

# **Socio-economic Assessment of Villages within the Omo-Oluwa Forests Protected Area, South-west Nigeria**

## **Final Report: General Baseline Study Report**



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## Executive Summary

The Omo-Shasha-Oluwa Forest Reserves contain some of the last remaining forests in southwestern Nigeria, but are threatened by logging, over hunting and clearance for farmland. The NCF is supporting a project to establish a new protected area for conservation, educational purposes and tourism in southwest Nigeria from the remaining natural forest areas within the boundaries of Omo, Oluwa and Shasha forest reserves. The socioeconomic assessment of the proposed project are conducted a two-way investigation, examining how lives of people are being affected and how the individual and collective social ideas and actions of people will also affect the proposed protected area for education and tourism centre development as people residing in the area try to meet their livelihood needs.

The degree of dependence of the local population varies from one settlement or group to another and according to gender, generation, social class, migrant status and ethnic background. The settlements vary significantly in size and level of permanency, leading to the need to consider each location individually. The study looks at settlements in the subsectors of Omo Forest Reserve, specifically J1, J3, J4, and in Oluwa Foest area. The assessment did not only consider the immediate proposed project site referred to in this report as directly affected communities, but also the surrounding areas referred to as indirectly affected and not more than 5-10km to the project site.

The socio-economic assessment study was designed to assess the social, cultural and economic characteristics of the communities in the vicinity of the site chosen for the proposed protected area, specifically: demographic profile, social capital, village economy and local livelihoods, natural capital, level of infrastructural development and development needs assessment, and finally, attitudes and perceptions of the local inhabitants about the protected forest areas.

Several theoretical assumptions were established that helped to form the framework of the assessment, noting that any intervention will surely result in a cause – effect change process in any social unit with potentially both negative and positive impact upon the stakeholders. Arising from all these considerations, the overall objective of the study is as follows: *To provide a comprehensive assessment of the social, cultural and economic characteristics of the communities in the vicinity of the proposed protected area (education and visitor centre) and suggest the probable negative and positive impacts of the project on the people of the locality.*

The main source of data for the assessment is primary data collected in the enclaves. The primary data is made up of both quantitative and qualitative data. A combination of research methods were used in this study including: review of secondary data; reconnaissance survey to identify all communities (enclaves) and to sensitize communities or enclaves members about the proposed studies and project; gathering of quantitative data through a survey of sampled residents in the enclaves with random sample of 93 and 52 residents including males and females were sampled in Omo and Oluwa Forests respectively, yielding a total of 145 respondents; In-depth interviews (IDIs) with a purposive sample of 14 and 9 local leaders in Omo and Oluwa settlements respectively; 28 and 18 FGDs were carried out groups of adult males and females in Omo and Oluwa Forests respectively; direct observations in the selected enclaves using a checklist of items; and participatory tools during FGDs, specifically community mapping, venn

diagram and paired needs ranking and develop case studies, wherever relevant, from examples provided in the discussions or IDIs. The logistical constraints were the most difficult challenge facing the research team, particularly with the very poor roads. There were 43 settlements identified through discussions with key informants from the locality and by the field visits in the two protected forest areas. These were stratified into two groups on the basis of their proximity to the proposed project area and the consequent likelihood of being affected by the project.

The report presents the findings of the study in two chapters – chapters 3 and 4 for Omo and Oluwa Forest Reserves respectively. In this summary, however, the findings on each of the issues are presented together to show the similarities and differences in the characteristics of the inhabitants in the two areas. The conclusions derived are also herewith presented to be more concise for the summary.

The first major set of findings from the study is focused on the demographic profile of the local populations. For the demographic profile of the local population, the data generated referred to the inhabitants that were surveyed. This is not a total picture of the entire population resident in the study area. Regarding the age distribution of the residents in the enclaves, the study found that while the study was purposive in selecting mostly adults over 30 years of age, there was some difference in the specific locations which appeared to be related to the size and degree of permanence of the settlements. In J4, for example, with more permanent communities, there were more older persons than the small, temporary settlements that were home to persons more likely to be younger and migrants, many of whom did not reside in the enclaves with their families.

The sample was stratified by sex with more males selected than females in both forest areas, but it was also found that there were more men than women in the enclaves. According to many of the male respondents, their wives and children reside in the larger, more permanent settlements or towns further away from the reserve area. This is partly due to lack of schools in the reserve, but also because in some settlements the household head stays in the forest reserve to farm, hunt or engage in other livelihood activities during the week and comes to the town to be with his family on the weekend. Many of the inhabitants are migrants from outside the immediate vicinity and their families stay in the permanent place of residence.

The findings on religion obtained responses for only the two main ones – Christian and Muslim, finding that somewhat more of the respondents are Christian in both localities. Although the respondents did not profess to be traditional religious worshippers, there is evidence of the practice of traditional religions in the form of sacred sites and shrines in many of the settlements.

Many of the settlements are small migrant camps as small as having 2 to 10 huts and perhaps as few as 10 to 30 inhabitants. Even though the majority of the residents are migrants, more than 50% of the residents had stayed in this area for more than 10 years. Some of the residents leave on Friday and come back on Mondays. Although nearly all of the sampled respondents from both of the reserves are Yoruba, a relatively small proportion of the residents of Omo Forest Reserve (less than 10%) originate from Ogun State. Similarly, that majority of the residents of Oluwa Forest Reserve are migrants from outside Ondo State who have come here to settle, farm

and hunt. J4 in Omo area, with a few larger, more permanent communities, however, has a higher proportion of the residents from the State.

The great majority of the inhabitants in both reserve areas are married. This is related to the age distribution of the sampled respondents, but it also illustrates that whether their families are residing together or not, the residents are mostly married. Several of the informants reported that their wives and children stay in a different town or village so that even though they may be married, they do not have the advantage of family labour on their farms.

The educational status of the sampled respondents in Oluwa Forest Reserve is generally low with 50% stating that they have no formal education. This is at variance with the findings from Omo Forest Reserve where relatively few had no formal education and a significant proportion even had secondary or vocational education. The proportion of non literate residents will affect the ability to disseminate information in any form other than non written messages. With the general lack of primary and secondary schools in the reserve areas, the ability to ensure education even for the children is limited. For this reason, many of the children reside in other locations to go to school.

The study examined the available social capital in the area. The most common groups found in Omo Forest Reserve are cooperatives, including trade unions such as *Okada* Riders association or farmers' cooperatives, Town Development Union and religious groups. Informal savings and work exchange groups are not common in the study area. This is likely due to the migrant nature of the residents so that there is limited working together on common activities. The most common social group in Oluwa Forest Reserve area is the Town Development Union, followed by the age grade society and the informal savings and credit association (*esusu*). These groups may be incorporated into development activities as a major way to mobilize the local population for conservation and development activities.

The study identified religious sites of social significance. For the most part, this was restricted to religious places of worship, whether churches, mosques or importantly, sacred sites such as shrine forests or sacred lakes, and so on. It is important to recognize these sites and show respect for the culture of the people. The researchers did not find much evidence of cemeteries or other sites of historical significance in the reserve. Since the majority of the residents are migrants and some of the settlements are temporary dwellings, it is understandable that persons would bury their dead in their places of origin. The presence of churches, mosques or even traditional sacred sites is an indication of the permanency of the settlement. Those with no places of worship are less likely to be permanent residences of the inhabitants.

Since all of the settlements identified in the forest reserve are largely made up of Yoruba people, the local leadership structure follows the same pattern. However, since the settlements in the forest reserve are quite small and many are temporary camps, nearly all have a *baale*, not an *oba*. The *baale* in the settlement is subject to the traditional community leaders in larger towns or cities in the vicinity. It is very important to understand and identify the correct leadership positions and office holders to inform and gain their approval of interventions. This will facilitate the mobilization of the local population. On the other hand, if the community leaders

are not properly informed and their consent is not obtained, this will serve as a serious obstacle to securing the cooperation of the inhabitants.

Aside from radio, which is the most prominent source of information, other common sources are informal and face-to-face. In Omo Forest Reserve, the forest officials do form an important information source since there is a Forest Guard Post in the area and the forest guards interact regularly with the people. This is important so that there is access to official information on regulations. However, other official sources of information are generally lacking. Less than  $\frac{1}{4}$  of the sampled residents have any interaction or gain information from extension agents. One area that the Project may want to improve is in the dissemination of information through formal channels to ensure the people are well informed.

The local economy for the rural dwellers of the forest reserves is almost totally based upon dependence on the natural resource base. The inhabitants base their livelihoods upon agricultural production and processing, gathering non timber forest products (NTFPs), hunting and providing services for the other residents. The most prominent income-generating activity in both of the forest reserves is farming. A common feature of the rural dwellers in the reserves is having multiple income-generating activities to meet their diverse livelihood needs. Processing of the farm produce is another activity engaged in by nearly everyone sampled. People sometimes combine farming with processing and / or trading as well as other means of securing goods or cash.

Cocoa and kolanut are among the most prominent crops produced in both reserve areas. Plantain and banana are similarly very widely grown in the areas. Of the food crops, cassava is the most commonly produced. There is relatively little variation in crops grown between the sectors in Omo Forest Reserve except in the case of yam which is commonly produced Oluwa Reserve as well as in J1 and J4, but not in J3.

Differentiation of income-generating activities by gender is important so that the project will be able to take into consideration the needs and challenges of both males and females and to ensure that the intervention will not lead to great gender inequity. The major gender differences were in production of economic tree crops, hunting, logging and transportation providers for men, while women specialize in processing kolanuts, gari and palm oil and petty trading. Males and females generally have equal access to the land, although there were a couple incidences where women felt they were not given access to good lands. In most locations, tree crops are grown by males while females that are farming are more likely to produce food crops like cassava, vegetables and cocoyam. In collecting some of the NTFPs, there are also gender differences. While these are not the same for all communities, there are some general observations that can be made. It is only men that hunt the big bush animals while both men and women can collect snails. Women are largely responsible for gathering firewood, but men are responsible for getting roofing poles for building the house. Women gather wrapping leaves, but both men and women may collect medicinal plants and chewing stick.

The respondents were asked to rank themselves in terms of their socio-economic status (SES) compared to other residents in the Reserve. The analysis revealed that over  $\frac{2}{3}$  of the sampled residents in Oluwa area considered themselves to be about average while about 10% rated

themselves to be better-off. The remaining felt they were actually poorer than other local residents. One of the findings of the study is that tree crop / cash crop farmers reported that they have seen improvements in their livelihoods and thereby improved status. The elderly, widows and female-headed households were generally reported to have the lower status and be the most vulnerable members of the society.

In most of the settlements in Omo Reserve area, the respondents reported that they don't have trouble getting land in the locality. While most respondents stated that land is available, they reported that it is declining in quantity as well as in quality. Over ½ of the respondents felt the natural resources in the reserve were currently evaluated as fair or poor. This may be related to over cropping of the limited land allowed for farming.

In Oluwa Reserve area, most of the respondents stated that although it is through the allocation of the local traditional leader that they had access to land, many complained that they were unable to get adequate land to farm. In general, the residents are not satisfied with the amount of land available to them for cultivation. Nevertheless, the majority (86.5%) rated the quality of resources as 'good'.

When respondents in Omo Forest Reserve were asked to compare the quality of land, forest and water resources now with 20 years ago, there were significant differences in the responses between the J1, J3 and J4 sectors. The majority of the inhabitants in J4 reported that the quality of the resources was better now than it was 20 years ago, while residents in the other two sectors were less positive. In Oluwa, over ½ of the respondents (59.6%) thought that the quality of the resources in the Forest Reserve had 'declined' over the last 20 years.

In both reserve areas, most respondents noted that loggers generally come from outside the reserve. Few loggers are residents of the reserve. The State Ministry is in charge of regulating logging activities. Loggers must get access from the Forestry Officials. Everyone, whether indigene or outsider, must get a permit to engage in logging.

According to the respondents in a few of the settlements of Omo Reserve that are further away from the proposed project site, there are not seeing many animals as there were in the past. In other parts of the Omo Forest Reserve, there are significant numbers of wild animals, including elephants, chimpanzees, and many others. Other common bush animals in the reserve are antelope, grasscutters, Igalala and tortoise. There are also a lot of hunting activities in the reserves, both by local residents and by migrant hunters. Evidence was seen in several locations that extensive hunting is taking place. This needs to be controlled.

Animals of various types were also seen in the areas visited in Oluwa Forest Reserve. Gbekelu is surrounded by hills / mountains, so the residents reported that they often see monkeys and gorillas. Common bush animals hunted include monkey, porcupine, antelope and grasscutter. Hunters in the area usually go to Shaghara River to hunt since there are many animals that go there.

Most of the responses concerning the environmental problems found in the reserve focused on deforestation, erosion and flooding. Some of the informants also complained that the soil was

becoming degraded and infertile because they have limited land for farming and it is being continuously cropped. Because of this, the settlers in some settlements voiced out the desire for being allowed to farm on more lands of the reserve. Evidence of encroachment of reserve lands for the purpose of farming was seen in several places.

The level of infrastructural development in all settlements of the forest reserve area is very poor. The majority of the settlements could not boast of any infrastructural facility. The settlements that had a primary school or clinic still did not have adequate staffing or equipment to make the facilities viable. To acquire access to these facilities and services, residents had to travel long distances or some members of the family would have to reside in larger towns or villages while the household head and perhaps some of the family members stayed in the reserve. The low level of infrastructural development is due in part to the scattered nature of small, semi-permanent settlements that cannot easily support the siting of facilities, neither could the support staff – in terms of teachers or medical personnel – attend to the regular needs of the residents. Many of the residents also complained about lack of GSM coverage, which cuts them off from their families and restricts their access to information. The only electricity in any settlement was by the use of private generator.

The major problem for settlements in the reserve, however, is poor roads and lack of transportation. Due to the poor roads, many of the settlements can only be reached by motorcycle or 4-wheel drive vehicles. Consequently, the cost of transportation and the difficulty for marketing the local produce has also caused problems for the people.

The findings of the paired needs priority ranking reaffirms that the most important need throughout the reserve areas is improvement of the road network for improved accessibility to the settlements and more effective evacuation of produce. Schools and health facilities, followed by water and market are the needs of the next greatest importance to the residents. Other frequently mentioned needs of lesser importance are farm inputs, GSM coverage, electricity and cottage industries. It is obvious that some of these facilities and services cannot be established in the reserve due to the small population size in most communities and scattered nature of the settlements. However, by improving the road network, the inhabitants would find it less difficult to have access to facilities and services in larger villages and towns in the locality.

Findings in both reserves indicated that residents are aware of the basic restrictions and they were able to recount these to the researchers: people must not go into the reserve to cut trees and may only gather dry branches for firewood; people must not kill animals (for hunting); people must not farm inside the reserve; people should not harvest honey; and people should not set fire in the reserve. These responses demonstrated the effectiveness of the information dissemination concerning the restrictions in the reserve areas.

In a general sense, the majority of the residents in Omo held the opinion that the restrictions on the use of the reserve are 'good'. Similarly, in Oluwa Reserve area, 78.8% of the inhabitants overall recognize that the restrictions on forest reserve use are 'good'. Most of the residents realized the importance of preserving the forest areas and the value of conserving the trees and wildlife.

When asked about the impact of the forest reserve restrictions on local incomes and livelihoods, a significant number of respondents noted that they have experienced a negative impact including destruction of crops by animals that they are not allowed to destroy. Some also complained of their inability to have access to forest resources like timber for roofing their houses in the reserve. In Oluwa, the respondents were especially concerned over restrictions on the use of the land. This is particularly so with the declining quality of the continually cultivated lands and the increase in population with increased demand for land. This is also no doubt related to the good income derivable from cash crops, such as cocoa, kolanut and plantain, produced in the reserve.

The study also investigated the kind of relationship that exists between Government officials and the residents of the forest reserve. There are several different types of government officials that the local population may have contact with including Forest Guards from the Department of Forestry, extension agents and local government officials. Typically, rural dwellers are not interested in where officials come from and all officials are viewed in the same way. The results showed that the relationship between Government and residents is generally not good. Discussants in many of the FGDs said they have no relationship at all with them. Many of the respondents said that the only time they see any representative of the government is when an election is coming. Over 60% of the sampled residents stated that their relationship with officials was poor or even hostile. This is not a good reflection of the ability to work with the local population.

In Omo Forest Reserve, a major factor affecting the attitudes of residents toward the Government was the event of 2008 where the Ogun State Government wanted to take over the reserve and drove the people out, burning much of their crops and property as well. Later in 2009, the inhabitants were told they could return as the reserve was no longer being taken over.

Many of the discussants and informants in both reserve areas feel that the local residents should have a major role to play in the conservation efforts of the Government. This is significant so that as the project tries to introduce involvement of the local population and encourage local participation, the residents will already be favourably pre-disposed to this strategy. Ultimately, sustainable development relies upon the full involvement of the local population. What is not clear, however, is whether the residents would fully protect the forest when there is a great local demand for more land for productive purposes. Regardless of the participatory role given to the local population for the conservation programs, it is necessary that officials will still have to monitor the implementation of the restrictions on local use of the forest resources.

The majority of the residents in both reserves do not know anything specifically about NCF, Some of them believe that a conservation project by any organization could have some impact. With the proposed conservation project, there will be need to conduct an awareness campaign so that the local population will be sensitized to the objectives and activities of the NGO.

On the basis of the findings, a number of conclusions and recommendations were made.

- From the information gained on the individual settlements in the two forest reserve areas, it is clear that each settlement is unique in terms of its characteristics as well as the needed interventions, including the need to be relocated in some cases. This requires that each case be considered on its own merit and the Project should not handle every settlement with the same strategy.
- The local inhabitants have expressed the desire to play a role in the management of the forests which is good for sustainable development, but this should be closely monitored as there is strong demand for more land to farm in some places, especially in Oluwa Forest Reserve. Since tree crops such as cocoa, kolanut and oil palm are so important to the local livelihoods, extension services should be provided to improve the quality of their production without increasing the area under cultivation.
- More dialogue between the local population and officials is needed to overcome the reported poor relationship currently existing. It is suggested that forest extension agents be incorporated into the programme who will be involved in community engagement activities.
- The road and bridge network throughout the two reserves is very poor, resulting in many of the inhabitants being cut off from other localities and from needed goods and services. The Project could respond to the felt needs of the people by improving upon the road network so that the permanent settlements are better linked to others.
- Some of the very small migrant settlements that lie along the corridor should be relocated. The evidence of extensive hunting activities also suggests the need for more enlightenment and involvement of the local population in enforcing the regulations concerning conservation. Forest guards should also be trained in effective community relations. Radio should be used to disseminate extension messages on conservation since this is the most common source of information that reaches even the most isolated areas.
- Due to the regulations on hunting and restrictions on the use of forest resources, local residents should be trained on alternative income generating activities that could provide them with income without harming the reserve. These activities could include such skills as domestication and rearing of grasscutters, modern bee keeping in approved areas, and planting trees specifically for firewood and other tree products.
- The local traditional leaders could play an important role in gaining the cooperation of the local population. The Oba has authority over the Baales in the smaller settlements so that with the involvement of the higher level traditional rulers, there would be a means of passing information as well as legitimation for the Project. It would be a serious omission to by-pass the local leaders which also includes leaders of local farmers, hunters, women and other groups in the communities.
- The social capital in the settlements is limited in many places. It may be necessary to strengthen some of these local groups to use them as channels of information, training

and mobilization. There was little evidence that relocation would have any major effect on social disruption since there were few sites of social significance, particularly for the small migrant settlements that are more likely to be affected by the need to relocate.

- Activities of outside loggers should be carefully monitored. Local residents should not be blamed for the destruction caused by outsiders.

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IDI with Traditional Leader at Abeku I (Adekanmbi)  
FGD with women in Gbekelu community, Oluwa Forest Reserve  
FGD conducted with group of men in Aba Baale (Ajebandele)  
Research team with challenge of crossing Omo River to Etemi community  
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# 1.0 INTRODUCTION

## 1.1 Background information to the Study

The Omo-Shasha-Oluwa Forest Reserves contain some of the last remaining forests in south-western Nigeria, but are threatened by logging, over hunting and clearance for farmland. A study conducted by Nigerian Conservation Foundation (NCF) in 2007 revealed that only about 40% of the natural forest in the reserves still remains, Omo-Shasha forests are still connected to each other and animals like elephant, chimpanzee, buffalo, duikers and white throated monkey endemic to Nigeria are still present in the forest reserves. The NCF is supporting a project to establish a new protected area for conservation, educational purposes and tourism in southwest Nigeria from the remaining natural forest areas within the boundaries of Omo, Oluwa and Shasha forest reserves. This study, however, is limited to Omo and Oluwa forest areas.

The need for the socioeconomic assessment of the proposed project is based upon the realization that the people located in and around the forest reserves affect and are affected by the local forest resources. In recent times there has been a growing awareness that the local people should not be seen as the problem in forest conservation, but rather viewed as participants in the attempt to sustainably manage forest resources. There are different views of scholars about people who live in and around forests that some are natural conservationists, while others engage in flora and fauna destruction. Therefore, the assessment is a two way investigation, examining how lives of people are being affected and how the individual and collective social ideas and actions of people will also affect the proposed protected area for education and tourism centre development as people residing in the area try to meet their livelihood needs.

The socioeconomic assessment did not only consider the traditional livelihood strategies and socio cultural elements, but also the current trends that have resulted from changes in the manner those resources are allocated and utilized. It must also be understood that members of the local population are dependent to varying extents upon forest resources of the reserves for meeting their livelihood needs. This dependency also varies according to gender, generation, social class, migrant status and ethnic background. The settlements vary significantly in size and level of permanency, leading to the need to consider each case individually. At the same time, there are some similarities of settlements particularly in the subsectors of J1, J3, J4 and Oluwa area.

The importance of conducting a Social Impact Assessment (SIA) before an intervention such as this project comes from the realization that projects, particularly in Nigeria, have often resulted in higher levels of poverty amidst great wealth. The impact of establishing a project of this magnitude with the likely disruption of existing social networks and livelihood activities needs to be examined from a variety of perspectives – including social, cultural, economic, demographic, health, infrastructural and safety dimensions. The ability of persons to maintain sustainable livelihoods will be seen to the extent that those livelihoods can cope with and recover from stresses and shocks, such as may be introduced by the activities of the project in the locality, and maintain or even enhance its

capabilities and assets both now and in the future, while not undermining the natural resource base.

With this in mind, the Social Impact Assessment (SIA) of Omo and Oluwa forest areas did not only consider the immediate proposed project site referred to in this report as directly affected communities, but also the surrounding areas referred to as indirectly affected and not more than 5-10km to the project site. This recognizes that it is not only the inhabitants of communities to be resettled such as perhaps Etemi that will be impacted by the project, but that other residents in the locality will also be affected in different ways.



**Project Office in Omo Forest Area**

## **1.2 Focus of the Social Impact Assessment Study**

The socio-economic assessment study was designed to assess the social, cultural and economic characteristics of the communities in the vicinity of the site chosen for the proposed protected area. The field study also encourages social and cultural sensitivities to ensure that project implementation does not escalate tensions or vulnerability.

The specific issues that were covered by the SIA are:

- i. Demographic Profile
- ii. Socio-cultural Institutions, Social Capital, Sites of Social Significance and Leadership Patterns,
- iii. Village Economy and Local Livelihoods,
- iv. Access and Control over Natural Capital,

- v. Level of Infrastructural Development and Development Needs Assessment, and
- vi. Attitudes and Perceptions of the Local Inhabitants about the Protected Forest Areas.

Each of the two areas are described separately on each of these aspects. The report then presents a general set of conclusions and recommendations.

### **1.3 Theoretical Framework Guiding the Studies**

One of the theoretical assumptions that form the basis of the SIA is that while all societies change all the time, an intervention will surely result in a cause – effect change process in any social unit. Secondly, the impact can be negative or positive for the stakeholders who may not all evaluate the type of impact in the same way; that is; the perspective of one group may be that the project is beneficial, while another set of stakeholders may view the impact as harmful. The varying perspectives held by different groups are likely to lead to differential reactions or behaviours. SIAs are able to identify the relevant stakeholders at different levels who may somehow relate to the proposed intervention in specific manners.

A number of other specific theoretical assumptions are relevant to form the background to this study:

- The proposed project site is to be located in a rural setting and the majority of rural dwellers are directly dependent upon natural resources for most of their income-generating activities. Any project that has a negative or positive impact upon the environmental quality will affect the sustainability of rural livelihoods, many of which are already subject to natural and market variations.
- While it is recognized that some of the conditions found around the project site can be generalized somewhat, there are likely to be a number of locality-specific differences for smaller areas and for specific communities or even groups within a community. Therefore, it is important for the study to not only give a general viewpoint, but also investigate characteristics of each settlement.
- The unstable conditions that had been created by government of Ogun State forcibly evacuating enclave dwellers about two years ago could have a spill-over effect in other localities leading to possible tensions and conflicts over land use or benefits to be derived between communities and the government, between different communities or even between groups within communities. There are lessons to be learned from such experiences.
- Creation of a protected area and later operation of an educational and visitor centre will attract persons seeking employment. This will change the population structure of the area as the influx of workers of various categories will lead to

more socially heterogeneous communities. There are numerous possible changes that may result from a larger and more diverse population, including more money brought into the local market with a more diversified economy, more employment opportunities, new ideas and information sources, as well as potential conflict situations.

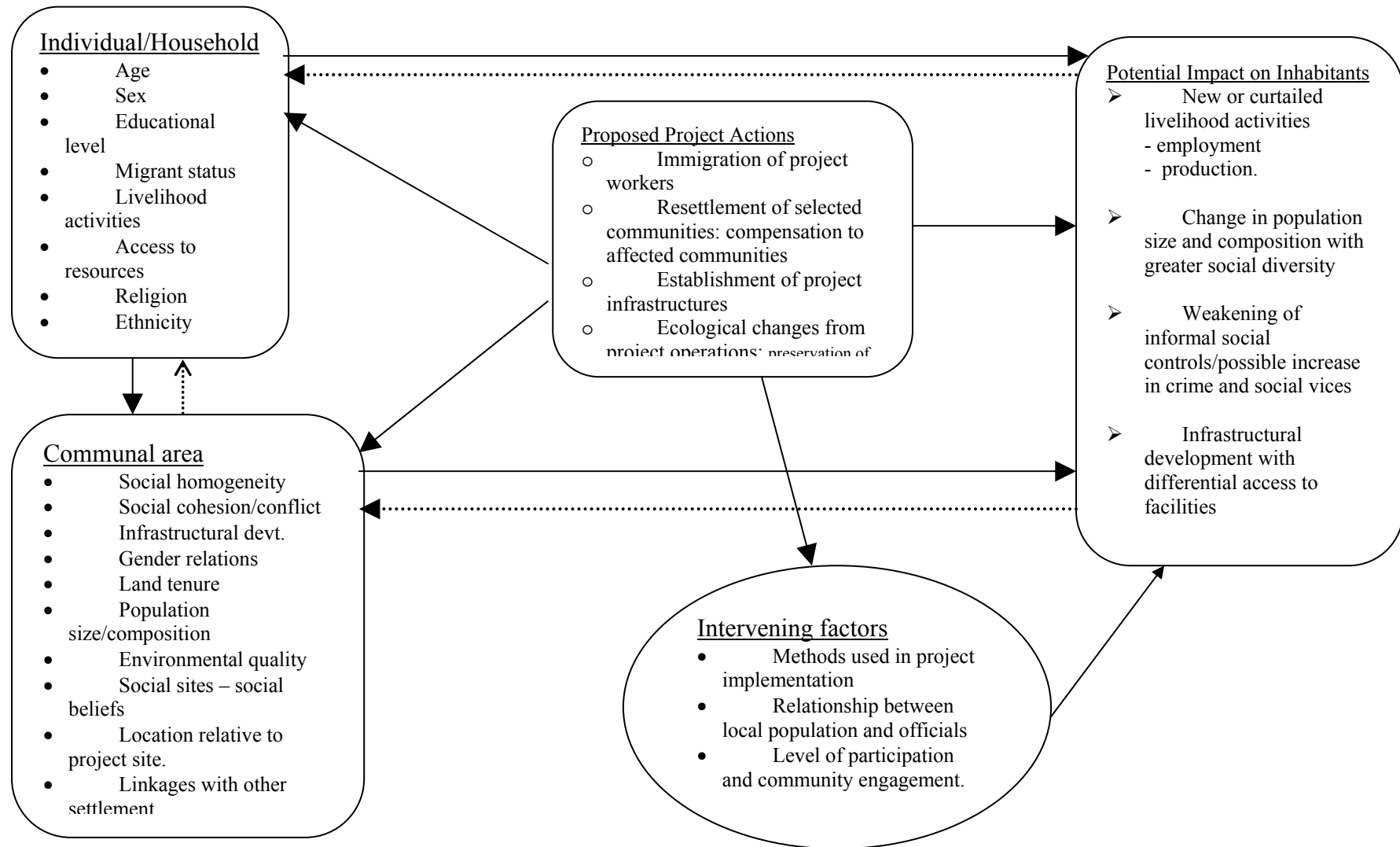
- With the citing of an educational and visit centre project in the locality, infrastructural development with the provision of more and better roads, reliable water supply, regular electricity and so on will be necessary. This can lead to enhanced standard of living for the local residents as long as the services are extended to all, but this is unlikely to be the case. Care must also be taken to meet the priority needs as identified by the local inhabitants.
- Effects of the project are likely to be felt beyond the immediate forest reserve, but they will probably be experienced to a lesser degree as distance from the site increases.
- Participatory approach to development is designed to involve local groups in the planning and implementation of development. This can reduce later feelings of alienation and disenchantment with a project only if local concerns are integrated into the project. In other words, the study is a means to an end, not just an end in itself.
- Some of the settlements are located along the wildlife corridor. Furthermore, some of these settlements are small, temporary dwellings and their residents engage in activities that are not environment friendly. It is likely that a few of such settlements will need to be relocated.
- The rural population draws its collective identity from the locality with special attachment to cultural sites of importance including local cemeteries or shrines such as sacred forests or lakes. There are other natural and social boundaries that need to be respected if cooperation and peaceful co-existence are to be maintained with the local population.
- Every intervention witnesses some form of resistance even with potentially beneficial effects. The SIA attempts to identify possible areas that might provoke resistance and try to mitigate the aspects of the project that might generate conflict situations.

On the basis of the assumptions presented and the background information for this and other impact assessments as well as evaluation of the implementation experiences in similar projects, a theoretical framework for these studies was developed. The framework, as presented in Figure 1 reflects the need to assess the impact on the individual / household and the communal / area levels and notes the different characteristics that are relevant at different levels of social organization. The framework

highlights four major types of changes that will necessarily occur with the citing of the project in these areas:

- Influx of project workers,
- Resettlement or displacement of residents in affected settlements,
- Establishment of project infrastructures, and
- Ecological changes.

A number of potential types of impact are indicated in the framework, recognizing that in each of these aspects, the impact might be positive or negative for different local stakeholders. Of significance also is the issue of the type of methods used in project implementation, including the type of relationship developed and maintained with officials and the level of participation guided by the manner of community engagement. This is indicated in the framework as 'intervening factors' and it is argued in this report that not only is the effective implementation of a participatory approach a sensitive issue, it may well determine the effectiveness of mitigating possible later conflict.



**Figure 1: Framework for Social Impact Assessment of Omo-Oluwa Protected Area Project.**

## 1.4 Objectives of the Study

From the background information presented, the overall objective of the study is conceptualized as follows:

*To provide a comprehensive assessment of the social, cultural and economic characteristics of the communities in the vicinity of the proposed protected area (education and visitor centre) and suggest the probable negative and positive impacts of the project on the people of the locality.*

From an analysis of the general objective and according to scope of work document, the following issues were addressed in the report:

- a. Description in general terms, the names and locations(using a GPS) of all the villages'/settlements/camps with their approximate population size and structure, settlement patterns, ethnic structure, language and cultural groups of the community;
- b. Identify administrative/socio-cultural institutions in terms of leadership patterns, whether landlord or tenant village, social association, etc
- c. Describe the level of infrastructural development by determining the type and quality of facilities available in the community as well as the degree to which each facility meets the needs of all groups;
- d. Present a gender analysis of conditions, activities and needs by stratifying the sample and participation in the Focus Group Discussions (FGDs) by gender;
- e. Find out the potential for conflict through a review of past and existing conflict situations and local views concerning possible conditions, including comparisons with similar projects, that could lead to conflict;
- f. Determine the current livelihood strategies in the locality and consider the possible impact of the project upon sustainability of livelihoods as well as the possibility for improved income-generating capability as a result of the Project;
- g. Identify local groups or individuals that are socially marginalized and vulnerable and propose possible strategies for their concerns to be integrated into project design and for group empowerment;

- h. Study the current environmental difficulties experienced by the local residents, their level of dependence upon natural resources and the possible effect of the project on this environment – population relationship; and
- i. Suggest mechanisms to minimize the negative effects of the project upon the local population and their communities while enhancing the probability of benefits.

## **1.5 Methodology for the Study**

### ***1.5.1 Sources of Data***

The main source of data for the baseline studies is primary data collected in the enclaves. The primary data is made up of both quantitative and qualitative data. The qualitative data provide insights for a greater understanding of the locality, the local population and the potential impact of the citing of the project in this location, while the quantitative data provide an important database to facilitate the later evaluation of the project.

Secondary data in the form of official documents, project records and publications were also reviewed to provide important background information.

### ***1.5.2 Methods used in the Study***

A combination of research methods were used in this study to cover the issues examined as itemized in the objectives above. These research methods include the following:

- ❑ Review of secondary data (SD);
- ❑ Reconnaissance survey to identify all communities (enclaves) and to sensitize communities or enclaves members about the proposed studies and project;
- ❑ Gathering of quantitative data through a survey of sampled residents in the enclaves;
- ❑ In-depth interviews (IDIs) with community leaders of the selected enclaves (traditional leader, women leaders, religious leaders, youth leader, etc);
- ❑ Focus Group Discussions (FGDs) in the selected enclaves with groups of adult males and adult females;
- ❑ Direct observations (DO) in the selected enclaves using a checklist of items; and

- Participatory tools during FGDs, specifically community mapping, venn diagram and paired needs ranking and develop case studies, wherever relevant, from examples provided in the discussions or IDIs.

Table 1 illustrates the methods used to achieve the stated objectives.

### ***1.5.3 Sampling Techniques and Sample Size***

Sampling was carried out on several levels: selecting respondents for the survey, participants in the FGDs and key informants for IDIs.



**Conducting Survey at Bature in Oluwa Forest Area**

The sampling was based on several selection criteria, including:

- ✓ Adequate representation from all relevant groups in the enclaves;
- ✓ Inclusion of groups / individuals with different population characteristics / socio-economic status cadres;
- ✓ Participation of those in positions with relevant information;

- ✓ Evidence of different types of livelihood activities; and
- ✓ Inclusion of males and females, as well as youth where possible.

Table 2 further describes the number of persons and groups for the different methods that were used, with approximate sample sizes for each method. The table also relates the objectives and activities to the methods.

*Sampling Informants, Discussants and Respondents:* The research design includes a number of methods for which different samples at the community level are drawn. A random sample of 93 and 52 residents including males and females were sampled in Omo and Oluwa Forests respectively, yielding a total of 145 respondents.

For the IDIs, a purposive sample of local leaders in each community has been selected including the traditional community leader or men or women or religious leaders in cases where the traditional is not available. A total of 14 and 9 IDIs were conducted in both Omo and Oluwa respectively.

FGDs were conducted with different groups in each of the communities visited. Two FGDs were carried out- one each with a group of adult males and a group of adult females. A total of 28 and 18 FGDs were carried out in Omo and Oluwa Forests respectively. The following photographs show various IDIs, FGDs and interviews during the survey in the identified settlements.



**IDI with Traditional Community Leader of Abeku I (Adekanmbi)**



**FGD with women in Gbekelu community, Oluwa Forest Area**



**FGD Conducted with Group of Men in Aba Baale (Ajebandele), Omo Forest Area (J4)**

### **Data Analysis**

All quantitative and qualitative data were analysed using standard statistical procedures. Before data entry, filled questionnaires were checked in the field to remove inconsistencies or improper administration of the instruments. The quantitative data were entered and analysed using primary descriptive statistics. As a follow up to relevant aspects derived from the FGDs and IDIs, some quantitative analysis of the qualitative findings was carried out. The findings on similar topics from different components of the studies were compared through the process of triangulation to ensure consistency of results.

### **Scope and limitations of the study**

The logistical constraints were the most difficult challenge facing the research team, particularly with the very poor roads as shown in the next few photographs. This is later confirmed in the section on Development Needs Assessment where road was repeatedly stated to be the need of greatest priority to the inhabitants. In a few cases the team had to cross a stream or take a motorcycle to reach the settlement. In other cases, although the vehicle was able to reach the settlement, the road was very poor in many places.



**Research team with the challenge of crossing Omo River to Etemi community, Omo Forest Area (J4)**



**Poor Road Network was a great Challenge to Conducting Field Work: Along the Road Leaving Bature on way to Adejori in Oluwa Forest Area**

Due to the large number of communities to be covered and the relatively limited time to complete the study with difficulties encountered, the size of the sample for the survey is small. It is felt, however, that having qualitative data to compliment the quantitative data will yield a fuller understanding of the conditions, constraints and potentials found in the locality.

**Table 1: Methods used as related to Specific Objectives of the Studies**

<i>Objectives to be addressed</i>	<b>SD</b>	<b>Survey</b>	<b>IDI Leaders Officials</b>	<b>FGD</b>	<b>DO</b>	<b>Comm- unity Mapping</b>	<b>Paired Needs Ranking</b>
a) Describe in general terms, the population size and structure, settlement patterns, ethnic structure and ethnic groups within the enclaves, leadership pattern, etc;	X	X	X	X	X	X	
b) Identify administrative/socio-cultural institutions/ leadership patterns, migrant status of villagers, etc.	X		X	X			X
c) Assess level of infrastructural development in terms of social amenities and infrastructure available and present condition;		X	X	X	X	X	X
d) Present a gender analysis of livelihoods, etc.		X		X			X
e) Find out potential for conflict and attitude or perception to the project and forestry department within the reserve;	X	X	X	X			
f) Determine livelihood strategies in terms of farming, hunting, non timber forest collection, logging, etc ;	X	X	X	X			
g) Identify socially marginalized groups		X	X	X			
h) Identify and assess status of resources (land, forest, water, etc.) and level of dependence upon the forest	X	X	X	X	X	X	
i) Suggest mechanisms to minimize negative effects of proposed project upon local population	X	X	X	X			X

**SD = Secondary Data; IDI = In-depth interviews; FGD = Focus Groups Discussions; DO = Direct Observation (Use of check list**

**Table 2: Sampled Persons and Groups for Research Activities**

Research methods	Target persons / groups	Sample N	Activities and Objectives
Survey	Inhabitants in the enclaves were stratified and selected. Omo Forest (Males 59, Females 34, Total=93) and Oluwa Forest (Males 35, Females 17, Total=52)	Omo=93 Oluwa=52	Individuals interviewed with structured schedule covering variables. Analysis of findings from survey provided the following information: <ul style="list-style-type: none"> <li>○ Provide baseline data for each enclave;</li> <li>○ Allow comparison within community;</li> <li>○ Facilitate a gender / generational analysis of differences btw groups on basis of sex and age;</li> <li>○ Identify the range of individual differences on personal characteristics and perspectives on the Project;</li> <li>○ Determine types of livelihood activities and dependence on natural resource base; and</li> <li>○ Find out viability of existing social capital.</li> </ul>
IDIs	Key informants including: a) Community leaders including traditional, religious and men's / women's / youth leaders	Omo=29 Oluwa=13	Key informants interviewed with semi-structured schedule covering relevant issues. From the analysis of findings the following were achieved: <ul style="list-style-type: none"> <li>○ Provide a general overview of many community-level characteristics including infrastructural development;</li> <li>○ Document historical background of communities including cases of conflict;</li> <li>○ Obtain information on social characteristics including gender relationships, social norms, cultural sites of importance, etc.</li> <li>○ Discover whether views of officials are consistent with local leaders</li> </ul> <p>Conducting IDIs also provide legitimisation for the continuance of the studies and other community processes by gaining cooperation of leaders.</p>
FGDs	Target groups to include	Omo=58 FGDs	FGDs were conducted using topic guide, covering relevant issues.

	<p>a) adult males b) adult females</p> <p>One FGD per group in an enclave</p>	<p>Oluwa=26 FGDs</p>	<p>Analysis of findings will facilitate the following:</p> <ul style="list-style-type: none"> <li>○ Obtain a generally accepted view of the specific gender or generational on possible impact of Project;</li> <li>○ Discover gender and generational differences in views within communities;</li> <li>○ Determine group-relevant differences in views between communities;</li> </ul> <p>During the course of conducting the FGDs,</p> <ul style="list-style-type: none"> <li>a. Pair-wise needs ranking was used to identify felt needs of the local groups;</li> <li>b. Community mapping illustrate important landmarks in communities;</li> <li>c. Seasonal calendars in selected cases show time-specific nature of livelihood activities</li> </ul>
Observational technique	Look at infrastructures in the community	<p>N = 1 per settlement Omo=29 Oluwa=13</p>	<p>Researchers observe availability and quality of infrastructures (or asked where necessary), using a checklist with relevant facilities. This provides pre-project baseline information which, together with findings from pair-wise needs ranking, may help to determine later development projects.</p>
Case Study	Based on information obtained during IDIs or FGDs	4	<p>Obtained information on unique conditions or examples of livelihood strategies, coping mechanisms, vulnerable groups such as migrant workers or PLWA and possible problem areas arising from the proposed project.</p>



**Researchers with hunters and farmers from around Alaf settlement in Oluwa Forest Area**

## 2.0 DESCRIPTION OF THE STUDY AREA

### 2.1 Physical Description and Location of the Study Area

Omo Forest Reserve is located about 135 km north-east of Lagos, some 20 km from the coast. The terrain is undulating and elevation reaches about 300 m on some rocky hills. The eastern border is formed by the Omo river which, with its many tributaries, drain the reserve. Omo is contiguous with five other, highly degraded forest reserves, the largest of which is Oluwa Forest Reserve to the east. The vegetation is mixed moist semi-evergreen rainforest. Due to selective exploitation in the past, the forest is largely mature secondary, with pockets of primary forest along river courses and in other areas where log extraction is difficult. Average annual rainfall is over 2,000 mm. The identified settlements found in Omo Forest Reserve are located in Ijebu North, Ijebu East and Ijebu-Igbo Local Government Areas (LGAs) of Ogun State.

Oluwa forest reserve covers a total area of 882 km<sup>2</sup> and it lies between the Oni river to the west and the Ore-Shagamu expressway to the East. The Ondo State Afforestation Project (OSAP), one of the study sites is situated within the reserve. It has the most extensive plantation of *Gmelina arborea* in Ondo State (Ogunlade and Odunlami, 1989). Although naturally situated on a mountainous land with high elevation at sea level (a.s.l.), the effect of weather and man's activities have considerably reduced the elevation of Oluwa forest reserve in recent times. With topography gently undulating, elevation ranges between 30m to 300m a. s. l. along the valley of major rivers in the reserve. The whole reserve is generally well drained by Oluwa, Omi-nla, Oni and Owena rivers. Oluwa forest reserve is located between latitude 6°35' and 7°20'N and longitudes 3° 45' and 4°32' E. The settlements found in the reserve are situated in Odigbo and Ondo West LGAs of Ondo State.

The climate of the area is bi seasonal – rainy and dry. Annual rainfall ranges from 1,500mm, commencing from March to November. As low as 250mm of rainfall is also recorded between December and February- during the dry season. Average relative humidity is about 84% daily during the raining season while annual temperature averages 26.95°C with peak around January/February and minimal between July and August (Oguntoyinbo, 1982).

Most of the plantations in the study area were established by departmental taungya, which entails exploiting and utilizing the economic indigenous species, clear felling the area and planting with the exotic species.

### 2.2 Spatial Distribution of Local Inhabitants in Omo-Oluwa Forest Areas

There were 43 settlements identified through discussions with key informants from the locality and by the field visits in the two protected forest areas. These were stratified into two groups on the basis of their proximity to the proposed project area and the consequent likelihood of being affected by the project. Table 3 lists the 43 settlements by the two categories of those likely to be directly affected and those likely to be indirectly or minimally affected by the proposed project.

**Table 3: Classification of identified settlements by proximity to the Project Area**

<i>Forest Area</i>	<i>Directly Affected</i>	<i>Indirectly Affected</i>
Omo (J1)	1. Erinwo	5. Baoku
	2. Iho-Ajebemi	6. Tuangya
	3. Owode	
	4. Okudu Temidire	
Omo (J3)	7. Munale	14. Tadungbose-Olorunsogo
	8. Aba Onitasi II	15. Ogbara Owu Ijebu
	9. Olumatisan (Aba Onitasi II	16. Omo Wood Afforestation
	10. Aparara(Aba Ekiti)	
	11. Erila I	
	12. Erila II	
	13. Wonder Camp	
Omo (J4)	17. Aba Baale (Ajebandele)	23. Osoko
	18. Etemi	24. Idi-Opepe
	19. Sojukodoro	25. Abeku II (Temidire)
	20. Ori-Apata	26. Abeku I (Adekanmbi)
	21. Ologuna	27. Eseke
	22. Esiri	28. Tamitami
		29. Gbonpa
		30 Imoba
Oluwa	31. Asorowo	39. Vasco Camp
	32. Lafa / Nirowi	40. Bature
	33. Gbekelu	41. Adejori
	34. Kabiyesi	42. Ulugha
	35. Yinka	43. Saare
	36. All African Wood Camp	
	37. Gbojulongun	
	38. Aba Black	



**Community Entrance is very important for successful field work: Research Team explains purpose of the study at Abeku I (Adekanmbi) in Omo Forest**

Figures 2 and 3 show the social mapping that roughly shows the location of the identified settlements in the two locations. It may be inaccurate to refer to all of the identified settlements as ‘communities’ since a few of the settlements are actually ‘camps’ for migrant hunters and in a couple cases, the settlements are not actually inhabited by residents. Fuller details of each settlement are presented in Volume II of this report which presents a profile on each settlement.

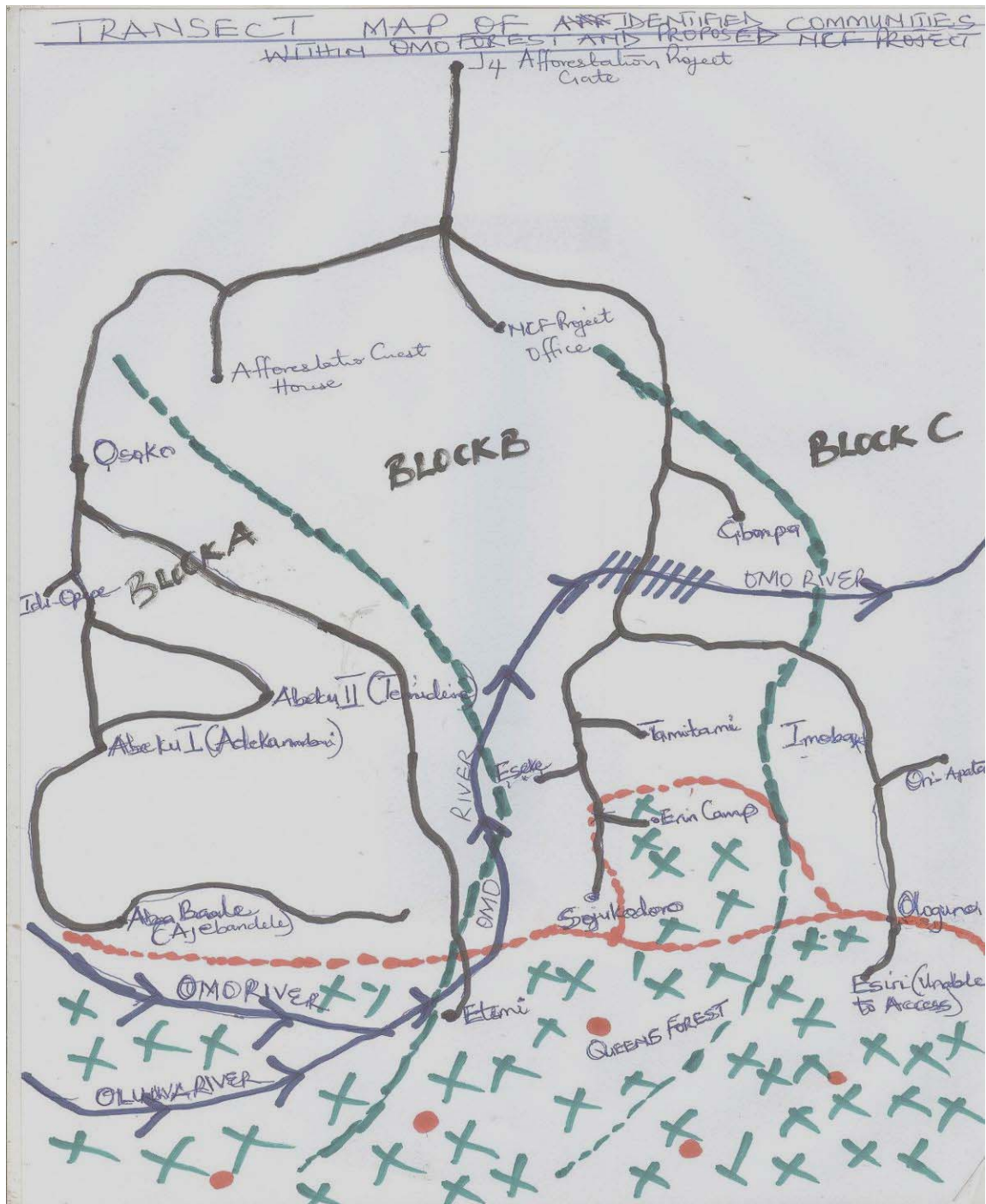


Figure 2: Social Mapping of Communities in Omo Forest Area

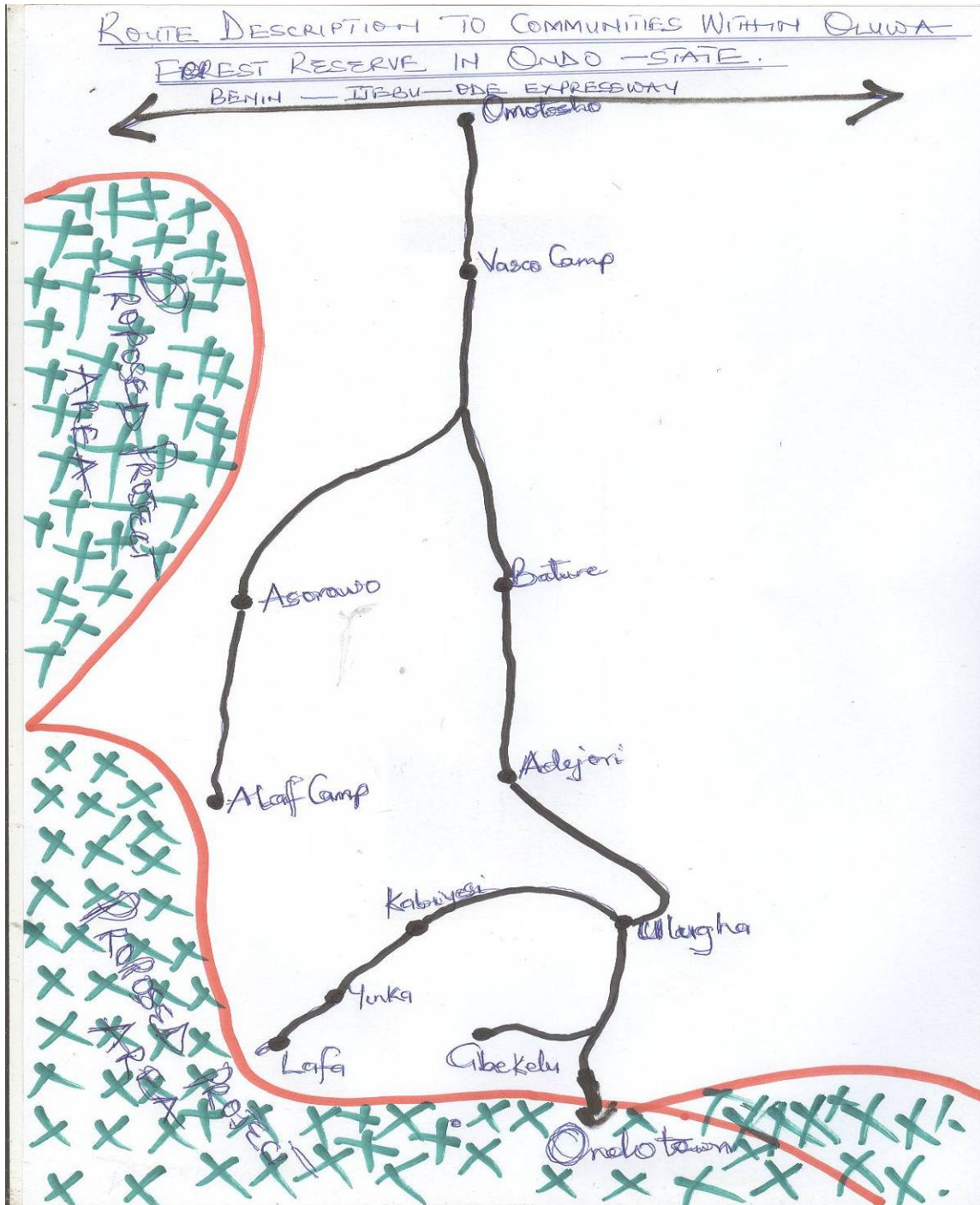


Figure 3: Social Mapping of Communities in Oluwa Forest Area

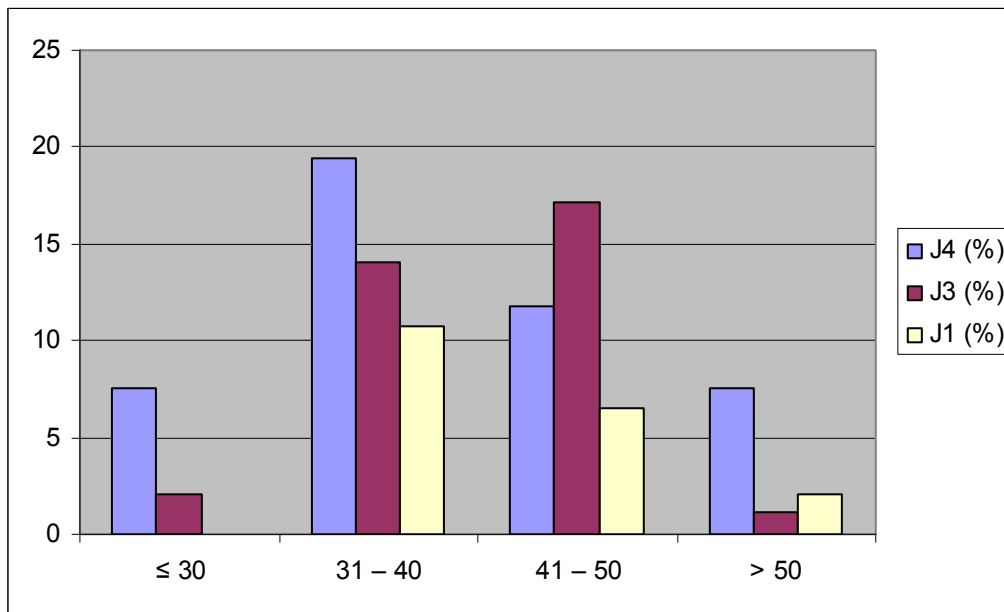
## CHAPTER 3: FINDINGS ON OMO FOREST RESERVE AREA

This section of the report presents the findings from the Omo Forest Reserve Area. This area is subdivided into three sectors: J1, J3 and J4. The results of the empirical investigation are disaggregated according to these three sectors since this is the administrative division, but more importantly, there are significant differences between the three in terms of demographic and other social characteristics. Most of the findings presented here are from the quantitative survey. For the Omo Forest Reserve Area, 93 respondents were sampled, 18 from J1, 32 in J3 and 43 in J4. However, information from the IDIs and FGDs are also included when it enhances the understanding of the findings.

Some of the findings are the result of how the respondents were sampled. The sample was not selected to reflect the actual distribution of the entire population in each settlement by age, sex, migrant status, and so on, but rather to gain insights from residents who would more likely be able to provide relevant and accurate information.

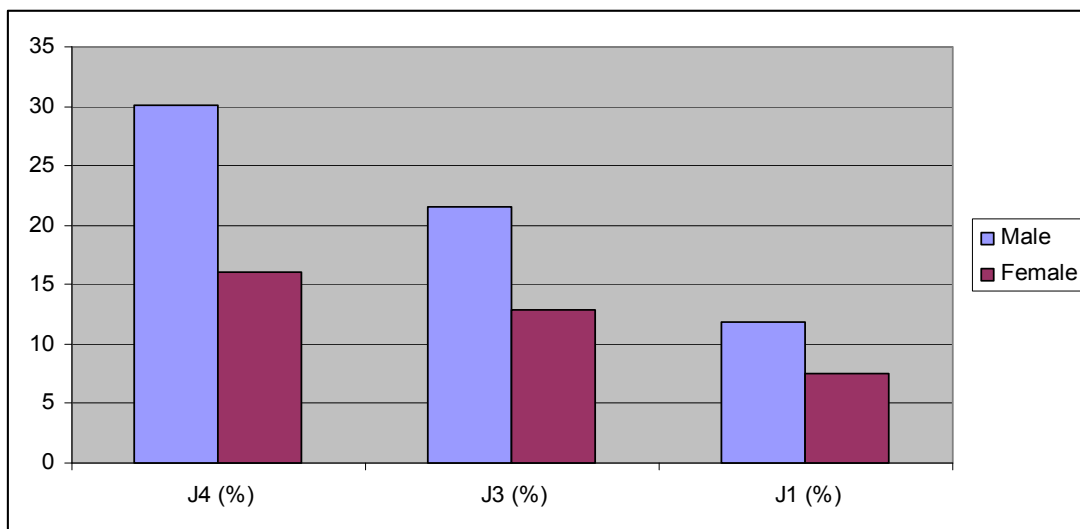
### 3.1 Demographic Profile of Surveyed Inhabitants of Omo Forest Reserve

**3.1.1 Age of Respondents:** Most of the respondents are between the ages of 31 and 50 years as shown in Figure 4. There is an obviously small proportion of the respondents that are less than 30. This is consistent with the observation that many youth are migrating out of the area in search of educational and employment opportunities. Contrary to the other two sectors, J3 has a higher proportion of residents that are 41-50 years, whereas the other sectors record their highest proportions in the 31- 40 age category. The low proportion of residents over 50 years reflects the findings on migrant status, recognizing that elderly persons would no longer be so active in farming, hunting, etc. in a migrant camp, but would rather be semi-retired. J4 contains more permanent communities than the other sectors that are home to many migrants.



**Figure 4: Distribution by Age of Surveyed Residents in Omo Forest Area**

**3.1.2 Distribution of Sample by Sex:** The distribution of the sampled residents also reflects the distribution of local inhabitants by sex. In all three sectors, male respondents outnumber the females by a significant proportion as shown in Figure 5. This is, to some extent due to the way the residents were sampled, but also reflects, to a significant extent, the fact that there are more males in the forest areas. According to many of the male respondents, their wives and children reside in the larger, more permanent settlements or towns further away from the reserve area. This is partly due to lack of schools in the reserve, but also because in some settlements the household head stays in the forest reserve to farm, hunt or engage in other livelihood activities during the week and comes to the town to be with his family on the weekend. Many of the inhabitants are migrants from outside the immediate vicinity and their families stay in the permanent place of residence.



**Figure 5: Bar Chart showing Distribution by Sex of Surveyed Inhabitants of Omo Area**

The inclusion of both males and females in the sample, as well as conducting FGDs with both male and female groups is important for conducting a gender analysis for many of the findings. In some of the sections, the views are specified by gender to provide information of differences in livelihoods, perspectives and resource utilization.

**3.1.3 Distribution of Sample by Religion:** The findings on religion investigated only the differences on religion, but obtained responses for only the two main ones – Christian and Muslim, finding about 3/5 of the respondents are Christian and the remaining 2/5 are Muslim as seen in Table 4.

**Table 4: Distribution of Sampled Inhabitants of Omo Forest Reserve by Religion**

Religion	J1 (%)	J3 (%)	J4 (%)	Total (%)
Christian	8 (8.6)	20 (21.5)	28 (30.1)	56 (60.2)
Muslim	10 (10.8)	12 (12.9)	15 (16.1)	37 (39.8)

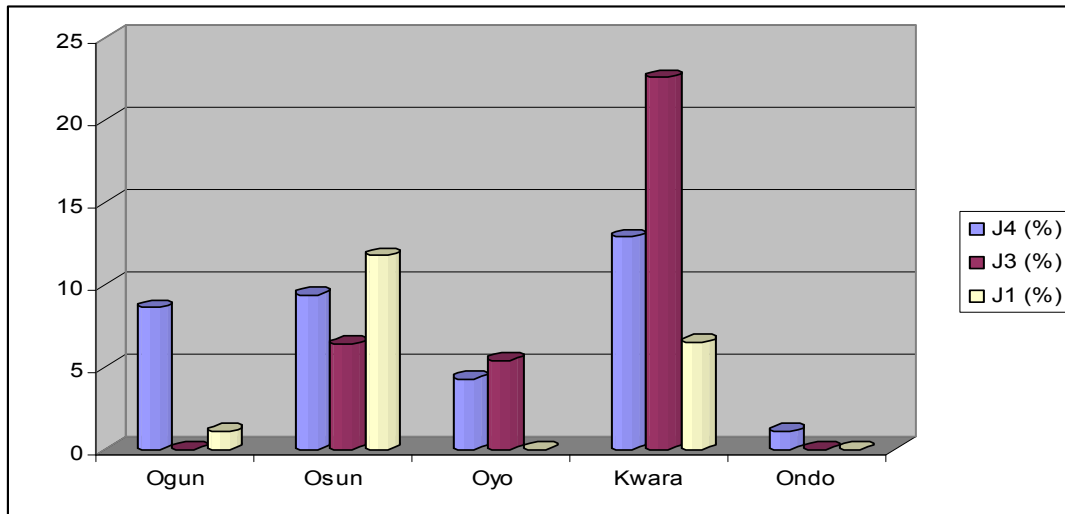
The respondents did not report that they are traditional worshippers, but in many studies it has been found that residents, particularly in the rural areas, may claim to be adherents of the

‘modern’ religions, even though they also practice traditional religion. The fact that many of the settlements had shrine forests and streams or other sacred sites demonstrates the importance still attached to traditional belief systems. Many of these traditional religions have prescribed behaviours that are sometimes consistent with environmental conservation where people are not allowed to enter certain areas which then become areas of rich biodiversity. There is more information on these sites of social significance in a later section as well as in Volume 2 which gives details about each settlement.

**3.1.4 Place of Origin:** As shown in the information on each settlement in Volume 2, many of the settlements are small migrant camps. Erinwa in J1, for example, is a migrant camp with 2 huts and less than 10 inhabitants. Iho-Alegbemi, also in J1, is similarly a migrant camp with about 15 huts and less than 50 inhabitants. Erinla II in J3 has about 30 huts with a population of about 100 residents, majority of whom are long-term migrants from Osun State. Ori- Apata in J4 is another example of a migrant settlement that has about 30 housing structures. According to informants the residents leave on Friday and come back on Mondays. Similar results were found for many of the settlements in Omo Forest Reserve Area. This is also indicated by the relatively small proportion of the residents (less than 10%) that originate from Ogun State as shown in Table 5. J4, with a few larger, more permanent communities, however, has a higher proportion of the residents from the State.

**Table 5: Distribution of Sampled Inhabitants of Omo Forest Area by State of Origin**

State	J1 (%)	J3 (%)	J4 (%)	Total (%)
Ogun	1 (1.1)	- (0.0)	8 (8.6)	9 (9.7)
Osun	11 (11.8)	6 (6.4)	18 (19.4)	35 (37.6)
Oyo	- (0.0)	5 (5.4)	4 (4.3)	9 (9.7)
Kwara	6 (6.5)	21 (22.6)	12 (12.9)	39 (41.9)
Ondo	- (0.0)	- (0.0)	1 (1.1)	1 (1.1)
Total	18 (19.4)	32 (34.4)	43 (46.2)	93 (100.0)



**Figure 6: Distribution by State of Origin and by Sector in the Reserve**

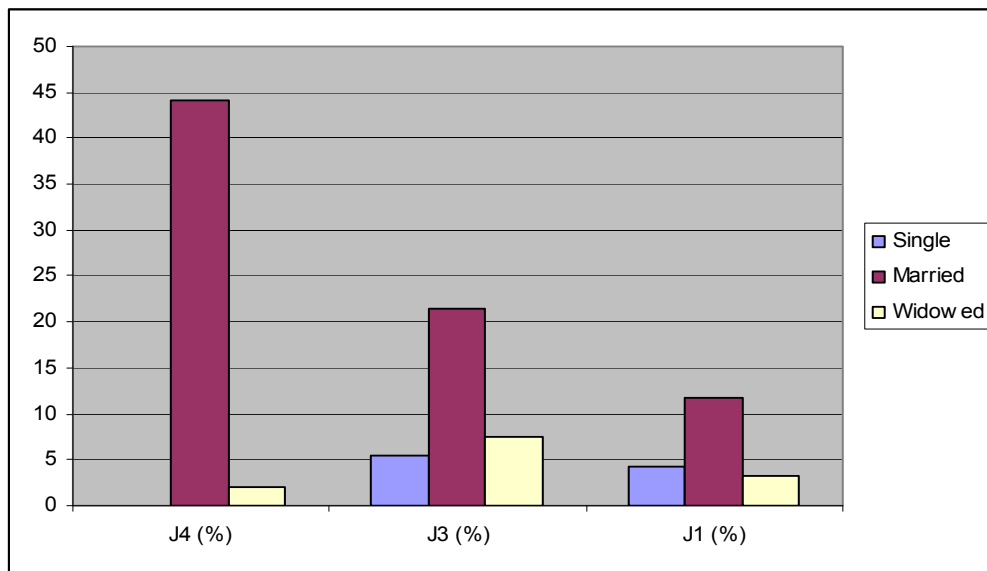
Although nearly all of the sampled respondents are from the Yoruba ethnic group, they are from different locations across Southwest Nigeria with a large proportion from Osun and Kwara States. Consequently, the majority of the local residents are non natives, even though they are from the predominant ethnic group in Southwest Nigeria.

Considering the finding that most of the inhabitants are migrants, further findings revealed the length of time they had stayed in the forest area. Table 6 shows that more than 50% of the residents had stayed in this area for more than 10 years. This means that although the majority of the inhabitants are migrants, nevertheless many have lived here for a relatively long period.

**Table 6: Period of Residence in Settlements in Omo Forest Area**

<i>Period of Stay (t= years)</i>	<i>J1 (%)</i>	<i>J3 (%)</i>	<i>J4 (%)</i>	<i>Total (%)</i>
≤ 5	5 (5.4)	5 (5.4)	12 (12.9)	22 (23.7)
6 – 10	3 (3.2)	3 (3.2)	7 (7.5)	13 (13.9)
11 – 15	6 (6.4)	13 (14.0)	11 (11.8)	30 (32.2)
16 – 20	3 (3.2)	7 (7.5)	5 (5.4)	15 (16.2)
≥ 21	1 (1.1)	4 (4.3)	2 (2.2)	7 (7.6)
Total	18 (19.4)	32 (34.4)	43 (46.2)	93 ( 100.0)

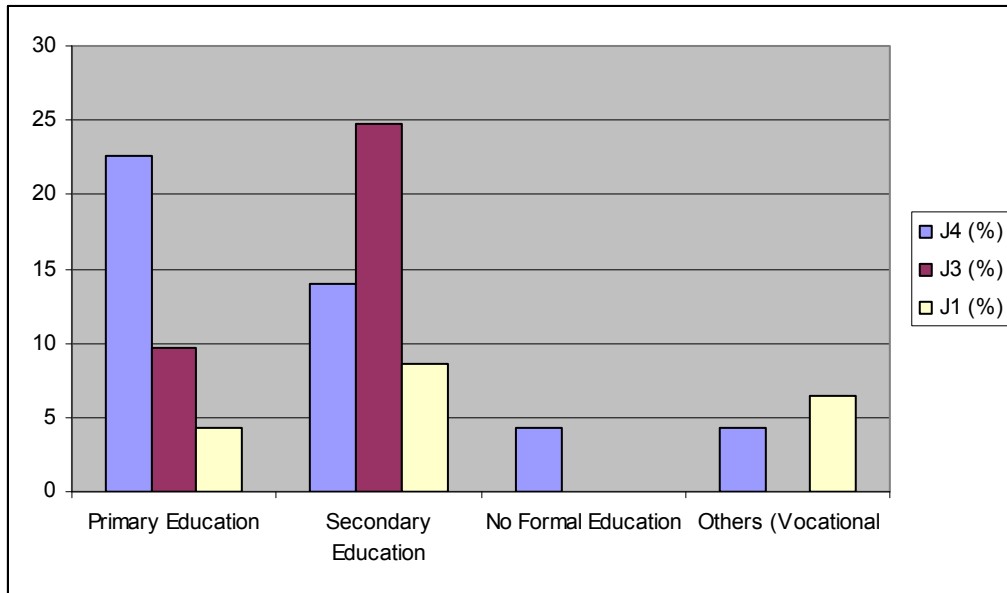
**3.1.5 Marital Status of the Inhabitants:** From the findings in Figure 7, it is obvious that the great majority of the inhabitants are married. This is related to the age distribution of the sampled respondents, but it also illustrates that whether their families are residing together or not, the residents are mostly married.



**Figure 7: Distribution by Marital Status of Surveyed Residents in Omo Forest Area**

**3.1.6 Educational Status of the Residents of Omo Forest Area:** The majority of the inhabitants of the forest reserve have primary or even secondary educational level as shown in Figure 8. This means that inhabitants decide to reside in the Forest Area even though they may have other income-generating potentials. There are relatively few respondents that do not have at

least a primary education in the area. This formal educational level also opens opportunities to have access to written sources of information which is important for information dissemination and awareness creation for extension services on conservation messages.



**Figure 8: Distribution of Sampled Residents in Omo Forest Area by Level of Education**



**Government Primary School at Abeku I (Adekanmbi),**

The fact that most residents have some formal education does not mean that it is qualitatively good education. The picture of the Government primary school at Abeku I shows that there are facilities but there are only two teachers. Students are distributed in the two classrooms, one room for primary 1-3 and the other for primary 4-6. Each classroom has one teacher for the three classes. This is not likely to yield good education for most of the students. More findings are provided in the later section on development needs assessment.

### 3.2 Social Capital: Social Groups, Sites of Social Significance and Leadership Patterns

Social capital has been recognized in recent years as being very significant for sustainable development and livelihoods. Social capital refers to social support networks, social identity, cultural heritage, social structure and other elements formed by society to provide members with their place in the family, group or community. Social capital provides a position and when necessary, coping mechanisms for members. Especially in developing countries where formal support services are not accessible or adequate, social capital is important for people to make their livelihoods and in times of challenges.

**3.2.1 Social Groups and Associations:** Social groups are the prominent and apparent form of social capital in any community. There are a variety of groups, ranging from the more formalized such as cooperatives and town development unions to the very informal such as local savings and credit groups or work exchange groups. These groups are formed for meeting different needs of the members of the community and made up of different members who share some common needs.

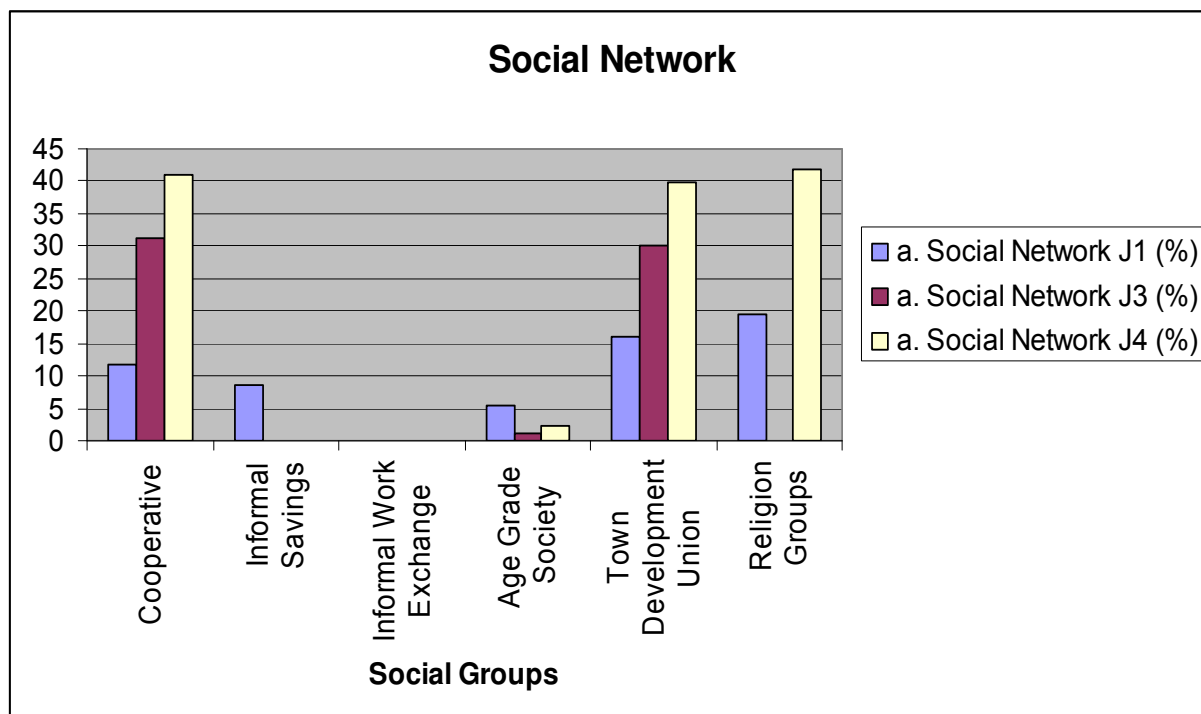
Table 7 and Figure 9 present the findings by sector of the inhabitants of Omo Forest Reserve area on the groups available in their settlement and their membership in different groups. The most common groups are cooperatives, including trade unions such as *Okada* Riders association or farmers' cooperatives, Town Development Union and religious groups. It should be noted that for most respondents, the town development unions were not for the development of the visited settlements, but for the towns from which the residents migrated.

Contrary to the findings of most rural studies, informal savings and work exchange groups are not common in the study area. This is likely due to the migrant nature of the residents so that there is limited working together on common activities.

**Table 7: Distribution of Surveyed Inhabitants by Membership of Social Groups**

Social Groups	J1 (%) (n=18)	J3 (%) (n=32)	J4 (%) (n=43)	Total (%) (n=93)
Cooperative	11 (11.8)	29 (31.2)	38 (40.9)	78 (83.9)
Informal Savings	8 (8.7)	-	-	8 (8.6)
Informal Work Exchange	-	-	-	-
Age Grade Society	5 (5.4)	1 (1.1)	2 (2.2)	9 (8.7)
Town Development Union	15 (16.1)	28(30.1)	37 (39.8)	80 (86.0)
Religion Groups	18 (19.4)	-	39 (41.9)	57 (61.3)

\*Multiple responses were offered



**Figure 9: Social Group Membership by Sector in Omo Forest Area**

**3.2.2 Sites of Social Significance:** The study identified religious sites of social significance. For the most part, this was restricted to religious places of worship, whether churches, mosques or importantly, sacred sites such as shrine forests or sacred lakes, and so on. In some cases the sites may look to the outsider as if they are insignificant, such as a tree with a cloth tied to it, or a few stones place on top of each other, but to the local inhabitants, such sites have influence over what they see as their cultural identity. The residents may feel that to disturb such sites may have social or spiritual consequences. It is important to recognize these sites – as has been done for each settlement in Volume II – and show respect for the culture of the people. It should be noted that the informants did not mention other sites of social significance such as cemeteries or historical sites of interest.

Table 8 summarizes the religious sites of social significance by settlement as identified by the key informants during the field work.

**Table 8: Religious Sites of Social Significance in the Settlements in Omo Forest Reserve**

<i>Name of Settlement</i>	<i>Churches</i>	<i>Mosques</i>	<i>Traditional Sacred Sites</i>
Erinwo	---	1	---
Iho-Ajebemi	1	1	1
Owode	1	2	4
Okudu Temidire	1	1	1
Baoku	1	1	1
Tuangya	3	1	1
Munale	1	1	1
Aba Onitasi I	2	1	1

Aba Onitasi II	1	1	1
Apara (Aba Ekiti)	1	1	1
Erila I	2	1	1
Erila II	1	1	---
Wonder Camp	1	1	1
Tadungbose-Olorunsogo	NA	NA	NA
Ogbara Owu Ijebu	NA	NA	NA
Omo Wood Afforestation	---	---	---
Aba Baale (Ajebandele)	6	1	---
Etemi	2	1	2
Sojukodoro	1	1	1
Ori-Apata	---	1	1
Ologuna	---	---	2
Osoko	3	1	2
Idi-Opepe	1	1	1
Abeku II (Temidire)	5	1	Yes, several: but declined to say how many
Abeku I (Adekanmbi)	2	1	1
Eseke	1	1	3
Tamitami	---	---	2 (Ogun and Oluweri)
Gbonpa	1	1	3 (Oluweri, Oluta and Ogun-Ajobo)
Imoba	1	1	1 (Ogun)

NA = information not available

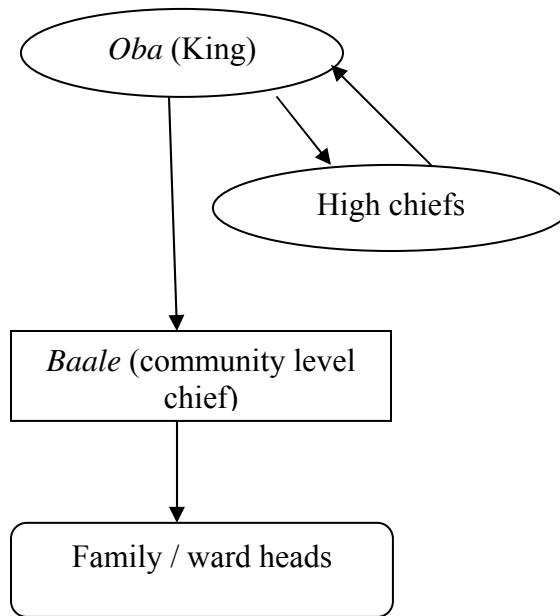


#### **Example of a Sacred Site in Omo Forest Reserve Area**

At times, a development project may need to make provision for the local population to carry out some cultural activities to relocate their shrine or otherwise satisfy the cultural demands for disturbing such sites. The proposed conservation project that may require some persons to be

relocated is an example of such. The sites that are likely to be disturbed or abandoned as the inhabitants are relocated are indicated in the table.

**3.2.3 Local Leadership Patterns:** All of the settlements identified in the forest reserve are largely made up of Yoruba people and the local leadership follows the pattern illustrated in Figure 10. However, since the settlements in the forest reserve are quite small and many are temporary camps, nearly all have a *baale*, not an *oba*. The *baale* in the settlement is subject to the traditional community leaders in larger towns or cities in the vicinity. This is indicated in a few cases on the community-by-community assessment presented in volume II. For example, the Baales of Osoko and Etemi are answerable to the Beje (Oba) in Ijebu-Igbo. Similarly, the Baale of Abeku II is under the leadership of the Oba at Ijebu Igbo.



**Figure 10: Organogram of Typical Yoruba Leadership Pattern**

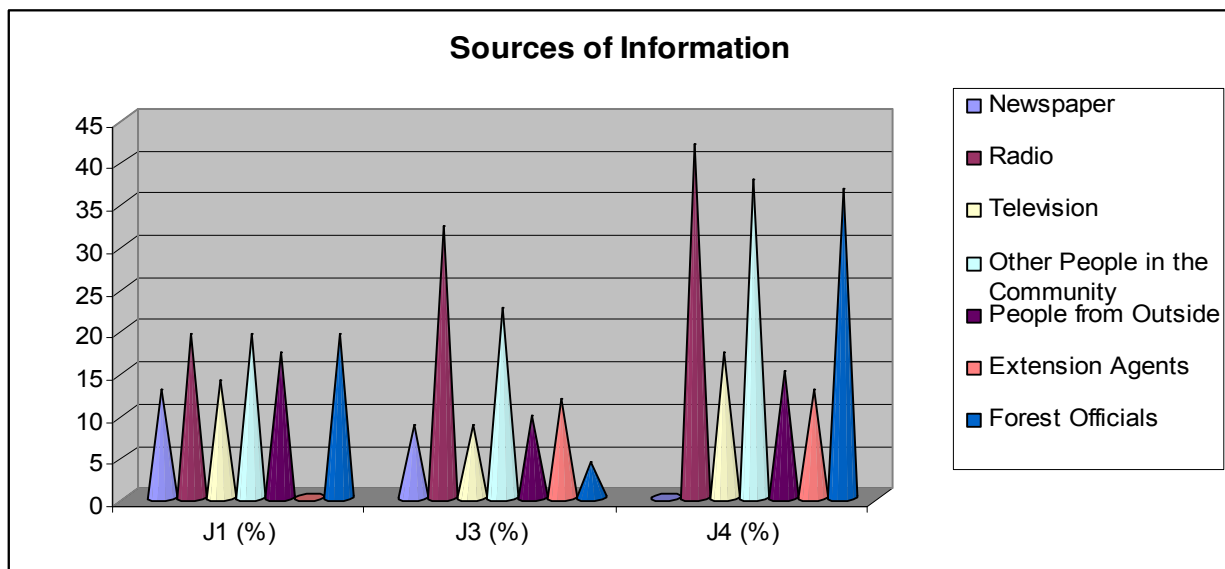
It is very important to understand and identify the correct leadership positions and office holders to inform and gain their approval of interventions. This will facilitate the mobilization of the local population. On the other hand, if the community leaders are not properly informed and their consent is not obtained, this will serve as a serious obstacle to securing the cooperation of the inhabitants.

**3.2.4 Sources of Information:** Access to information is very important for the development of people’s attitudes and behaviours. The study investigated the sources of information available and used by the local inhabitants to determine what types of information and the credibility of the sources for information dissemination. From the findings presented in Table 9, it is apparent that aside from radio, which is the most prominent source of information, other common sources

are informal and face-to-face. In Omo Forest Reserve, the forest officials do form an important information source since there is a Forest Guard Post in the area and the forest guards interact regularly with the people. This is important so that there is access to official information on regulations. However, other official sources of information are generally lacking. Less than ¼ of the sampled residents have any interaction or gain information from extension agents. One area that the Project may want to improve is in the dissemination of information through formal channels to ensure the people are well informed.

**Table 9: Distribution of Sampled Inhabitants of Omo Forest Area on Source of Information**

<i>Information Sources</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Newspaper	12 (12.9)	8(8.6)	-	20 (21.5)
Radio	18 (19.4)	30 (32.3)	39 (41.9)	87 (93.6)
Television	13 (14.0)	8 (8.6)	16 (17.2)	37 (39.8)
Other People in the Community	18 (19.4)	21 (22.6)	35 (37.6)	74 (79.6)
People from Outside	16 (17.2)	9 (9.7)	14 (15.1)	39 (42.0)
Extension Agents	-	11 (11.8)	12 (12.9)	23 (24.7)
Forest Officials	18 (19.4)	4 (4.3)	34 (36.6)	56 (60.3)



**Figure 11: Graph showing the common local sources of information**

### 3.3 Village Economy and Local Livelihoods

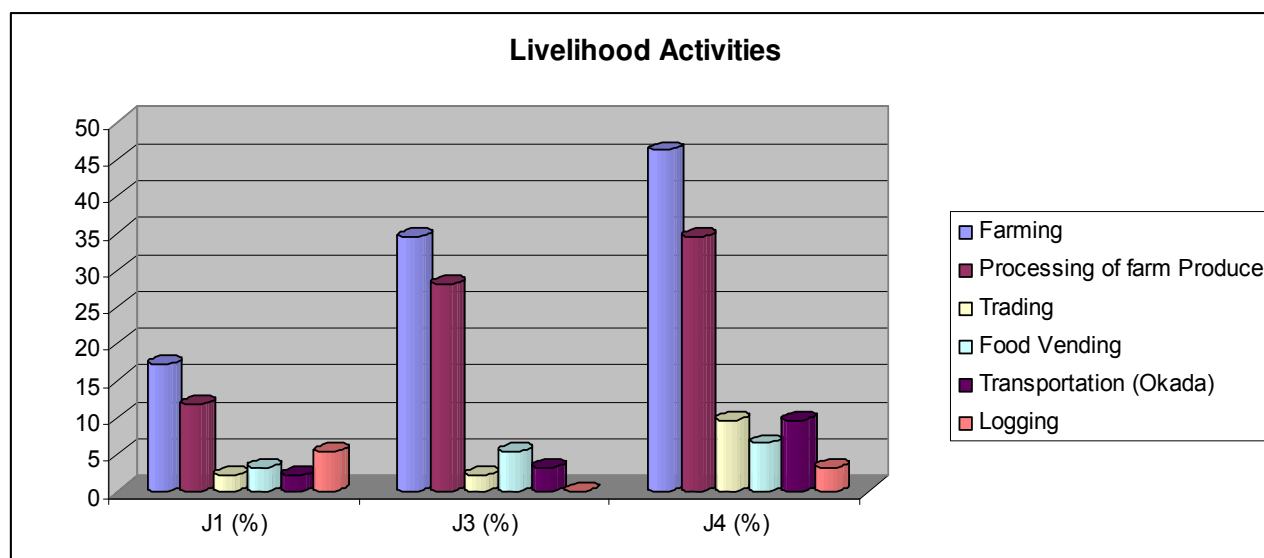
The local economy for the rural dwellers of the Omo Forest Reserve is almost totally based upon dependence on the natural resource base. The inhabitants base their livelihoods upon agricultural production and processing, gathering non timber forest products (NTFPs), hunting and providing services for the other residents. The following subsections present the findings on the income-generating activities of the people and other issues related to local livelihood strategies.

**3.3.1 Income Generating Activities:** The most prominent income-generating activity in the forest reserve is farming as shown in Table 10 and Figure 12. A common feature of rural dwellers here and in most other localities, however, is having multiple income-generating activities to meet their diverse livelihood needs. This is also indicated in the table as respondents gave multiple responses to the question on the income-generating activities that they engage in.

**Table 10: Income-Generating Activities of Sampled Inhabitants of Omo Forest Reserve**

<i>Income Generating Activities</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Farming	16 (17.2)	32 (34.4)	43 (46.2)	91 (97.8)
Processing of farm Produce	11 (11.8)	26 (28.0)	32 (34.4)	69 (74.2)
Trading	2(2.2)	2(2.2)	9(9.7)	13(14.1)
Food Vending	3(3.2)	5 (5.4)	6 (6.5)	14 (15.1)
Transportation (Okada)	2 (2.2)	3 (3.2)	9(9.7)	14(15.1)
Logging	5(5.4)	-	3 (3.2)	8 (8.6)

Multiple Responses Given



**Figure 12: Graph showing Livelihood Activities of Omo Forest Residents by Sector**

**3.3.2 Crops Grown:** From the previous findings, it was found that nearly all of the surveyed residents in Omo Forest Reserve Area (91 out of 93 sampled inhabitants) are farming as one of their major livelihood activities. In Table 11, it is apparent that tree crops including cocoa and kolanut are among the prominent crops produced. Plantain and banana are similarly very widely grown in the area. Of the food crops, cassava is the most commonly produced. There is relatively little variation in crops grown between the sectors in Omo Forest Reserve except in the case of yam which is commonly produced in J1 and J4, but not in J3.

**Table 11: Major Crops Grown by Farmers of Omo Forest Reserve**

<i>Crops</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Cocoa	13 (14.0)	32 (34.4)	43 (46.2)	86 (94.6)
Kolanut	9 (9.7)	27 (29.0)	40 (43.0)	56 (81.7)

Plantain	13 (14.0)	32 (34.4)	43 (46.2)	88 (94.6)
Banana	13 (14.0)	19 (20.4)	27 (29.0)	59 (63.4)
Yam	11 (11.8)	3 (3.2)	39 (41.9)	53 (56.9)
Cocoyam	6 (6.5)	30 (32.3)	27 (29.0)	63 (67.8)
Cassava	18 (19.4)	31 (33.3)	39 (41.9)	88 (94.6)

The advantage of growing tree crops is the economic value of the produce. In recent times, there has been a good economic environment for producing these crops. As the discussants at a FGD with adult males at Osoko reported: *Cocoa is now selling better. The cocoa trees are germinating very well and it is selling very well in the market. Cocoa farmers are increasing*”.

**3.3.3 Gender Dimensions to Livelihoods:** Differentiation of income-generating activities by gender is important so that the project will be able to take into consideration the needs and challenges of both males and females and to ensure that the intervention will not lead to great gender inequity. Table 12 indicates the common activities performed by men and by women.

**Table 12: Gender-specific Income-generating Activities in Omo Forest Reserve Area**

<i>Activities most commonly performed by men</i>	<i>Activities most commonly performed by women</i>
Cocoa, kolanut, oil palm producers (i.e. tree crop farmers)	Processing palm oil, gari, kolanuts and other agricultural crops.
Trading in farm produce	Selling provisions
Hunting, fishing	Collect firewood, snails and some other NTFPs
Artisans – carpenters, bricklayers, etc.	
Logging	

In collecting some of the NTFPs, there are gender differences. While these are not the same for all communities, there are some general observations that can be made. It is only men that hunt the big bush animals while both men and women can collect snails. Women are largely responsible for gathering firewood, but men are responsible for getting roofing poles for building the house. Women gather wrapping leaves, but both men and women may collect medicinal plants and chewing stick.

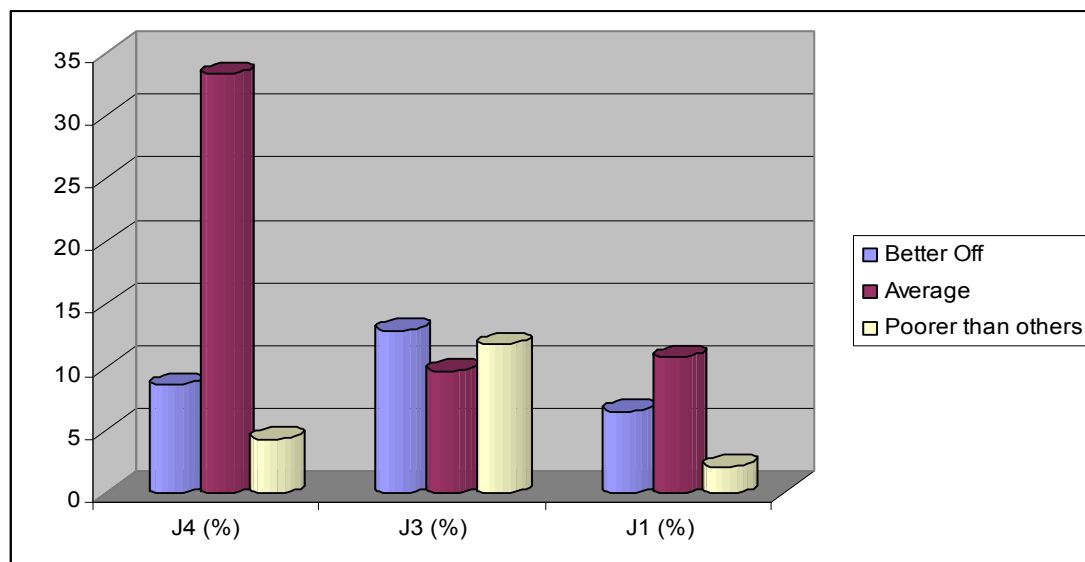


**Rural Woman in Omo Forest Reserve Area Processing Kolanut**

**3.3.4 Socio Economic Status Distribution:** Socio-economic status is an important characteristic of the population. By this, it is possible to see the level of poverty and/or economic well-being. Table 13 and Figure 13 show the results when the sampled inhabitants were asked to state what their own socio-economic status (SES) is compared to other residents in the locality. The study did not use a standardized scale for measuring SES which would involve a long list of items. Due to the migrant, temporary nature of many of the settlements, this was viewed to be unsuitable since it would not be a true reflection of the status of many of the residents whose permanent home, and possessions, would be located in another village or town. This is therefore, only indicative of the respondents' perception of their level of status compared to others.

**Table 13: Self-evaluated Socio-Economic Status of Sampled Residents in Omo Forest Reserve**

<i>Perceived SES</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Better Off	6 (6.5)	12 (12.9)	8 (8.6)	26 (28.0)
Average	10 (10.8)	9 (9.7)	31 (33.3)	50 (53.8)
Poorer than others	2 (2.1)	11 (11.8)	4 (4.3)	17 (18.2)
Total	18 (19.4)	32 (34.4)	43 (46.2)	93 ( 100.0)



**Figure 13: Graph showing comparative perceived SES of residents in Omo Forest Reserve**

One of the findings of the study is that tree crop / cash crop farmers reported that they have seen improvements in their livelihoods and thereby improved status. Female discussants in Erinle II remarked that *“there has been an improvement as there is increase in cocoa production and the price of cocoa as well as palm oil and kolanut.”* This improved standard of living is also evidenced by the following remark: *“The livelihood is becoming better. Initially when we came it was very difficult to bring our wives, but now we can bring our wives to the settlement that we started 10 years ago”* (FGD with men from Imoka).

The elderly, widows and female-headed households were generally reported to have the lower status and be the most vulnerable members of the society.

### 3.4 Natural Capital – Land and Natural Resources

**3.4.1 Accessibility and Quality of Natural Resources:** In most of the settlements, the respondents reported that they don’t have trouble getting land in the locality. The findings in Table 14, however, show that while most respondents stated that land is available, it is declining in quantity as well as in quality. This is further supported by Table 15 which indicates that over ½ of the respondents felt the natural resources in the reserve were currently evaluated as fair or poor. Figure 14 further illustrates these ratings. As later discussed, this is partly related to over cropping of the limited land allowed for farming.

**Table 14: Availability of Natural Resources in Omo Forest Reserve in the last 20 years.**

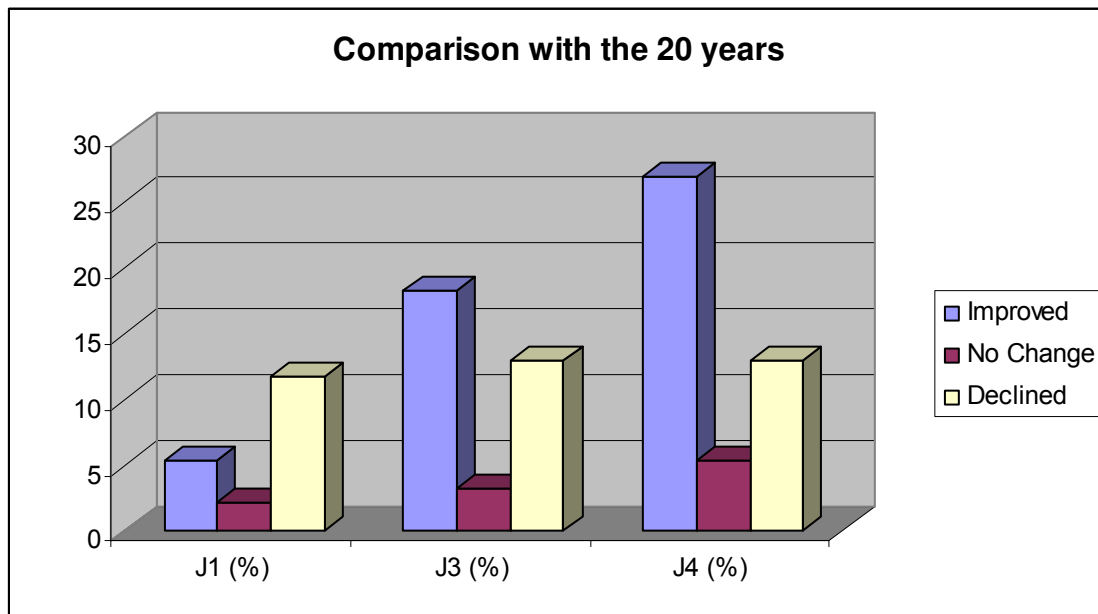
Perceived Quality	J1 (%) (n=18)	J3 (%) (n=32)	J4 (%) (n=43)
Yes Improving	3 (3.2)	8 (8.6)	29 (31.2)
Yes, but declining	13 (14.0)	21 (22.6)	11 (11.8)
No Change	2 (2.2)	3 (3.2)	3 (3.2)

One discussant from Osoko provided information on how tenure rights to land, trees and water resources are allocated to the residents: *Government gives the land to the indigenes through the Baale*. Another informant stated that N1,000 rent is then paid to the Baale. In nearly all settlements, the respondents stated that there is no discrimination in allocation of land. Males and females generally have equal access to the land, although there were a couple incidences where women felt they were not given access to good lands. In most locations, tree crops are grown by males while females that are farming are more likely to produce food crops like cassava, vegetables and cocoyam.

**Table 15: Rating of Land, Forest and Water Quality**

<b>Rating/Present status</b>	<b>J1 (%) (n=18)</b>	<b>J3 (%) (n=32)</b>	<b>J4 (%) (n=43)</b>	<b>Total (%) (n=93)</b>
Good	9 (9.7)	18 (19.4)	15 (16.1)	42 (45.2)
Fair	5 (5.4)	10 (10.8)	14 (15.1)	29 (31.3)
Poor	4 (4.3)	4 (4.3)	14 (15.1)	22 (23.7)

When respondents in Omo Forest Reserve were asked to compare the quality of land, forest and water resources now with 20 years ago, there were significant differences in the responses between the J1, J3 and J4 sectors. As shown in Figure 14, the majority of the inhabitants in J4 reported that the quality of the resources was better now than it was 20 years ago, while residents in the other two sectors were less positive. Particularly in J1, the results showed that most of the respondents believed that the resources had declined from earlier years. The results from J3 were less conclusive.



**Figure 14: Comparison of Resource Quality Now with 20 years ago**

**3.4.2 NTFPs Collection:** Gathering *non* timber forest products (NTFPs) such as firewood, snails, medicinal plants and so on is an important livelihood activity for all rural dwellers, but particularly for the forest dwellers. According to many of the respondents, however, the reason for collecting NTFPs is more for household use and food security than for sale, except in the case

of bush meat. Some of the informants reported that the NTFPs are picked right on their farms and that they do not need to go far into the forest to gather them. According to the male discussants at Abeku II, it is not advisable to go into the reserve to collect NTFPs since “*people can get lost in the reserve. That is why we do not encourage or even allow people to go into the reserve to pick anything.*” Nevertheless, respondents from Aba Baale complained that the best NTFPs are in the thick forest. Unfortunately, they bemoaned that in their area, there is less thick forest now.

**Table 16: NTFPs collected by Residents of Omo Forest Reserve**

<i>NTFPs</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Roofing Poles	13 (14.0)	22 (23.7)	24 (25.8)	59 (63.5)
Fuel Wood	16 (17.3)	32 (34.4)	41 (44.1)	89 (95.8)
Chewing Stick	12(12.9)	19 (20.4)	10 (10.8)	41 (44.1)
Bush Meat	14 (15.1)	12 (12.9)	9 (9.7)	35 (37.7)
Medicinal Plants	9 (9.7)	30 (32.3)	41 (44.1)	80 (86.0)
Spices, Fruits	11 (11.8)	30 (32.3)	41 (44.1)	82 (88.1)
Wrapping Leaves	4 (4.3)	29 (31.2)	36 (38.8)	69 (74.3)
Honey	2 (2.2)	-	1 (1.1)	3 (3.3)

In several settlements, the residents stated that they do not collect honey. In most settlements, the residents said that it is only Hausa people that harvest the honey in the area. However, in Etemi, an informant said that honey is collected by some people, but only at midnight.

**3.4.3 Logging and Hunting Activities in Omo Forest Reserve:** In several settlements, respondents noted that loggers generally come from outside the reserve, from Ijebu-Ode, Ijebu-Igbo and other urban areas. Few loggers are residents of the reserve. The State Ministry is in charge of regulating logging activities. Loggers must get access from the Forestry Officials. Everyone, whether indigene or outsider, must get a permit to engage in logging.

According to the respondents in a few of the settlements that are further away from the proposed project site, they are not seeing many animals as they did in the past. In other parts of the Omo Forest Reserve, there are significant numbers of wild animals, including elephants, chimpanzees, and many others. In Eseoke, for example, discussants reported that they see many elephants and monkeys in the evenings and in the mornings. Other common bush animals in the reserve are antelope, grasscutters, Igala and tortoise. There are also a lot of hunting activities in the reserve, both by local residents and by migrant hunters. Evidence was seen in several locations that extensive hunting is taking place and this needs to be controlled. According to discussants at Abeku I, they hunt any type of animal. Most of the hunters are indigenes, but any migrant hunter that ‘reveals’ himself to the community and lets the chief hunter know him will be allowed to hunt. Many of the NTFPs, including bush animals, are obtained from the virgin forest, known as *Igbo dudu*. These virgin bushes are reducing, but they are difficult to go into and “*if you are not very strong in the heart, you cannot go into such bush*” (FGD with men in Abeku I).

**3.4.4 Environmental Problems:** Most of the responses concerning the environmental problems found in the reserve focused on deforestation, erosion and flooding. Some of the informants also

complained that the soil was becoming degraded and infertile because they have limited land for farming and it is being continuously cropped. Because of this, the settlers in some settlements voiced out the desire for being allowed to farm on more lands of the reserve. Evidence of encroachment of reserve lands for the purpose of farming was seen in several places.

Among the stated reasons for the environmental problems are the activities of loggers from outside the locality. The loggers, it was explained, do not replant trees as they are supposed to. In fact, discussants from Etemi categorically stated that the loggers are the ones causing the environmental problems in their area.

### **3.5 Physical Capital: Level of Infrastructural Development and Development Needs Assessment**

**3.5.1 *Infrastructural Facilities and Services:*** The level of infrastructural development in all settlements of the forest reserve area is very poor. The general lack of facilities and services is itemized for each community in Volume II of this report. The majority of the settlements could not boast of any infrastructural facility. The settlements that had a primary school or clinic still did not have adequate staffing or equipment to make the facilities viable. To acquire access to these facilities and services, residents had to travel long distances or some members of the family would have to reside in larger towns or villages while the household head and perhaps some of the family members stayed in the reserve. Many of the residents complained about lack of GSM coverage, which cuts them off from their families and restricts their access to information. The only electricity in any settlement was by the use of private generator.

The major problem for settlements in the reserve, however, is poor roads and lack of transportation. This problem has come out repeatedly in this report as the biggest challenge for conducting the field work and as the priority need of the settlers as shown in the next section on priority needs ranking where roads came out as the highest ranked need in nearly all the settlements where paired needs ranking was carried out. Due to the poor roads, many of the settlements can only be reached by motorcycle or 4-wheel drive vehicles. Consequently, the cost of transportation and the difficulty for marketing the local produce has also caused problems for the people. According to some discussants, motorcycle is only means of transport to reach some of the settlements: To transport produce from Abeku I to Omotosho costs N500, but there is no alternative.



**Poor Quality of the Road Network in Omo Forest Reserve**



**Residents rely on motorcycles to transport their produce**

Although many of the respondents noted that their health status is not bad, yet they complained about the lack of health facilities in the area. As reported by the FGD with men in Abeku I,

“There is no hospital, no clinic. People rely on herbs to prepare concoction and if serious, they have to move to the general hospital in cities like Ijebu-Ode, Ibadan Ife or Osogbo.”

**3.5.2 Development Needs Assessment: Paired Needs Priority Ranking:** Determining the priority needs of the people is necessary for ensuring that development interventions respond to the problems that are of greatest importance to them. The study conducted paired needs priority ranking with many of the groups of males and females resident in the settlements of Omo Forest Reserve. This was conducted during the FGDs. The results are collated and presented in Table 17. Some of the settlements had so few residents that it was not possible to conduct FGDs, while some had only male residents and so FGDs with females were impossible. In a couple settlements, the FGDs were conducted with males and females together since there were very few residents available.

**Table 17: Results of Paired Needs Priority Ranking with Residents in Omo Forest Reserve**

<i>Name of Settlement</i>	<i>Road</i>	<i>School</i>	<i>Health facility</i>	<i>Water</i>	<i>Market</i>	<i>GSM coverage</i>	<i>Other</i>
<b>J1</b>							
Iho-Ajebemi (M)	1		2	4			Farm inputs = 3
Owode (M)	1	2	3	4		5	
Okuku Temidire (M)	1	4	2	3			
Baoku (M)	1	3	2	4			Oil press = 5
Tauangya (M)	3	6	2	5			Tree crops = 1
(F)	1		2	3			Loans = 4
<b>J3</b>							
Munale (M)	1	2	4		3		Farm inputs = 5
Onitasi II (M&F)	1	2	3	5	4		
Aba Ekiti Aparo (M)	1	4	3		2		
Erinla I (M)	1		2	3	4		
Erinla II (M)	1	3	2				Farm inputs = 4
(F)	2	3	1		4		Electricity = 5
Wonder Camp (M)	1	2	4		3		
<b>J4</b>							
Aba Baale (M)	1	2	4	5		2	
(F)	1	2	4	6	4		Cottage industry = 3
Etemi (M)	1	4	3	2		6	Bridge = 5
(F)	1	2	3				Bridge = 4
Sojukodoro (M)	1	3	2	5	4		
Ori-Apata (M)	1	3	2				
Ologuna (M&F)	1	2	3				
Osoko (M)	1	4	2	5	6	3	
(F)	1	2	3	6		5	Electricity = 3
Abeku IITemidire (M)	1	3	2	5	5	5	Farm inputs = 3
(F)	4	1	2		5		Cottage industry = 3
Abeku I Adekanmbi (M)	1	5	2	4		3	Police station = 6
(F)	1	2	3	3			Electricity = 5
Eseoke (M)	1	3	2	5	4	6	

(F)	1	2	3	5		4	
Tamitami (M)	1		2			3	
Imoba (M)	1	2	3	4			Electricity = 5
(F)	3	1	2				

Note: Ranking: 1=most important need to the residents; 2 = 2<sup>nd</sup> most important, etc.

M=male group responses; F=female group responses

Not all settlements are included as FGDs could not be conducted in some locations.

The findings of the paired needs priority ranking reaffirms that the most important need throughout the reserve area is improvement of the road network for improved accessibility to the settlements and more effective evacuation of produce. Schools and health facilities, followed by water and market are the needs of the next greatest importance to the residents. Other frequently mentioned needs of lesser importance are farm inputs, GSM coverage, electricity and cottage industries.

It is obvious that some of these facilities and services cannot be established in the reserve due to the small population size in most communities and scattered nature of the settlements. However, by improving the road network, the inhabitants would find it less difficult to have access to facilities and services in larger villages and towns in the locality.

### **3.6 Knowledge and Attitudes of the Local Inhabitants on Official Policy and Practices concerning Forest Reserve**

**3.6.1 Knowledge of Policy and Restrictions on Forest Reserve Use:** The study investigated the awareness of the inhabitants on the policy and restrictions set by the government on the use of forest resources and the activities allowed in the reserve and their attitudes concerning the restrictions. The practices of the rural dwellers such as collecting NTFPs, hunting and logging activities have been discussed in earlier sections.

It was obvious that in all locations in the forest reserve, residents were aware of the basic restrictions and they were able to recount these to the researchers.

The following are the restrictions that were mentioned in nearly all the various IDIs and FGDs:

- People must not go into the reserve to cut trees and may only gather dry branches for firewood:
- People must not kill animals (for hunting),
- People must not farm inside the reserve;
- People should not harvest honey, and
- People should not set fire in the reserve.

These responses demonstrated the effectiveness of the information dissemination concerning the restrictions in the reserve areas.



**Signpost showing some of the Restrictions in Omo Forest Reserve**

**3.6.2 Attitudes on Forest Reserve Restrictions:** In a general sense, the majority of the residents held the opinion that the restrictions on the use of the reserve are ‘good’ as shown in Table 18. Only about 1/3 of the residents felt that the restrictions were ‘bad’ or had no opinion. There was little difference between sectors in the proportions of respondents who held the positive or negative views.

**Table 18: Views of Residents of Omo Forest Reserve on Restrictions for Use of Reserve**

<i>Overall View of Restrictions</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Good	11(11.8)	22 (23.7)	27 (29.0)	60 (64.5)
Bad	4 (4.3)	4 (4.3)	6 (6.5)	14 (15.1)
No Opinion	3 (3.2)	6 (6.6)	10 (10.8)	19 (20.6)

Specific responses to attitude statements are found in Table 19.

**Table 19: Results of Responses to Attitude Statements by Residents of Omo Forest Reserve**

<i>Statement</i>	<i>Strongly agree</i>			<i>Agree</i>			<i>Undecided</i>			<i>Disagree</i>			<i>Strongly disagree</i>			<i>Mean score</i>
	<i>J1</i>	<i>J3</i>	<i>J4*</i>	<i>J1</i>	<i>J3</i>	<i>J4</i>	<i>J1</i>	<i>J3</i>	<i>J4</i>	<i>J1</i>	<i>J3</i>	<i>J4</i>	<i>J1</i>	<i>J3</i>	<i>J4</i>	
1. Restrictions on use of forest products are necessary.	12	19	33	6	13	10	---	---	---	---	---	---	---	---	---	4.7
2. They lead to more suffering.																

	2 --- 5	6 13 4	10 16 6	--- 3 17	--- --- 11	2.9
3. If there were no restrictions, the people would completely clear the forest reserve.	--- 3 11	15 17 29	1 6 3	2 5 ---	--- --- ---	3.7
4. The restrictions are not good and should be removed.	--- --- 2	9 12 3	--- 8 3	8 12 20	1 --- 15	3.5
5. Local residents understand the importance of the forest reserve.	2 6 12	16 22 31	--- 4 ---	--- --- ---	--- --- ---	4.2
6. People in the community should be allowed to manage the forest reserve by themselves.	--- --- -- -	3 9 4	2 5 ---	3 17 10	10 1 29	2.0

Note: J1 – n=18; J2 – n=32; J4 – n=43  
Overall average mean = 3.5.

The findings on the attitude statements show the two statements that have the most negative responses (#2 & 6) are related to the most negative views of the restrictions. This is in line with the findings in Table 18 in which the majority of the sampled residents consider the restrictions to be positive.

When asked about the impact of the forest reserve restrictions on local incomes and livelihoods, a significant number of respondents noted that they have experienced a negative impact. In the words of discussants at one of the FGDs, farmers stated that “*The restrictions have a negative impact. Most times, bush animals come from the forest reserve to destroy our farms and Government says we should not kill animals that are destroying our farms.* Indeed in Etemi, a respondent noted that elephants sometimes come and destroy the crops and at times, loggers also cause damage to their farms.

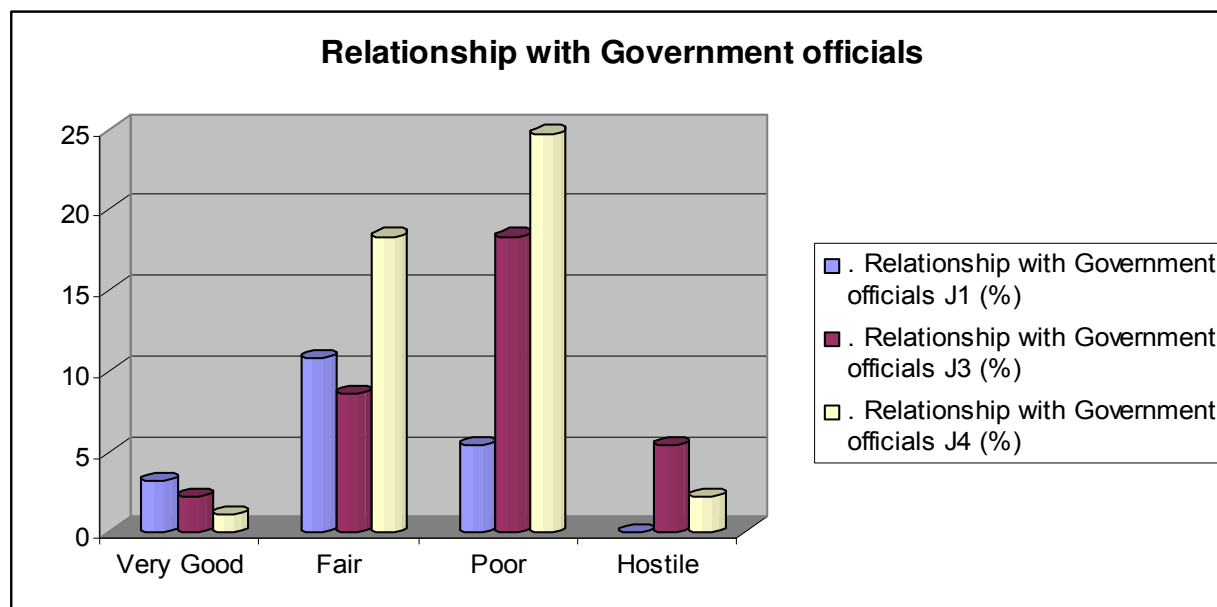
In a different contribution, male discussants from Abeku II said that one effect upon their lives is the inability to have access to timber resources for roofing their houses in the reserve. In Taungya, the informants also noted that the “*restrictions are not good for us. We are being denied use of better areas to farm*”. A similar view was expressed by male discussants at Munale in J3: “*We want to expand our farms so as to make more money, but we are not allowed*”.

**3.6.2 Attitudes Toward Government and other Officials:** The study also investigated the kind of relationship that exists between Government officials and the residents of the forest reserve. There are several different types of government officials that the local population may have contact with including Forest Guards from the Department of Forestry, extension agents and local government officials. Typically, rural dwellers are not interested in where officials come from and all officials are viewed in the same way. The results in Table 20 show that the relationship between Government and residents is generally not good.

**Table 20: Type of Relationship between Government Officials and Residents**

<i>Relationship</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Very Good	3 (3.2)	2 (2.2)	1 (1.1)	6 (6.5)
Fair	10 (10.8)	8 (8.6)	17 (18.3)	32 (37.7)
Poor	5 (5.4)	17 (18.3)	23 (24.7)	45 (48.4)
Hostile	-	5 (5.4)	2 (2.2)	7 (7.6)
Total	18 (19.4)	32 (34.4)	46 (46.2)	93 (100.0)

A major factor affecting the attitudes of residents toward the Government was the event of 2008 where the Ogun State Government wanted to take over the reserve and drove the people out, burning much of their crops and property as well. In Owode community in J1, for example, informants reported that 37 houses were burnt down at that time. Later in 2009, the inhabitants were told they could return as the reserve was no longer being taken over. According to an informant in Etemi (J4), this event reduced the number of residents and migrant hunters in the locality. An informant from Iho-Ajebemi in J1 stated that, people “no longer take farming as seriously in the area since the thugs invaded the settlements to drive people away on the claim that Ogun State Government wanted to use the whole land.” The same view was offered at Baoku settlement.

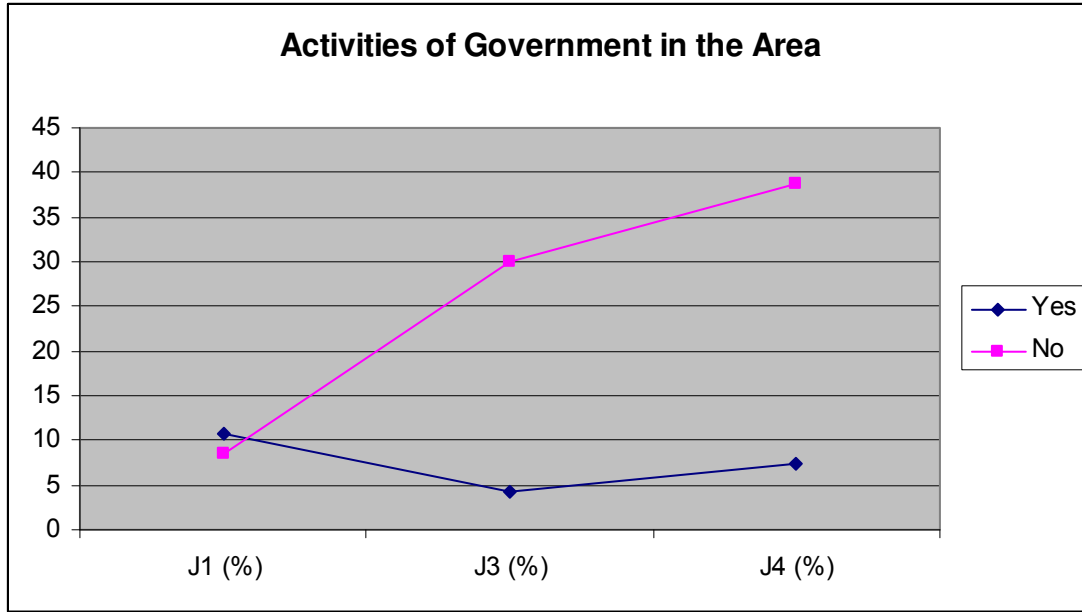


**Figure 15: Graph to illustrate the type of relationship between officials and residents in Omo Forest Reserve.**

The study found that in J3 and J4, inhabitants generally noted that there had been very little activity of the Government, whether positively or negatively affecting them, in the area. In J1, however, there was reported greater activity in the area. The study obtained responses from the sampled inhabitants on whether any development activities carried out by the Government had taken place recently

**Table 21: Activities of Government in the Area**

<i>Recent Gov't Activities?</i>	<i>J1 (%) (n=18)</i>	<i>J3 (%) (n=32)</i>	<i>J4 (%) (n=43)</i>	<i>Total (%) (n=93)</i>
Yes	10 (10.8)	4 (4.3)	7(7.5)	21 (22.6)
No	8 (8.6)	28 (30.1)	36 (38.7)	72 (77.4)
Total	18 (19.4)	32 (34.4)	43 (46.2)	93 (100.0)



**Figure 16: Chart to illustrate the poor level of official activity.**

When asked about the relationship with the Government officials, discussants in many of the FGDs said they have no relationship at all with them. Over one-half of the respondents stated that the relationship was poor or even hostile. Many of the respondents said that the only time they see any representative of the government is when an election is coming.

Discussants from Aba Ekiti (Apara) in J3 took a very pragmatic approach in their relationship with the authorities: *“We cannot go against the government decision or else the government will ask us to leave the reserve and we are not ready to leave”*.

## CHAPTER 4: FINDINGS ON OLUWA FOREST RESERVE AREA

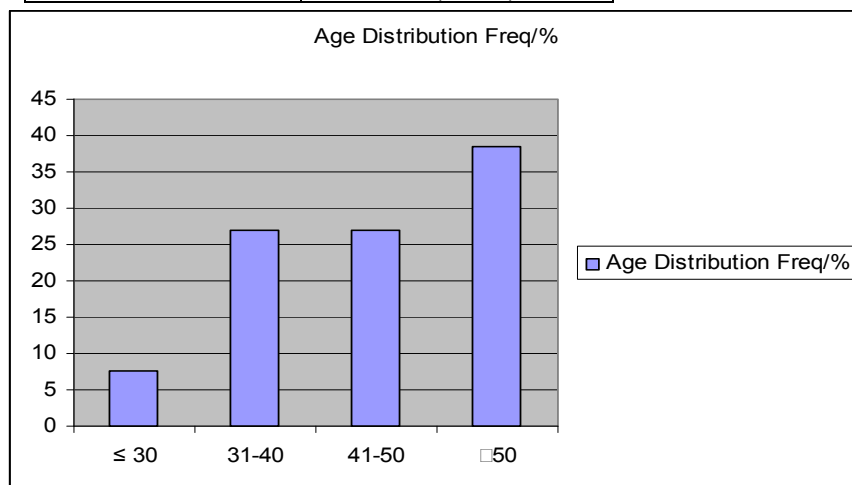
### 4.1 Demographic Profile of Surveyed Inhabitants of Oluwa Forest Reserve

This section provides a general characterization of the residents that were sampled from among the local residents of the settlements in Oluwa Forest Reserve area. It should be recognized that this is not a full representation of the local population since the sample was purposive in terms of selecting informants and respondents and was stratified by gender. A total of 52 respondents were sampled from the study area of Oluwa Forest Reserve.

**4.1.1 Age of Respondents:** All of the sampled respondents are adults with about 65% of them over 40 years of age as seen in Table 23 and Figure 18. This is important because the study does, among other issues, examine the trends in resource use and quality over time. It also investigates the opinions of persons who have lived and been involved in the forest reserve over a significant period of time. For this reason, the sample was purposive in selecting mostly adults over 30 years of age.

**Table 23: Age Distribution of Sampled Residents in Oluwa Forest Reserve**

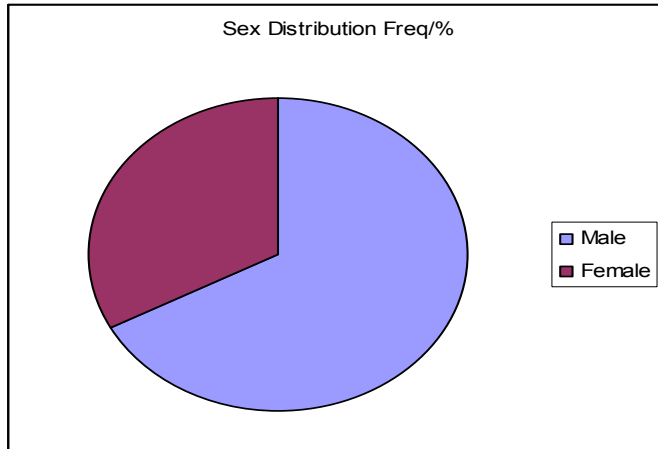
<i>Age</i>	<i>Freq/%</i>
≤ 30	4 (7.7)
31-40	14 (26.9)
41-50	14 (26.9)
≥ 50	20 (38.5)
Total	52 (100.0)



**Figure 18: Bar graph showing age of sampled residents of Oluwa Forest Reserve**

**4.1.2 Distribution of Sample by Sex:** The sample was stratified by sex to ensure there was adequate representation of both males and females. This is not, however, an accurate proportionate sample of the two groups as the actual proportion of males and females in the study areas is unknown. The findings did reveal that in the smaller settlements, some families were located in two places with the wives and children living in another village or town while

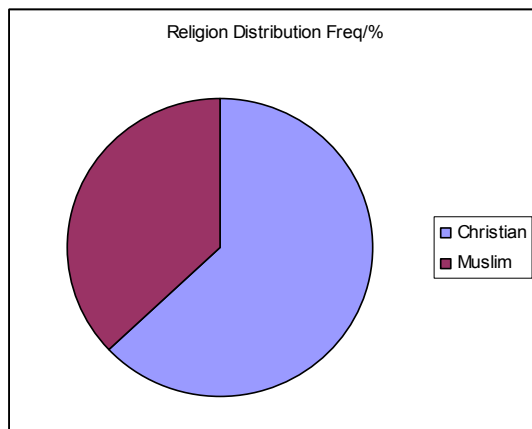
the men stayed in the settlement during the week to farm or hunt and then join the rest of the family for the weekend. The sample was made up of about 2/3 (67.3%) males and 32.7% females as illustrated in Figure 19.



**Figure 19: Distribution by Sex of Sampled Residents of Oluwa Forest Reserve.**

Representation of both males and females in the sample has allowed for some reflection of gender differences in the findings, even though a full gender analysis was not carried out for this study.

**4.1.3 Distribution of Sample by Religion:** Slightly over one-half (55.8%) of the sampled respondents are Christians and the remaining 44.2% stated that they are Muslim. This is illustrated in Figure 20. As with the findings from Omo Forest Reserve, however, the respondents did not profess to be traditional religious worshippers even though there is evidence of the practice of traditional religions in the form of sacred sites and shrines in many of the settlements as reported in a later section.



**Figure 20: Distribution by Religion of Sampled Residents of Oluwa Forest Reserve**

**4.1.4 Distribution of Sampled Population by Place of Origin:** Nearly all (96.2%) of the sampled residents stated that they are Yoruba by ethnicity. As seen in Table 24, the majority of the inhabitants are from Ondo, Osun and Ogun States. The remaining are from Oyo State. By this result, it can be deduced that nearly all of the people in the Reserve are from the southwestern part of Nigeria. This also demonstrates that majority of the residents are migrants from outside Ondo State who have come here to settle, farm and hunt.

**Table 24: Distribution of Sampled Inhabitants of Oluwa Forest Reserve by State of Origin**

<i>State of Origin</i>	<i>Freq/%</i>
Ondo	13 (25.0)
Osun	13 (25.0)
Ogun	18 (34.6)
Oyo	8 (15.4)
Total	52 (100.0)

Table 25 further reflects the migrant status of the majority of the residents. Only about ¼ of the surveyed population has stayed in the reserve for more than 20 years. Over 40 % have resided in the reserve for less than 10 years.

**Table 25: Period of Residence in Settlements in Oluwa Forest Reserve**

<i>Period of stay (t = year)</i>	<i>Freq/%</i>
≤ 5	11 (21.2)
6-10	12 (23.1)
11-15	11 (21.2)
16-20	6 (11.4)
≥21	12 (23.1)
Total	52 (100.0)

Although individual information on each of the settlements is provided in Volume II of this report, it is considered useful to provide a description of one of the enclave villages in Oluwa Forest Reserve to have a clearer idea of what characteristics the settlements in the reserve have. This also reflects the way of life of settlers whose families do not reside in the locality.

**Asorowo: An Example of a Small Local Enclave Settlement**

Asorowo is an example of a very small hamlet that provides a base for temporary settlers. The hamlet is located within natural forest with 4 huts and less than 20 people. The huts are constructed with thatch and tarpaulin as shown in the photograph below. Majority of the settlers are Ikale persons from Odigbo LGA of Ondo state. The inhabitants from Calabar area that are in their midst are hired labourers. It is a dispersed settlement with each hut surrounded by kolanut and plantain crops. Only men with a few women are found in the community, while other members of their family reside in Omotosho where the children attend school. They usually move out of camp on Fridays or Saturdays in the evening and return on Monday morning. At times, when they return to the settlement, animals would have invaded their farms to eat plantain, banana, yam, cocoyam and other food crops. Animals usually found in the area include chimpanzee, monkey, and tortoise.



**4.1.5 Marital Status of Inhabitants of Oluwa Forest Area:** Taking into consideration the age distribution of the sampled respondents, it is not surprising that over  $\frac{3}{4}$  of the surveyed persons indicated that they are married. A little more than 10% of the respondents are widows/widowers and a little less than 10% are still single as shown in Table 26. Nevertheless, several of the informants reported that their wives and children stay in a different town or village so that even though they may be married, they do not have the advantage of family labour on their farms.

**Table 26: Distribution by Marital Status of Surveyed Residents of Oluwa Forest Reserve**

<i>Marital Status</i>	<i>Freq/%</i>
Single	5 (9.7)
Married	41 (78.8)
Widowed	6 (11.5)
Total	52 (100.0)

**4.1.6 Educational Status of Residents of Oluwa Forest Reserve:** The educational status of the sampled respondents is generally low with 50% stating that they have no formal education. This can be seen in Table 27. This is at variance with the findings from Omo Forest Reserve where relatively few had no formal education and a significant proportion even had secondary or vocational education. With a high level of non literate residents, the ability to disseminate information would be limited to non written messages. With the general lack of primary and

secondary schools in the reserve area, as indicated in the description of individual settlements in Volume II, the ability to ensure education even for the children is limited. For this reason, many of the children reside in other locations to go to school.

**Table 27: Distribution of Sampled Residents by Educational Status**

Education Attainment	Freq/%
No Formal Education	26 (50.0)
Primary Education	15 (28.8)
Secondary Education	8 (15.4)
Others Vocational	3 (5.8)
Total	100.0



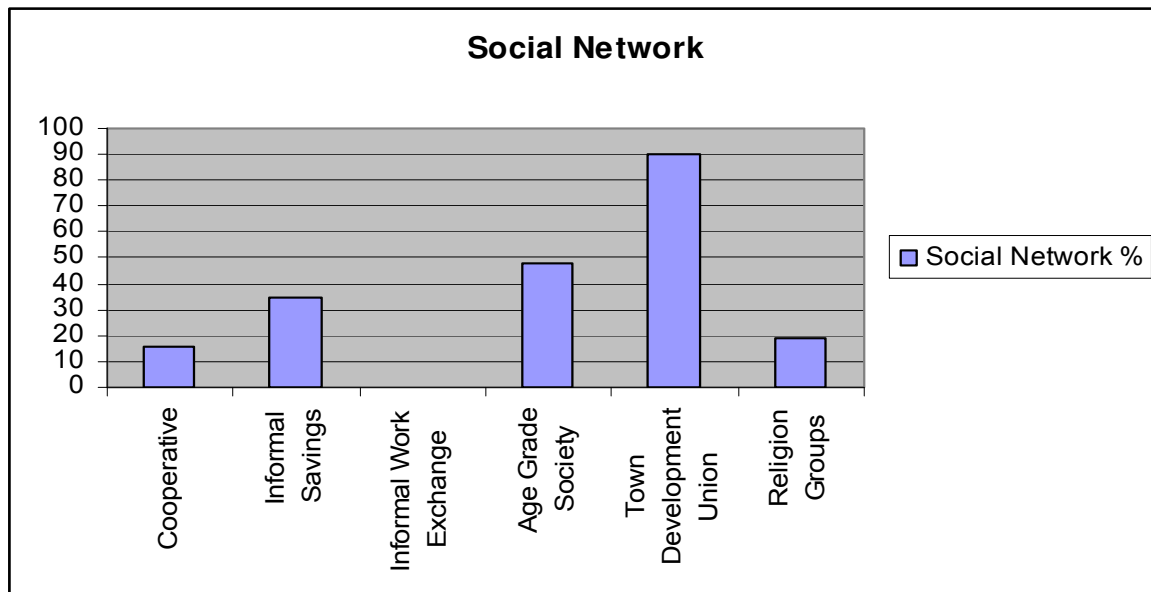
**Private Primary School for Adejori and surrounding Settlements in Oluwa Forest Area: Only Primary School for residents in the vicinity**

**4.2 Social Capital: Social Groups, Sites of Social Significance and Leadership Patterns:** As noted earlier in the similar section for Omo Forest Reserve, social capital is very important in the lives of people, particularly in rural areas and those without the formal social services. In such situations, social groups give the social support that is otherwise absent. Social sites are important for maintaining social and cultural identity. The local leaders ensure that the local community is linked to other communities and that social power is regulated.

**4.2.1 Social Groups and Associations:** The most common social group in Oluwa Forest Reserve area is the Town Development Union, followed by the age grade society and the informal savings and credit association (*esusu*). The membership in social groups is presented in Table 28 and Figure 21. These groups may be incorporated into development activities as a major way to mobilize the local population for conservation and development activities.

**Table 28: Membership in Social Groups in Oluwa Forest Reserve**

<i>Social Groups</i>	<i>Freq. (%)</i>
Cooperative	8 (15.4)
Informal Savings	18 (34.6)
Informal Work Exchange	-
Age Grade Society	25 (48.1)
Town Development Union	47 (90.4)
Religious Groups	10 (19.2)



**Figure 21: Social Group Membership for Residents in Oluwa Forest Reserve**

**4.2.2 Sites of Social Significance:** As in the findings for Omo Forest Reserve, the study found that the religious sites were the ones of the greatest significance to the people. The researchers did not find much evidence of cemeteries or other sites of historical significance in the reserve. Since the majority of the residents are migrants and some of the settlements are temporary dwellings, it is understandable that persons would bury their dead in their places of origin.

Table 29 presents a list of the religious sites, including churches, mosques and traditional sacred sites in the identified communities in the forest reserve. This is a collation of the findings on the individuals settlements as contained in Volume II of the report.

**Table 29: Religious Sites of Social Significance in the Settlements in Oluwa Forest Reserve**

<i>Name of Settlement</i>	<i>Churches</i>	<i>Mosques</i>	<i>Traditional Sacred Sites</i>
Asorowo	---	---	---
Gbekelu	1	1	---
Kabiyesi	1	1	1 (Eesi)
Alaf	---	---	---
Gbojulogun	1	1	1 (Ogun)
Aba Black	---	---	---
Vasco Camp	---	---	---
Bature	2	1	2 (Ogun, Oya)
Adejori Camp	4	1	1 (Babaji)
Ulugha	2	1	2
Lafa (Nirowi)	1	---	---

The presence of churches, mosques or even traditional sacred sites is an indication of the permanency of the settlement. Those with no places of worship are less likely to be permanent residences of the inhabitants.



**A sacred site in Bature community**

**4.2.3 Local Leadership Patterns in Oluwa Forest Reserve Area:** The traditional leadership pattern in Oluwa Forest Reserve Area is very similar to that of Omo Forest Reserve due to the fact that both areas are inhabited mostly by Yoruba peoples. In Oluwa area, the *Oloja (Baale)* of Ulugha is directly responsible to the *Osemawe (Oba or king)* of Ondo Kingdom. The traditional leaders of all other settlements under Ondo territory are under the authority of the *Oloja* of Ulugha.

There has been a land dispute between the people of Ulugha and Gbekelu since around January 2010. This is currently being handled by the Ondo State Department of Forestry at Akure. This conflict illustrates the greater competition for available lands for farming or other activities in the reserve area. It also demonstrates the inability of the traditional political institution to handle matters of this nature.

**4.2.4 Sources of Information for Residents of Oluwa Forest Reserve Area:** The most common sources of information for the local population residing in the Oluwa Forest Reserve area are radio and the town crier as shown in Table 30. Newspapers and television are not common sources partly due to the high level of non literacy as well as inaccessibility of the settlements and because of lack of electricity. Telephone is a relatively more common source of information, but it is limited in coverage as many informants from different localities complained that they are unable to get any signal from their residence. The Forest Guards are another source of information for the rural dwellers, reaching about 1/3 of the respondents.

**Table 30: Sources of Information for Residents of Oluwa Forest Reserve**

<i>Sources of Information</i>	<i>Freq. (%)</i>
Newspaper	6 (11.5)
Radio	41 (78.8)
Television	6 (11.5)
Local Town Crier	40 (76.9)
People from Outside	7 (13.5)
Telephone (GSM)	20 (38.5)
Forest Guards	18 (34.5)

Radio is the best medium to pass information to the rural dwellers. In trying to sensitize the population on conservation and the activities of the environmental agencies, this would be the most effective way to reach the largest number of residents.

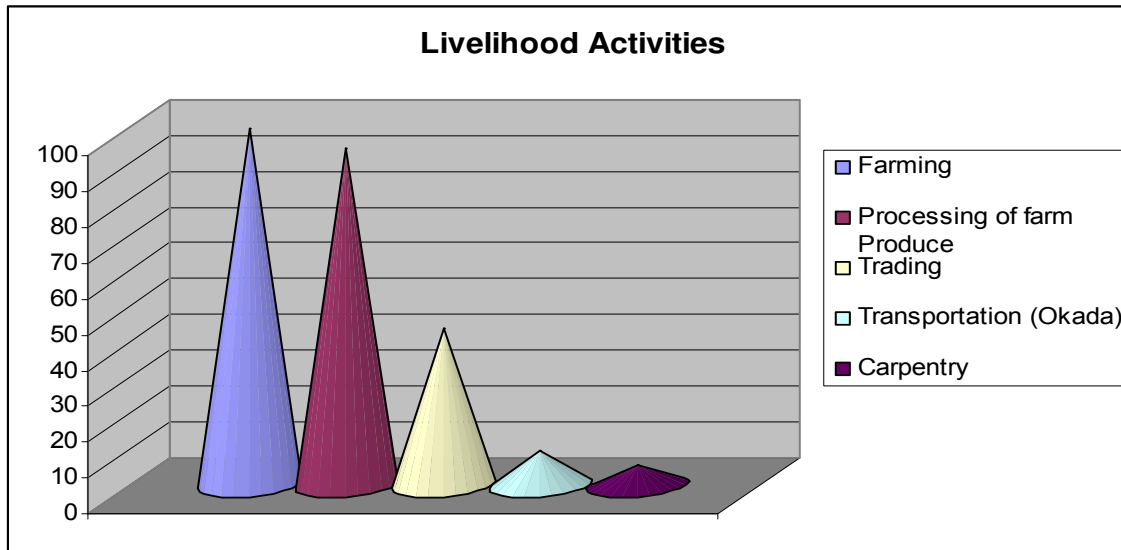
### **4.3. Village Economy and Local Livelihoods**

In the same way as stated in section 3.3 of this report, the local economy of Oluwa Forest Reserve is largely based on activities utilizing the natural resource base. These activities include crop farming, gathering NTFPs, processing agricultural produce and hunting. This section looks at not only the income-generating activities of greatest significance, but also considers the dependence of the local population upon the resources of the reserve for meeting local livelihoods.

**4.3.1 Income-generating Activities:** Table 31 and Figure 22 present the findings on the income-generating activities engaged in by the local inhabitants of the forest reserve. All of the sampled respondents engage in crop farming. Processing of the farm produce is another activity engaged in by nearly everyone sampled. Through their multiple responses, it is apparent that some of the people engage in multiple income-generating activities, perhaps combining farming with processing and / or trading as well as other means of securing goods or cash.

**Table 31: Income-generating Activities of Residents of Oluwa Forest Reserve (n=52)**

<i>Income Generating Activities</i>	<i>Freq/ (%)</i>
Farming	52 (100.0)
Processing of farm Produce	49 (94.2)
Trading	23 (44.2)
Transportation (Okada)	5 (9.6)
Carpentry	3 (5.8)



**Figure 22: Graph of Income-generating Activities in Oluwa Forest Reserve**

It is very likely that the respondents would have under-represented the number of activities they carry out in an attempt to meet their livelihood needs. In Adejori Camp, for example, the majority of households also have a few local chickens that are reared using free range management.

**4.3.2 Crops Grown by Residents of Oluwa Forest Reserve Area:** As in Omo Forest Reserve, the most significant crops are economic tree crops particularly cocoa, kolanut, plantain and banana. Nearly all of the residents grow all of these crops as presented in Table 32. Yam is another very commonly produced crop, but cocoyam and cassava are less prominent.

**Table 32: Distribution of Crops Grown by Farmers in Oluwa Forest Reserve (n=52)**

<i>Crops</i>	<i>Freq. (%)</i>
Cocoa	52 (100.0)
Kolanut	51 (98.0)
Plantain	49 (94.2)
Banana	50 (96.2)
Yam	44 (84.6)
Cocoyam	23 (44.2)
Cassava	17 (32.7)

The major crops of cocoa, kolanut and plantain / banana are all good income earners. Informants stated that at the time of the study, cocoa was selling for N400 per kg; one basket of kolanut for about N5,000 and a dozen bunches of plantain was earning from N5,000 to N10,000.



**Banana and plantain crops of settlers at Asorowo, Oluwa Forest Area**

**4.3.3 Gender Dimensions to Livelihoods in Oluwa Forest Reserve Area:** Gender-specific activities in the forest reserve are indicated in Table 33. The major gender differences were in production of economic tree crops, hunting, logging and transportation providers for men, while women specialize in processing kolanuts, gari and palm oil and petty trading as shown in the photographs below.

**Table 33: Gender-specific Income-generating Activities in Oluwa Forest Reserve Area**

<i>Activities carried out by Males</i>	<i>Activities carried out by Females</i>
Crop production: cocoa, kolanut, plantain, yam, etc.	Processing of agricultural produce like kolanut and food products like gari and palm oil
Hunting	Petty trading
Logging (by a few inhabitants)	Gather some NTFPs like fuelwood, spices, etc.
Gather some NTFPs like roofing poles	
Motorcycle riders (Okada)	

From the table, it is apparent that some of the important NTFPs are gathered by males or females such as in the case of roofing poles and fuelwood respectively, while other NTFPs are gathered by both males and females such as chewing stick, medicinal plants, some spices, fruits and wrapping leaves. Harvesting honey is rarely done since there are restrictions concerning it.

Very few respondents stated that they harvest honey, but in the few cases that they do, it is the task of men.

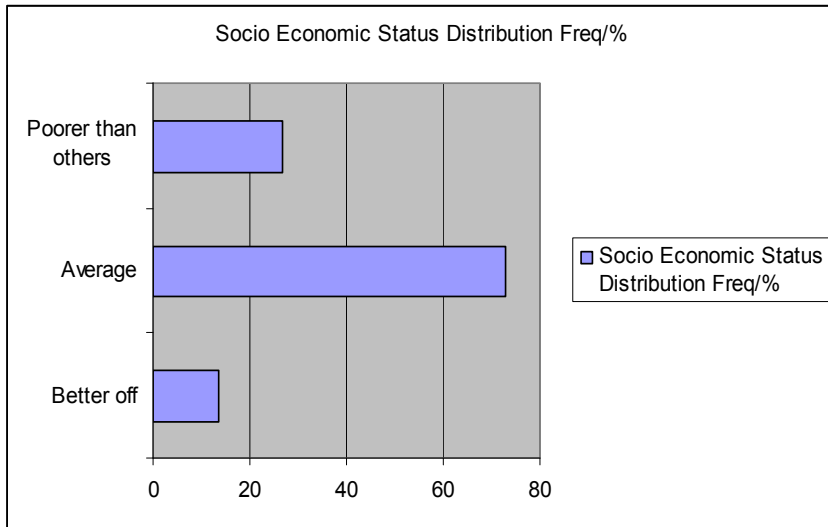


**Oil Palm processing: a major source of income for women in communities like Gbekelu**



**Kolanut processing: A major income generating activity for women within Oluwa Forest Reserve**

**4.3.4 Socio-Economic Status Distribution for Oluwa Forest Settlers:** The respondents were asked to rank themselves in terms of their socio-economic status (SES) compared to other residents in the Reserve. The analysis revealed that over 2/3 of the sampled residents considered themselves to be about average while about 10% rated themselves to be better-off. The remaining felt they were actually poorer than other local residents. According to the informants, the poorer and more vulnerable inhabitants include those that are elderly and widows. This distribution by self-evaluated social status is illustrated in Figure 23.



**Figure 23: Graph showing comparative perceived SES of residents in Oluwa Forest Reserve**

The commonly reported reason for some respondents rating themselves as ‘better-off’ than other residents is because of their ability to produce cocoa, kolanut and plantain which are very profitable. Indeed, this is a major reason for the increasing competition for farm land and the observed encroachment into the forest reserve despite the regulations forbidding this action.

#### **4.4 Natural Capital: Land and Natural Resources in Oluwa Forest Reserve**

**4.4.1 Accessibility and Quality of Natural Resources:** While most of the respondents stated that it was through the allocation of the local traditional leader that they had access to land, many complained that they were unable to get adequate land to farm. This is discussed further in section 4.6.2 in which the attitudes of residents toward the restrictions on resource use from the reserve is further investigated. In general, the residents are not satisfied with the amount of land available to them for cultivation.

When asked to rate the quality of the natural resources in the forest reserve, however, the majority (86.5%) rated the quality of resources as ‘good’, as shown in Table 34. Less than one-tenth of the sampled settlers felt the resources were ‘poor’.

**Table 34: Rating of Land, Forest and Water Quality in Oluwa Forest Reserve (n=52)**

<i>Rating/Present status</i>	
Good	45 (86.5)
Fair	3 (5.8)
Poor	4 (7.7)

Nevertheless, over ½ of the respondents (59.6%) thought that the quality of the resources in the Forest Reserve had ‘declined’ over the last 20 years.

**4.4.2 Collection of NTFPs by Residents of Oluwa Forest Reserve:** As earlier discussed, collecting NTFPs is a very important activity that is primarily for the purpose of enhancing household food security. Some of the products are also sold wherever possible. Fuelwood collection is the most common forest product gathered, followed by roofing poles, chewing stick, medicinal plants and spices or fruits.

**Table 35: NTFPs collected by Residents of Oluwa Forest Reserve**

NTFPs	
Roofing Poles	50 (96.1)
Fuel Wood	52 (100.0)
Chewing Stick	49 (94.2)
Bush Meat	34 (65.4)
Medicinal Plants	49 (94.2)
Spices, Fruits	42 (80.8)
Wrapping Leaves	30 (57.7)
Honey	3 (5.8)

Although it is relatively rare to have people harvesting honey in the reserve, the informants reported that it is only the Hausa people from outside that come around to harvest honey. In addition to these forest products, respondents also stated that they collect walnuts and mushrooms.

**4.4.3 Logging and Hunting Activities in Oluwa Forest Reserve:** Animals of various types were seen in the areas visited in Oluwa Forest Reserve. Gbekelu is surrounded by hills / mountains, so the residents reported that they often see monkeys and gorillas. In Gbojulongun, informants say that in addition to the commonly seen animals, they also see buffalo and chimpanzee. A buffalo was reportedly killed a few months before the study.

In some areas such as around Vasco Camp and Alaf, active hunting is going on as evidence such as seen in the following photograph shows. Common bush animals hunted include monkey, porcupine, antelope and grasscutter. Discussants from Bature explained that they usually go to Shaghara River to hunt since there are many animals that go there. In fact, the traditional leader said that Bature was established more than 40 years ago by Chief Ladapo from Ondo town as a logging and hunting community.



**Evidence of Hunters' Activities at Vasco Camp (Note the rifle cartridges and remains of processing animals)**

Although logging is going on in the Reserve, most of the discussants stated that it is being carried out by outsiders that come in to cut down the trees. At Asorowo, for example, the discussants stated that although a lot of logging is taking place, it is not carried out by residents but by outsiders. There were only a few respondents that admitted that they are engaged in logging. Nevertheless, there is significant evidence of deforestation by farmers encroaching on Reserve lands to open areas for farming as is discussed in the following section.

**4.4.4 Environmental Problems in Oluwa Forest Reserve:** As in Omo Forest Reserve, the main environmental problems were reported to be deforestation, erosion, flooding and declining soil fertility. The reducing quality of the soil was attributed to the continuous farming of limited land allocated to the residents. In Adejori, an informant complained that natural resources are declining because *“they have famed here for a long period – over 50 years – and it is no more enough for us and my children and my grandchildren to farm”*. This problem is further discussed in a later section, but it should be stated that much of the deforestation is due to encroaching into forest lands. According to the male discussants at a FGD in Asorowo, *“People come and take land as they like”*. The effects of this can be seen in the following photograph.



**Continuous bush burning and opening of the forest for farming in Oluwa Forest Reserve**

#### **4.5 Physical Capital: Level of Infrastructural Development and Development Needs Assessment**

**4.5.1 Infrastructural Facilities and Services:** As was found in Omo Forest Reserve and as reported in Volume II of this report, the level of infrastructural development throughout Oluwa Reserve is very low. This is due in part to the scattered nature of small, semi-permanent settlements that cannot easily support the siting of facilities, neither could the support staff – in terms of teachers or medical personnel – attend to the regular needs of the residents.

As in Omo Forest Reserve, the first, most observable problem facing the inhabitants of the Reserve areas is the poor quality of roads and inability to access many of the settlements. During the rainy season in particular, i.e. between July and September, some settlements like Bature are not accessible because of their poor bridges and the many streams and rivers to cross before reaching the community. Informants from Gbojulogun also complained that during the rainy season, the only way to get to the settlement is by motorcycle which is very expensive: N800 – N1,000 from Asewele – Korede junction. (See Figure A.3 in the Appendix). For some settlements, access is a problem all year round. As seen in the following photograph, some settlements do not have an access road at all. During the field work, the team actually had to cut a path to reach the next community in the reserve.



**Research Team cutting a path for vehicle to reach next community in Oluwa Forest Area**

In terms of other infrastructural facilities, the overall level of development in nearly all settlements can only be described as ‘very low’. In Section 4.1.6, a photograph of a private primary school at Adejori is presented. This school is the only primary school in the vicinity and serves Adejori and surrounding settlements in Oluwa Forest Area. Children from Bature have to trek 6km to Leege which has the nearest primary and secondary schools. Children from Kabiyesi attend school in Ondo town or Lasoro, about 4km away.

From the following photograph, one can also see that the area does not have a stable water supply for the residents. Most inhabitants rely upon the streams and rivers that run through the reserve such as the one shown below at Adejori.



**Source of Water for Inhabitants of Adejori, Oluwa Forest Area**

The Reserve does have a couple local markets where residents can sell their produce. An important market outlet especially for plantain holds at Bature every 5 days. Gbojulongun also serves as a market outlet for some surrounding villages, including Keseomi, Omikoko, Agojerry and Aba Jesa. The residents, however, stated that they would want these markets to be upgraded to be more modern than their current local status.

**4.5.2 Development Needs Assessment: Paired Needs Priority Ranking:** Paired Needs priority ranking was carried out during most of the FGDs to gain information from as many groups as possible. The results of one of the ranking exercises that was carried out with the women in Bature settlement is presented in Figure 24. In this case, the women gave the highest priority to having a school in their settlement, followed by a better road. This is understandable as it has been reported that the children of Bature have to trek 6km each day to attend school. This would, of course, be of primary concern to the mothers. The second most important need to them is improving the road, which is considered to be the highest priority in most of the settlements. The remaining three needs, water, market and health facility were ranked with the same level of importance with this group.

The comparative results from all of the ranking exercises carried out with groups of residents in Oluwa Forest Reserve is presented in Table 36.

	Hospital	School	Road	Market	Water
Hospital					
School	School				
Road	Road	School			
Modern market	Hospital	School	Road		
Water	Water	School	Road	Market	

**Figure 24: Results of Paired Needs Priority Ranking with Women in Bature**

**Table 36: Results of Paired Needs Priority Ranking with Residents in Oluwa Forest Reserve**

<i>Name of Settlement</i>	<i>Road</i>	<i>School</i>	<i>Health facility</i>	<i>Water</i>	<i>Market</i>	<i>Electricity</i>	<i>Other</i>
Asorowo (M)	1	---	---	2	---	---	3 = tree seedlings
Bature (M)	1	3	2	5	---	---	4 = farm inputs
(F)	2	1	3	3	3	---	---
Aba Black (M)	1	2	3				
Gbojulogun (M)	1	3	4	5			2 = security
(F)	1	2	3	4			
Kabiyesi (M)	1	3	2	5		4	6 = farm inputs
(F)	1	---	2	3		4	5 = credit
Ulugha (M&F)	1	2	3	4			
Lafa / Nirowi (M)	1	4	5	2	6	3	7 = GSM coverage
(F)	1	3	2	6	3	5	
Adejori Camp (M)	1	3	4			5	2 = GSM coverage
(F)	1	3	2			4	
Gbekelu (M)**	1	6	5	3			2 = relocation;** 4 = GSM coverage
(F)	1	3	2	5		4	

Note: Ranking: 1=most important need to the residents; 2 = 2<sup>nd</sup> most important, etc.

M=male group responses; F=female group responses

Not all settlements are included as FGDs could not be conducted in some locations.

\*\* In Gbekelu, men gave their 2<sup>nd</sup> priority as wanting to relocate their settlement to the main road.

Overall, it is apparent that as with the findings from the exercise in Omo Forest Reserve, improving the accessibility to the settlements with better roads is the highest priority for all of the settlements. The response from the men's FGD in Gbekelu should be specially noted. While accessibility with a better road network is the highest priority, the discussants also stated that they would want their settlement to be relocated nearer to the main road. In other words, "if the road cannot come to us, we will go to the road." Given their location and the prevalence of the animals in the vicinity, this may be a wise conservation action to take.

#### **4.6 Knowledge and Attitudes of Local Inhabitants of Oluwa Forest Reserve on Official Policy and Practices concerning the Forest Reserve**

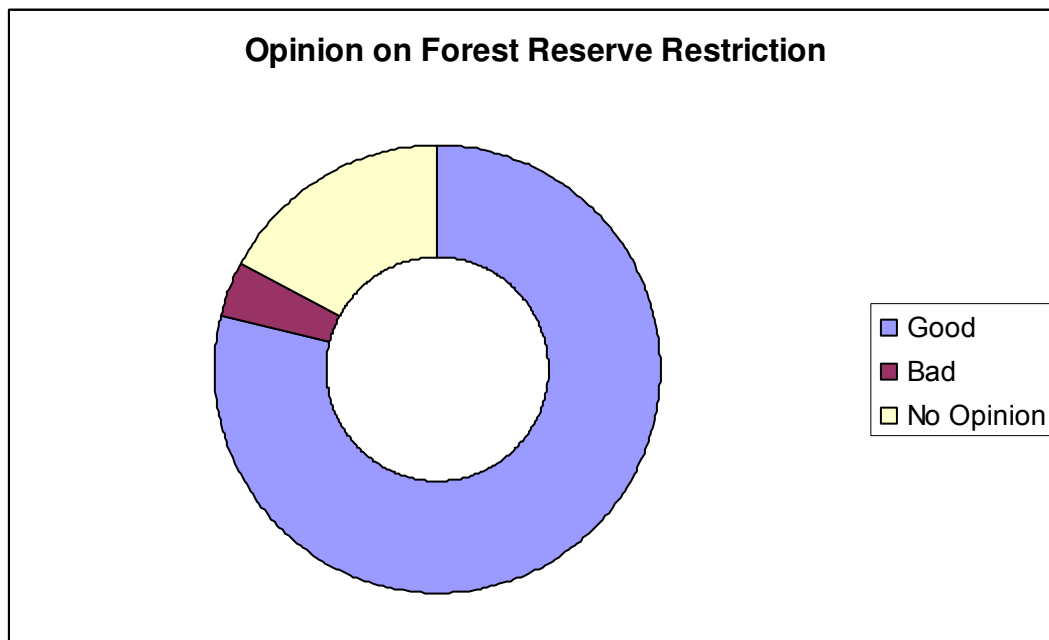
**4.6.1 Knowledge of Policy and Restrictions on Forest Reserve Use:** As in the Omo Forest Reserve, the inhabitants are quite knowledgeable about the restrictions to their use of the reserve

land and its resources. Most of the respondents and discussants gave the following as their understanding of the restrictions on resource use in the reserve:

- People should not burn anything in the forest;
- There should be no farming in the forest;
- People should not kill animals in the reserve; and
- They should not kill ‘government trees’ (that is, the teak and gmelina trees);

In Adejori Camp, the informants specifically stated that they know they must not enter the reserve, especially blocks A1 and A2, but A2 is very close to their settlement and it is difficult to follow this regulation.

**4.6.2 Attitudes concerning Forest Reserve Restrictions:** Overall, the inhabitants recognize that the restrictions on forest reserve use are ‘good’ as shown in Figure 25 where 78.8% of the sampled residents responded that they are good. Only 3.9% felt the restrictions are bad and 17.3% had no opinion. Most of the residents realized the importance of preserving the forest areas and the value of conserving the trees and wildlife.



**Figure 25: Views of Residents of Oluwa Forest Reserve on Restrictions for Use of Reserve**

On the other hand, while many of the informants and discussants understood the positive impact of the restrictions upon the environment and their livelihoods, they expressed their concern over restrictions on the use of the land. This is particularly so with the declining quality of the continually cultivated lands and the increase in population with increased demand for land. This is also no doubt related to the good income derivable from cash crops, such as cocoa, kolanut and plantain, produced in the reserve. Among the comments of the residents are the following:

*“Not burning the bush is good for our livelihoods, but the restrictions of not exceeding certain size of farm plots should be relaxed a little” (men at Kabiyesi).*

*“The community is now large and people want the extension of the enclave as there is no land to farm. Even we want to build more houses, but there is no place to build the houses” (men at Adejori).*

*“Government should provide more land. It is over 50 years since we were given land. The approved land is exhausted” (Discussants at Ulugha).*

*“People are not enjoying resources in the reserve” (men at Asorowo).*

*“When the government said we should not go there to farm, do they want us to steal? It is a bad thing in one word” (male discussants at Bature.)*

Specific responses to attitude statements concerning restrictions by residents of Oluwa Forest Reserve are as presented in Table 37.

**Table 37: Results of Responses to Attitude Statements by Residents of Omo Forest Reserve**

<i>Statement</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>Mean score</i>
1. Restrictions on use of forest products are necessary.	5	43	1	3	---	4.0
2. They lead to more suffering.	---	6	33	8	1	2.9
3. If there were no restrictions, the people would completely clear the forest reserve.	1	29	10	8	4	3.3
4. The restrictions are not good and should be removed.	1	19	20	9	3	2.6
5. Local residents understand the importance of the forest reserve.	1	35	10	3	3	3.5
6. People in the community should be allowed to manage the forest reserve by themselves.	6	38	8	4	1	3.8

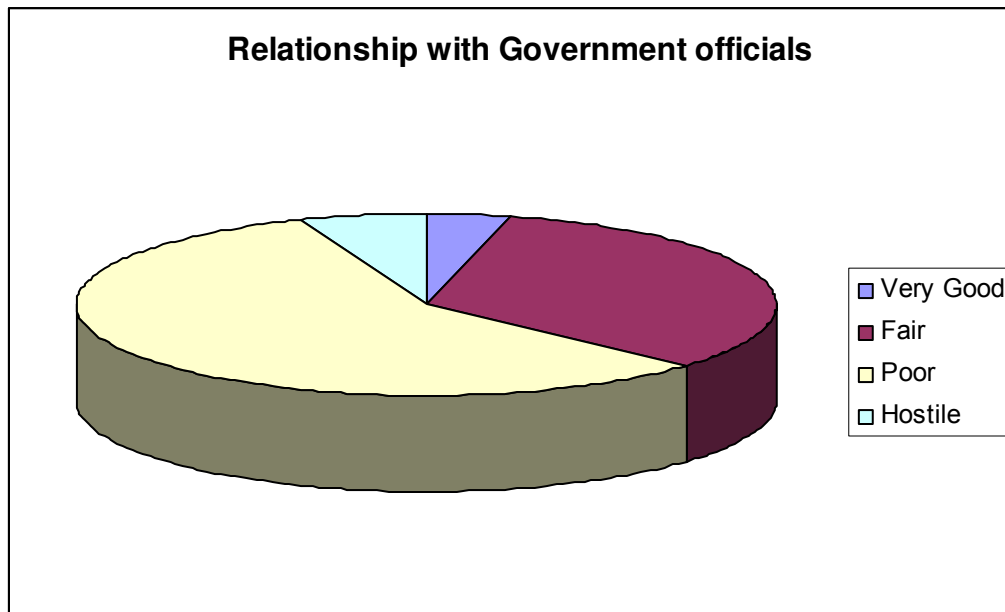
The overall mean for the attitude statements is 3.4 which is slightly lower than the mean of responses from the Omo Forest Reserve. From the results from Oluwa, it is clear that the local residents recognize the need for the restrictions (statement no 1). There was a positive position to the aspect that local residents understand the importance of the forest reserve (statement no. 5). . There was also a positive response to allowing people in the community to manage their own area of the forest reserve. This is significant so that as the project tries to introduce involvement of the local population and encourage local participation, the residents will already

be favourably pre-disposed to this strategy. Ultimately, sustainable development relies upon the full involvement of the local population.

**4.6.3 Attitudes toward Government and other Officials:** The findings from the study clearly demonstrate that there is a relatively poor relationship between the local population and the local officials of government organizations. Over 60% of the sampled residents stated that their relationship with officials was poor or even hostile as seen in Table 38 and Figure 26. This is not a good reflection of the ability to work with the local population.

**Table 38: Relationship between Local Population of Oluwa Forest Reserve and Government officials**

<i>Type of Relationship</i>	<i>Freq.(%)</i>
Very Good	2(3.9)
Fair	17 (32.7)
Poor	30 (57.7)
Hostile	3 (5.8)



**Figure 26: Chart showing type of relationship between residents of Oluwa Forest Reserve and Government Officials**

The presence of the Forest Guards in the Reserve is probably a major reason for the rather poor relationship with government officials as they are the most visible of the officials. According to the discussants in Gbojulogun, “*the forest guards always come here to disturb us*”. Concerning the desire to expand the land for cultivation and the obvious encroachment into the forest for farming in several locations in the reserve, it is not surprising that there is some unfriendliness with those who are sent to enforce the restrictions on reserve usage.

Beyond the relationship with forest guards, however, there is some negative feeling toward other government officials including those from the local government. As is commonly heard in rural

communities, many of the informants and discussants noted that the only time they see such officials is near the election time when they will come and make promises to gain the votes of the people, but later, nothing is done for them and they don't see the officials again. This is reflected in the responses to the questions on whether the government has had any development activities in the area and 93.3% of the respondents replied negatively.

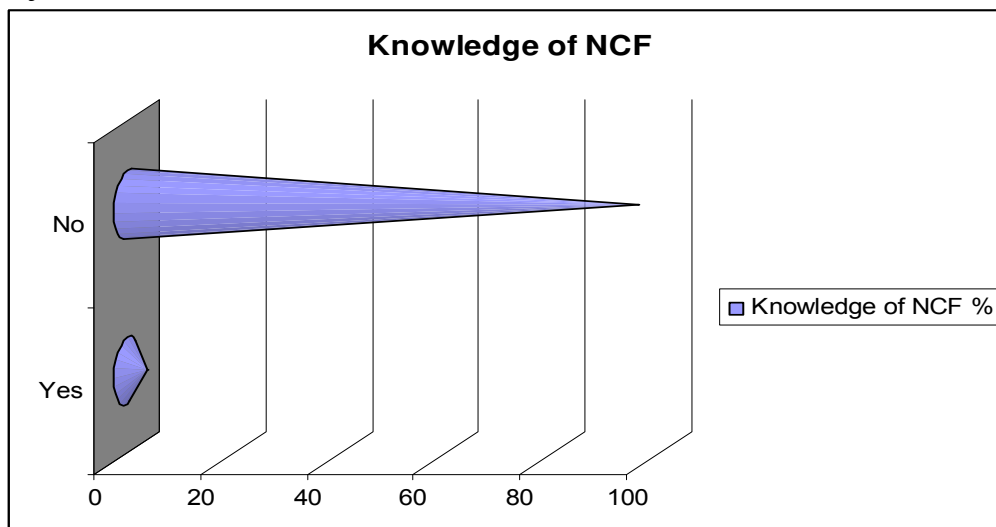
There is need for officials to have greater dialogue with the local residents and improve upon the relationship with them. This will enhance the cooperation that can be secured from the local population to assist in monitoring the conservation efforts of the government and NCF.

**4.6.4 Views about the Role of the Community in Conservation Efforts:** As with the residents in Omo Forest Reserve area, the residents in Oluwa expressed their willingness to participate in local conservation efforts. In some ways, they are already contributing to such efforts. At Kabiyesi, for example, the informants stated that they normally report whoever sets fire in the forest to the Oloja. Other responses reflect the positive view of participating in the preservation of the forest:

- *“The community should be in charge of the forest.”*
- *“We should be the ones to manage the forest and protect the forest with our men.”*

What is not clear, however, is whether the residents would fully protect the forest when there is a great local demand for more land for productive purposes. Regardless of the participatory role given to the local population for the conservation programs, it is necessary that officials will still have to monitor the implementation of the restrictions on local use of the forest resources.

**4.6.5 Knowledge of NCF:** As with Omo forest reserve, very few of the residents, only 2 of the 52 sampled respondents, had heard of NCF. With the proposed conservation project, there will be need to conduct an awareness campaign so that the local population will be sensitized to the objectives and activities of the NGO.



**Figure 27: Graph showing the very low awareness of NCF by Residents of Oluwa Forest Reserve.**

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

This study carried out a comprehensive investigation to cover the objectives of the study. On the basis of the findings, a number of conclusions and recommendations were made.

One of the theoretical assumptions forming the framework for the study was that while some of the conditions might be somewhat generalized, there is a presumed locality-specific set of differences between the forest reserves and between the settlements. From the information gained on the individual settlements in the two forest reserve areas, it is clear that each settlement is unique in terms of its characteristics as well as the needed interventions, including the need to be relocated in some cases. This requires that each settlement should be considered on its own merit and the Project should not handle every settlement with the same strategy. It is for this reason that the report was separated into two reports – to provide information on the level of the reserve in volume 1 and on the level of individual settlements in volume 2. Even on a lower level of the individual households, there are differences between persons who are indigenous to the area and those that are migrants who can more easily move to another area. On each level, these differences are significant.

The Project will include an educational and visit centre in the locality. As earlier mentioned, this will bring in workers and other outsiders into the reserve area. The Project should be carried out with the cooperation and assistance of the local residents who might otherwise work against the success of the project. There may be opportunities to provide employment as workers and as local monitors / custodians of the forest resources and physical capital. The local inhabitants have expressed the desire to play a role in the management of the forests which is good for sustainable development. In some places they are already assisting with the raising of seedlings in local nurseries. There should be other ways in which they can participate and be provided with some form of incentives. However, there should be close supervision of the local involvement in the forest management as there is strong demand for more land to farm in some places, especially in Oluwa Forest Reserve. Since tree crops such as cocoa, kolanut and oil palm are so important to the local livelihoods, extension services should be provided to improve the quality of their production without increasing the area under cultivation.

As anticipated, there have been incidents, particularly in Ogun State, that the inhabitants felt that they had been unjustly treated by the State Government. More dialogue between the local population and officials is needed to overcome the reported existing poor relationship. It is suggested that forest extension agents who could work with the people on their livelihood activities and welfare issues and not just forest guards whose duty is purely enforcement of regulations be incorporated into the programme. These extension agents will be involved in community engagement activities.



**Community sensitization with farmers and hunters in Sojukodoro, Omo Forest Area**

The proposed educational and visiting facilities for the Project will require upgrading of the existing infrastructures. The road and bridge network throughout the two reserves is very poor, resulting in many of the inhabitants being cut off from other localities and from needed goods and services. The Project could respond to the felt needs of the people, as well as provide the infrastructure needed for the visitors to enjoy the natural environment by improving upon the road network so that in addition to meeting the requirements of the Project, the permanent settlements would be better linked to others.

Some of the very small migrant settlements that lie along the corridor should be relocated. The evidence of extensive hunting activities also suggests the need for more enlightenment and involvement of the local population in enforcing the regulations concerning conservation. Forest guards should also be trained in effective community relations. Radio should be used to disseminate extension messages on conservation since this is the most common source of information that reaches even the most isolated areas.

From similar studies and relevant literature, the livelihoods of the enclave dwellers were assumed to be very dependent upon the natural resources of the reserve and so their income-generating activities would be affected by the restrictions on resources use. This would be intensified with the proposed conservation project. This was indeed found to be so. Due to the regulations on hunting and restrictions on the use of forest resources, local residents were unable to expand their farming and could not have access to some timber resources. It is recommended that they should be trained on alternative income generating activities that could provide them

with income without harming the reserve. These activities could include such skills as domestication and rearing of grasscutters, modern bee keeping in approved areas, and planting trees specifically for firewood and other tree products such as roofing poles.

For sustainable development, the participation of the local population is crucial. This requires legitimation of the Project and mobilization of the rural dwellers. The local traditional leaders could play an important role in gaining the cooperation of the local population. The Oba has authority over the Baales in the smaller settlements so that with the involvement of the higher level traditional rulers, there would be a means of passing information as well as legitimation for the Project. It would be a serious omission to by-pass the local leaders which also includes leaders of local farmers, hunters, women and other groups in the communities.

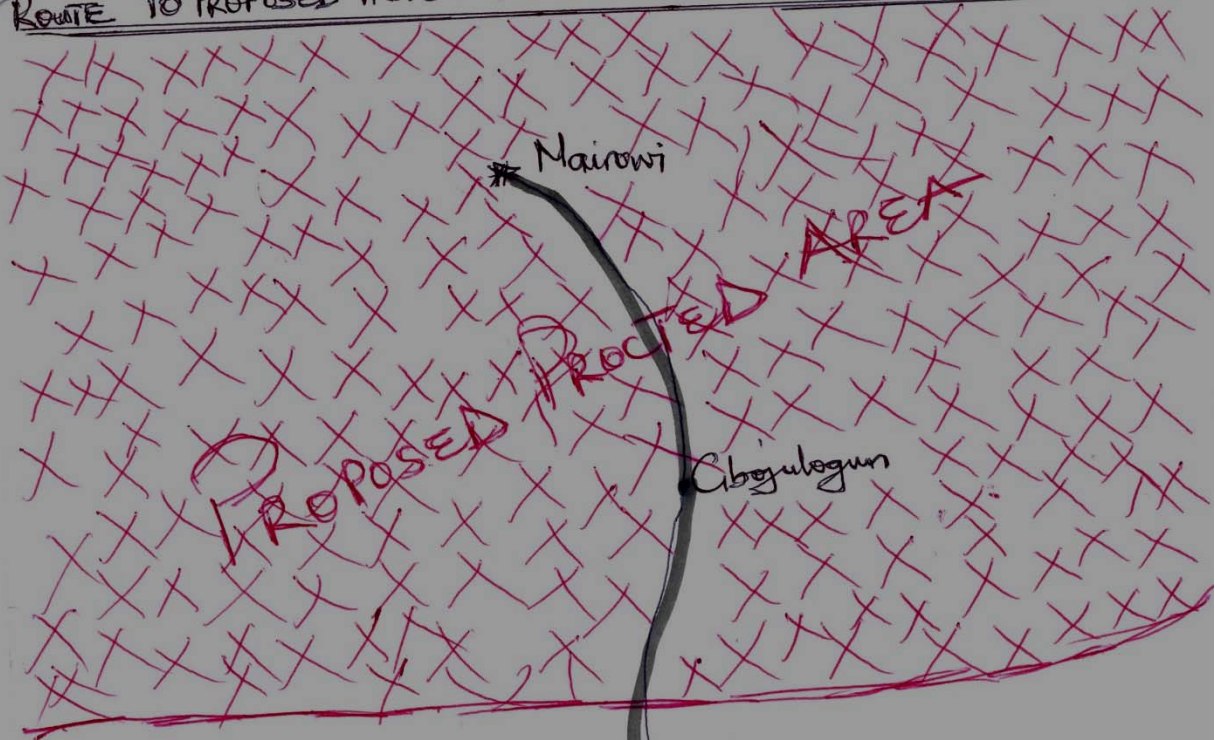
The social capital in the settlements is limited in many places. It may be necessary to strengthen some of these local groups to use them as channels of information, training and mobilization. There was little evidence that relocation would have any major effect on social disruption since there were few sites of social significance, particularly for the small migrant settlements that are more likely to be affected by the need to relocate.

It is quite common to put much of the blame on the local population for problems associated with deforestation, illegal logging and encroachment. Some of this is justified as the people themselves admitted that local residents sometimes go into the reserve areas to take over lands for farming when their land is inadequate. However, much of the environmental damage is caused by outsiders like commercial loggers, migrant hunters and honey harvesters who come into the reserve, exploit the forest resources and leave. Activities of these outside loggers and other groups should be carefully monitored. Local residents should not be blamed for the destruction caused by outsiders.

Ultimately, the enclave dwellers recognize that the reserve lands are Government owned and that the Government has the right to bring in any development project. They are not opposing the intervention. It would, however, be advisable to work with the people and not create a situation in which they are treated as though they are enemies of the environment that they also have a vested interest to protect.

## **6.0 APPENDIX**

ROUTE TO PROPOSED PROTECTED AREA THROUGH ASEWELE (OLUWA)



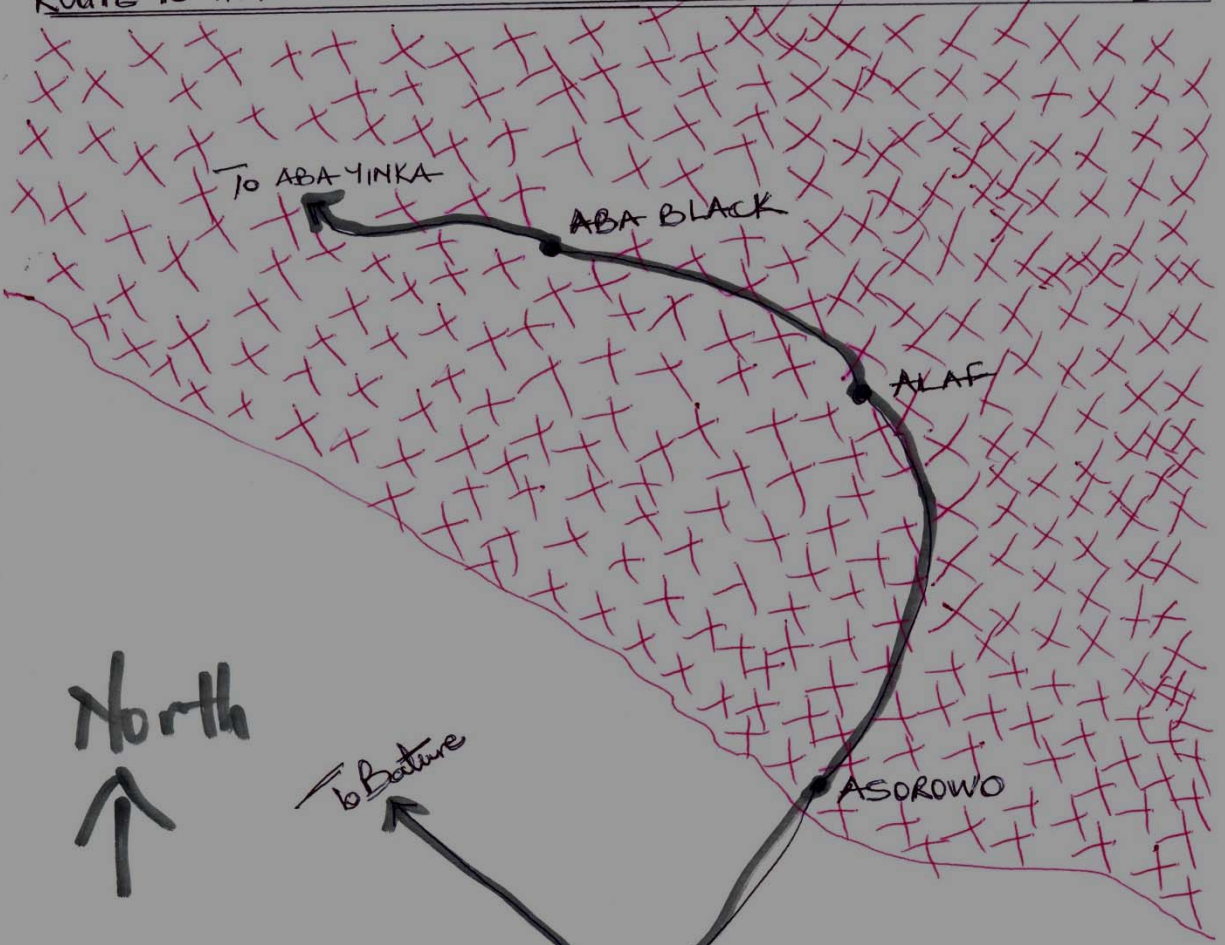
North  
↑

\* Saare

ASEWELE - KOREDE  
JUNCTION

ORE ← → ONDO ROAD

ROUTE TO PROPOSED PROTECTED AREA THROUGH OMOTOSHO (OLUWA)



North  
↑

to Bature  
↑

BENIN

ITEBU ODE EXPRESSWAY

OMOTOSHO

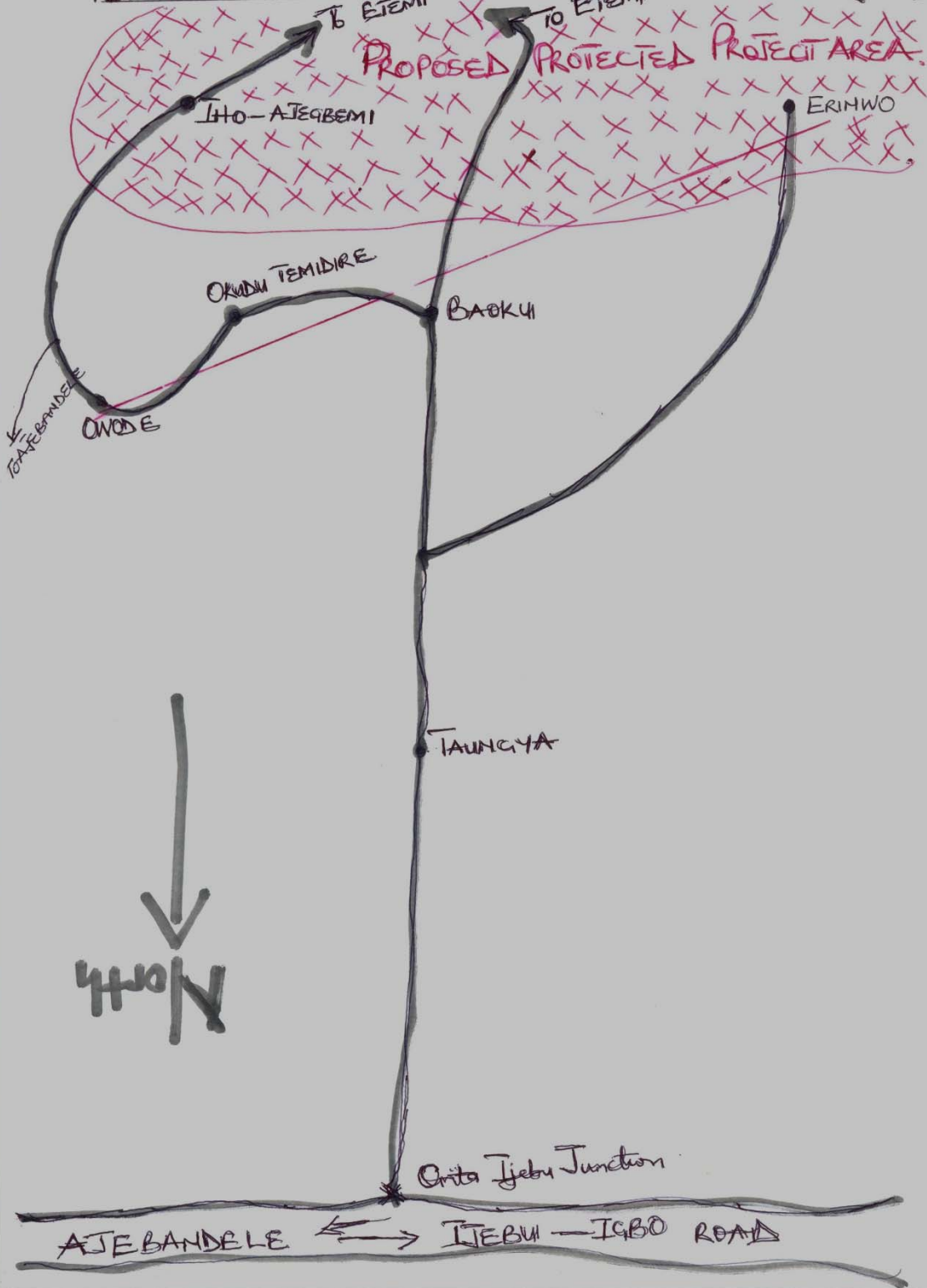
ASOROWO

ALAF

ABA BLACK

TO ABA YINKA

ROUTE TO PROPOSED PROTECTED PROJECT AREA THROUGH JI (OTMO)



ROUTE TO PROPOSED PROTECTED PROJECT AREA THROUGH J3 (OMO WOOD)

