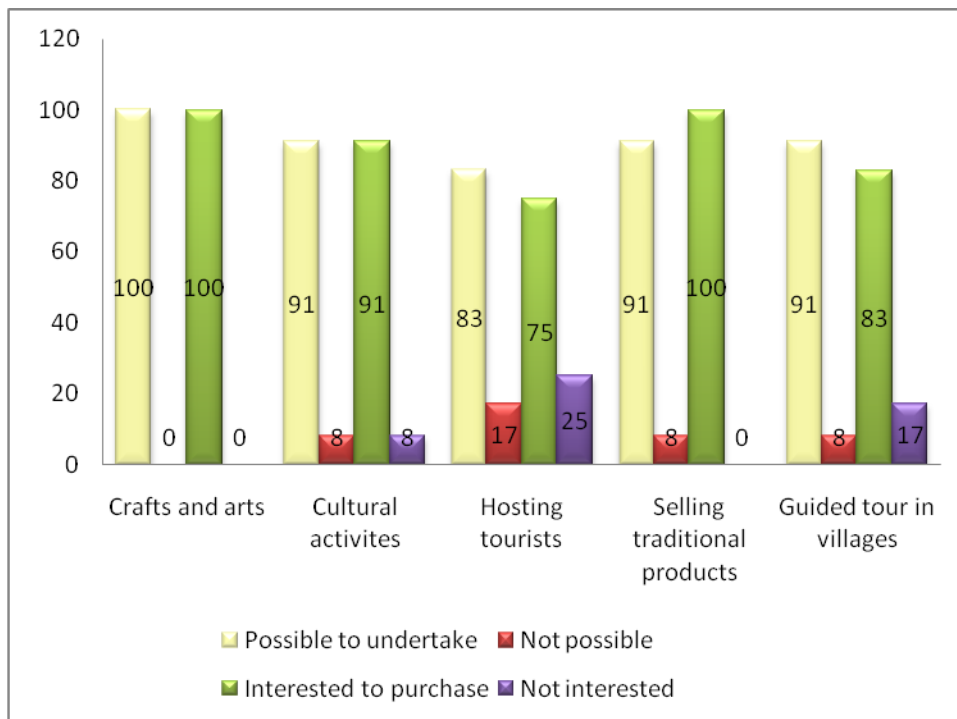
Figure 4.19: Possibilities and interest to purchase the activities in percentages.
Source: Fieldwork 2007.

All the respondents (12) were of the view that crafts and arts were possible to undertake and they were all interested to purchase them. Although 11 said selling traditional products was possible and they would like to purchase them, one of them said it was not possible. Generally most of the visitors were interested in the activities and would like to purchase them.

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The higher response from the communities to participate in these activities is a positive sign and shows that they are really interested in the management activities. The fact that the visitors showed interest to purchase some of these activities is also a positive sign for management to assist the communities to undertake some of these activities so as to increase their income and reduce poverty in the area.

Glimour (in Odoi 1999) is of the opinion that if the development of the society could be achieved from different sources, it would reduce the effects of their actions on the resource to be preserved. Besides, it is more probable for local communities to consent to preservation and management of resource use if they can derive some profit from it. Berkes et al. (in Makela 1999) propose that in order to have a successful resource management, there should be a provision of economic enticements intended for local people to safeguard the resource. The Kakum National Park has been selected as one of the eco-tourism site in the country and as has been defined by the Eco-tourism Society in Makela (1999) that eco-tourism is a purposeful travel to natural places with the intention of acquiring more knowledge on the tradition and history of the environment and also that the local populace need to be given the economic situations to enable them benefit from the resource, it is essential that the communities surrounding the Park engage in some activities that would benefit them as well as the tourists and which in the long run would result in sustainable use of the resource. Furthermore, Domfeh (2007) is of the view that communities have other duties to perform in their participation in the management of the forest. These include creating their own conservation norms in line with that of the national policy, embark on community education to create awareness of the importance of the forest and sanctioning community members whose activities damage the aim of the creation of the forest reserve.

From the conceptual framework, Profits would be derived when communities participate in alternative livelihoods activities. When their economic welfare is assured through their participation in the management by engaging in these activities, conflicts with management would be reduced and the forest resource would be used at a sustainable rate

to ensure the sustainability of their activities. It is through these that the balance between the 'Triple Ps' can be achieved.

4.6   Summary

From what has been discussed so far, it can be said that community participation in the management of forest resource is inevitable as far as poverty reduction is concerned. The management of forest resource here denotes the various forms of activities that the communities can undertake in order to earn income without depending on the forest for their survival. Few people however, participate in the management of the forest even though they are aware of the fact that their participation can reduce poverty.   Managing these activities in sustainable way would ensure the continuity of the activities which would go a long way to reduce poverty in the region.

Even though some members from the communities were in collaboration with the management, others were not satisfied with the activities of the management and were of the opinion that getting benefits from the forest will help manage the conflicts. Similarly when issues on conflicts are dealt with in a peaceful manner, there would be improved collaboration and this would enhance the sustainable use of the forest resource as well. It is undeniable fact that the establishment and management of the natural resources is one of the practical ways to guarantee that natural resources are conserved so as to meet the material and cultural desires of all and sundry now and for future generation. However, it is important that in the management of the resource, the communities are not left out because it is when their present needs are addressed that the conservation of the resource can be guaranteed.

Chapter five: Conclusion

5.0   Introduction

This chapter discusses some implications of the results obtained. It also highlights on some important issues in community participation in the management of forest resources and its relationship with poverty and end with some useful recommendations that would assist policy makers to enact policies that favour community participation in forest management.

5.1   Community participation in Forest resource management

From what have been discussed so far, it is evident that forest resources can be conserved in a better way when communities participate in its management. However, few people thus about 87% from the three communities do not participate in the management of the forest whereas 13% engage in some activities. For those who do not participate, their reasons were that they are not allowed to go to the forest 46% those who said the officials do not involve them were 23%, those who said they do not get any benefit from the forest were 17% and those who said they were not given the chance to participate were 14%. For those who participate, their reasons were to preserve their heritage 31%, those who participate to protect the forest were 61% and those who participate in order to aid tourism activities were 8%.

The management of many forest resources take the form of reserves creation for educational, recreational and tourism activities most of which are profit oriented. The objectives behind such activities would be achieved to a greater extent when the communities participate in the management activities. From the data that was collected, communities surrounding the Kakum National Park have greater interest, thus about 80%

were willing to undertake some management activities which is a positive sign for management of the forest to engage them.

5.2 Relationship between participation and poverty

It has been established that community participation in the management of forest resources has a relationship with poverty. This is true to the extent that when communities engage in the activities as mentioned earlier, they would be able to earn some income from these activities which would improve their living conditions. When these activities are sustainably managed it would go a long way to enhance the economic situation of the members of the communities which would help reduce poverty in the long run. From the field studies, it is clear that those who do not participate in the management of the forest have low income. From table 4.1 a greater number 86% of those who do not participate in the management of the forest receive less than 50 Ghana cedis and as mentioned before, falls below the average daily wage.

Besides, the respondents were 100% sure that their participation would reduce poverty because they think that by participating they would be employed by doing so and that would increase their revenue. However, for such activities to be successfully undertaken, the community members would need more education as to the areas in which they can participate in and how to manage it sustainably. About 96% of the respondents have low education and 43% are farmers. For communities of this nature, land is of great priority to them. One of the respondents commented that, 'they should be given some portion of the forest to farm on because that part is very fertile'. It is however, necessary for them to be made aware of the importance of conserving the forest and the areas where they can participate to derive some benefit. It is through this that sustainability in resource use can be achieved.

'To meet the challenges of poverty and environmental sustainability, a different kind of research will be needed. This research will need to embrace the complexity of these systems by redirecting the objectives of research toward enhancing adaptive capacity, by incorporating more participatory approaches, by

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embracing key principles such as multi-scale analysis and intervention' (Sayer and Campbell 2003, 1).

5.3   Collaboration or conflicts between management and communities

In the management of forest resources, conflicts arise and according to Pendzich et al. (in Makela 1999) such conflicts in institutions are natural, and a practice that is bound to happen, however, the actual difficulty lies in the way to deal with these conflicts. Before the creation of the forest reserve, communities had free access to the forest to perform all forms of activities that would benefit them but once such benefits have been 'cut off' and especially when community members do not have the means to get it elsewhere there would be misunderstandings. The field studies showed that, there are conflicts on issues between the management and the communities. Although a greater number of the respondents (54%) said they were in collaboration with the management, it was evident that there were some conflicts on interest. Almost all the participants in the Focus Group Discussion were not happy with the management because they felt they are not benefiting from the forest like they used to and about 29% from the household survey shared the same view whilst 19% were also not happy with the management because they are not allowed to sell at the reception. This was confirmed by the management during the interview. In order to reduce these misunderstandings, about 42% of the respondents suggested that, they should have a fair share of the benefit whilst 31% want to participate in other activities.

Although the interview with management revealed that some actions have been taken to reduce the raiding of elephants on farms by hanging a piece of chilli-smeard rug on ropes around the farm, the farmers in these three communities where the research was conducted do not have any idea on this action. This implies that there is less advocacy of this action for farmers around the forest communities.

5.4   Ways to involve communities in management of the forest

As have been discussed earlier, community participation in the management of forest implies the kinds of activities that members of the communities can undertake in order to derive some benefit from the forest. These activities should not degrade the forest but rather assist the community members to gain a deeper understanding in forest conservation. For instance, some members would be interested in rearing grass-cutters. These grass-cutters can be taken from the forest and be reared at home so that any time they are in need of grass-cutters they can get it from the community without going to hunt for them in the forest. The person rearing the grass-cutter can sell it to earn some income. From the fieldwork, about 29% of the respondents were interested in rearing animals including snails, bees for honey and grass-cutter. Mushroom cultivation, crafts and arts making, hosting tourists and sale of traditional products were among other activities that were possible to be undertaken and the community members were interested to participate.

5.5   Recommendations

In order for communities to participate in forest management activities to reduce poverty and also to overcome some of the problems related to their participation as well as to ensure the sustainability of forest resource use, the following recommendations have been suggested for policy consideration:

  ➢ The communities surrounding the Kakum National Park need more education. There should be a designed educational programmes targeted at educating the communities to have a deeper understanding of the objectives behind the creation of the reserve.

➢ Community participation in forest management activities should be the prime focus of the managers in charge of community participation. They should design programmes together with the communities and reach out to those who are interested to participate in the programmes. These programmes should be geared towards reducing poverty and increasing community participation especially for women since they form a greater part of the population and it is these women who collect non timber forest products from the forest for the members of the household.

➢ There should be a conscious effort to involve communities surrounding the Kakum National Park in activities such as the rearing of grass-cutters, snail, bee keeping, mushroom cultivation, sale of traditional products, craft and arts making and other activities that they can undertake to earn some income whilst conserving the forest.

➢ There should be increased communication between management and communities. Information regarding the forest and activities going on in other communities should be made known to all the communities. This has to be constant among all beneficiaries. This will help boost their interest to undertake some management activities.

➢ There is the need for the formation of a community interest group that would link the community and the management of the forest. This would enhance communication flow between management and the community. This group should also be in-charge of all community participating activities. The members of the group should be given the necessary training to run the community management activities and to ensure its sustainability.

➢ There should also be benefit sharing for all stakeholders. All stakeholders including members of the communities should come to a consensus as to what percentage of benefits should accrue to all parties involved. This will go a long way to reduce conflicts on the use of the forest resource.

➢ The communities must be involved in decision making especially those that concern them. This will not only help to reduce conflicts but also improve collaboration and enhance the communities' understanding in forest conservation.

➢ The management of Kakum National Park should partner with other NGOs that are interested in community participation issues to come to the aid of the communities especially in the area that concerns capacity building.

➢ There is also the need to improve on the agricultural base of the communities around the Park since majority of them are farmers. Provision of incentives to farmers can assist them expand their production and market which can also go a long way to sustain the forest.

➢ Members of the communities should be encouraged to participate in other activities like the making of soap, gari processing and other local industrial products with raw materials from their farm products.

➢ There should be the development of other attractions in the communities that have tourism potentials. Bonsaben Forest Reserve can also be turned into another attraction site managed by the communities around it. This can help to ease the pressure on the Kakum National Park and provide additional revenue for communities around these areas.

5.6   Summary

Community participation in the management of forest resources is essential in forest conservation and management. Educating them would increase their understanding in conservation issues and to be aware of the sort of activities that they can undertake. Besides, their participation in forest management activities would enable them get employment and earn income which would help improve their living conditions and reduce poverty. Furthermore, their involvement in decision making at all levels and

sharing benefits would help improve collaboration and reduce conflicts on the use of the forest resource which would go a long way to ensure the sustainable use of the resource.

Appendixes

Appendix I

COMMUNITY PARTICIPATION IN THE MANAGEMENT OF FOREST RESOURCE: A MEANS TO REDUCE POVERTY.

QUESTIONNAIRE FOR HOUSEHOLD

This questionnaire is confidential. Any information given is strictly for academic purposes.

SECTION A – BACKGROUND

1. Age ....
2. Sex: □Male   □Female

3. Educational level: □Primary   □JSS / MSLC   □SSS / Vocational
   □Training College   □University   □None

SECTION B – KNOWLEDGE AND ACTIVITIES IN THE FOREST

4. Do you know of the existence of the forest (Kakum National Park)?

   □Yes   □No

5. How often do you visit the place?

   □Never   □Occasionally   □Monthly   □Yearly

6. What do you do in the forest?

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   ……………………………………………………………………………………

SECTION C – PARTICIPATION

7. Do you participate in the management of the forest?   □Yes   □No

8. If Yes / No why?

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SECTION D – INCOME

9.   What is/are your source(s) of income?

☐ Farming   ☐ Trading   ☐ other, specify…………………………………….

10.   What is your monthly income range?

☐ < 50   ☐ 50-100   ☐ 100-150   ☐ >150

SECTION E – WAYS TO PARTICIPATE IN FOREST MANAGEMENT

11.   In what ways should the community be involved in the management of the

forest?

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12.

Activities	Do you think it is possible?		Would you be interested in participating?	
Guided tour in the villages	☐ No	☐ Yes	☐ No	☐ Yes
Guided tour in the Forest	☐ No	☐ Yes	☐ No	☐ Yes
Selling traditional products	☐ No	☐ Yes	☐ No	☐ Yes
Hosting tourists	☐ No	☐ Yes	☐ No	☐ Yes
Cultural activities (dancing, singing, music)	☐ No	☐ Yes	☐ No	☐ Yes
Crafts and arts making	☐ No	☐ Yes	☐ No	☐ Yes
Bee keeping	☐ No	☐ Yes	☐ No	☐ Yes
Snail rearing	☐ No	☐ Yes	☐ No	☐ Yes
Mushroom cultivation	☐ No	☐ Yes	☐ No	☐ Yes
Grass-cutter rearing	☐ No	☐ Yes	☐ No	☐ Yes

13. Do you think by participating in the management of the forest poverty can be reduced?   □Yes   □No

14. If yes how?

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15. Do you have any traditional management practices?   □ Yes   □No

16. If yes, what are some of these practices?

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SECTION E - CONFLICTS

17. Are there any conflicts between management and the communities?   □ Yes □ No

18. If yes, what forms of conflicts exist?

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19. What should be done to manage these conflicts?

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20. Comments

Appendix II

**COMMUNITY PARTICIPATION IN THE MANAGEMENT OF FOREST
RESOURCE: A MEANS TO REDUCE POVERTY.**

QUESTIONNAIRE FOR VISITORS

1.   Age ....
2.   Sex: □ Male   □Female

3.   Educational level   □Primary   □JSS / MSLC   □SSS / Vocational
       □Training College   □University   □None

4. Why do you visit this place?

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………………………………………………………………………………………

5. Would you like to see the community engaged in some management practices?

□Yes   □No

6. If yes, what kind of management practices would you want to see the communities

engaged in?

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7. What do you think of the following activities and would you like to patronise them?

Activities	Do you think it is possible?		Would you be interested to purchase them?	
Guided tour in the community	☐ No	☐ Yes	☐ No	☐ Yes
Traditional products	☐ No	☐ Yes	☐ No	☐ Yes
Home stay	☐ No	☐ Yes	☐ No	☐ Yes
Cultural activities (dancing, singing, music)	☐ No	☐ Yes	☐ No	☐ Yes
Crafts and arts	☐ No	☐ Yes	☐ No	☐ Yes

8. Do you think by participating in the management of the forest poverty can be reduced?   ☐Yes   ☐No

9.   If yes how

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10.   Comments.

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Appendix III

COMMUNITY PARTICIPATION IN THE MANAGEMENT OF FOREST RESOURCES: A MEANS TO REDUCE POVERTY.

QUESTIONNAIRE FOR MANAGEMENT

This questionnaire is confidential. Any information given is strictly for academic purposes.

1. What is your goal?
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2. How do you work towards achieving your goal?
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3. Do you engage the communities in the management of the resource?
    ☐ Yes ☐ No

4. If yes / no why
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5. How do you engage the communities in the management of the resource?
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6. Do you think community participation in the management can bring about poverty reduction?   ☐Yes   ☐No

7. If yes in what ways?

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8. In what ways are funds generated from the resource used?

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9. Is it possible to use some of the funds to sponsor some participation management activities?   ☐Yes   ☐No

10. Why

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11. Are there any conflicts between the management and the communities? ☐Yes☐No

12. If yes, what forms of conflicts exist?

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13. What should be done to solve these conflicts?

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14. Comments

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Appendix IV

**COMMUNITY PARTICIPATION IN THE MANAGEMENT OF FOREST
RESOURCES: A MEANS TO REDUCE POVERTY.**

QUESTIONNAIRE FOR NGOs/ORGANIZATIONS

This questionnaire is confidential. Any information given is strictly for academic
purposes.

1.　　What is the name of your organization?

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2.　　What is your mission?

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3.　　How do you work towards achieving your mission?

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4.　　Do you think community participation in forest management is essential?
　　　　☐ Yes　　☐No
　　　　Why…………………………………………………………………………
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5.　　Can community participation in forest management bring about poverty
　　　　reduction? ☐Yes　　　☐ No.

6.   How if yes
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7.   What kind of activities should the communities be engaged in as part of their
      participation in managing the forest?

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8.   Would you be interested in sponsoring any of these activities? ☐Yes ☐No

9.   What forest communities do you have contact with?
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10.   What kind of problems/conflicts do you face with these communities?
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11.   How do you manage these problems/conflicts?
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12.   Comments
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