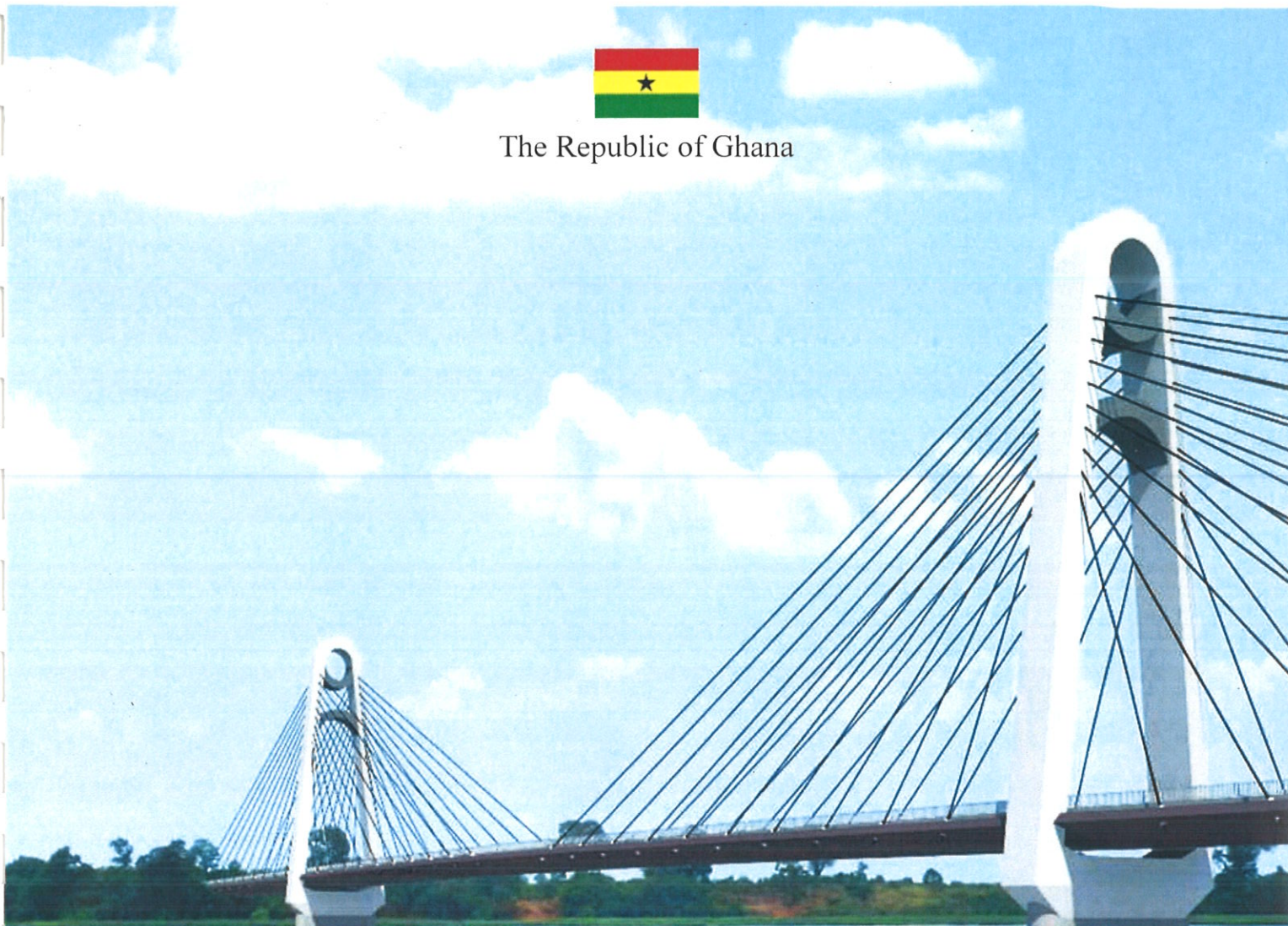




The Republic of Ghana



ABBREVIATED RESETTLEMENT ACTION PLAN (RAP)
FOR
CONSULTING SERVICES FOR DESIGN REVIEW
AND CONSTRUCTION SUPERVISION
FOR CONSTRUCTION OF A NEW BRIDGE
ACROSS THE VOLTA RIVER
ON THE EASTERN CORRIDOR PROJECT

March 2020

Joint venture of :

 **CENTRAL CONSULTANT INC.,**

 **ORIENTAL CONSULTANTS GLOBAL CO., LTD.**

In Association with

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ACRONYMNS

AfDB	African Development Bank
ARAP	Abbreviated Resettlement Action Plan
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMU	Environmental Management Unit
EPA	Environmental Protection Agency
FGD	Focus Group Discussion
F/S	Feasibility Studies
GC	Grievance Committee
GHA	Ghana Highway Authority
GoG	Government of Ghana
JICA	Japan International Cooperation Agency
LC	Lands Commission
LVD	Lands Valuation Division
MEST	Ministry of Environment, Science, Technology and Innovation
MMDA	Metropolitan, Municipal, and District Assemblies
MRH	Ministry of Roads and Highways
PAP	Project Affected Person
ROW	Right Of Way
RPF	Resettlement Policy Framework
STEP	Special Terms for Economic Partnership
WB	World Bank

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EXECUTIVE SUMMARY

Introduction

Road transportation accounts for approximately 95 percent of the total transportation in the Republic of Ghana. However, only about 12 percent of roads are paved (i.e. asphalt concrete and cement concrete pavement) and can accommodate heavy traffic loads. Hence, there is a great need to improve the roads in order to sustain economic growth.

The trunk highway network in Ghana consists of three international corridors (i.e. Central, Western and Eastern) connecting the coastal area of the Gulf of Guinea with Burkina Faso, and the West African Highway Corridor along the Gulf of Guinea connecting Cote d'Ivoire and Togo. The Eastern Corridor is the shortest route connecting the most important port of Ghana, Tema Port, and Burkina Faso, and developing this corridor will contribute to the improvement of less-developed areas along this corridor. Japan International Cooperation Agency (JICA) has identified the importance of the Eastern Corridor in the cooperation policy for Ghana, "Development of infrastructure to support economic growth", and has conducted the "Preparatory Survey on the Eastern Corridor Development Project" [Master plan and feasibility study(F/S)] to assist the development of the Eastern Corridor. They proposed the construction of approximately 1,540m of new road, including a new bridge across the Volta River, after comparing various alternatives.

Based on this proposal, the Government of Ghana (GoG) has secured and received a Japanese ODA loan from JICA to finance the construction by applying the Special Terms for Economic Partnership (STEP) scheme, in order to construct a high-quality, durable, and economically viable bridge using various Japanese technologies.

This Abbreviated Resettlement Action Plan (ARAP) is an update to the 2015 ARAP on the project that was prepared by the Ghana Highway Authority (GHA) with assistance from the detailed design study team of JICA.

Outline of the Study

The project catchment area falls within two major communities in two main Districts: Volivo in the Shai Osudoku and Dorfor Adidome in the North Tongu District. The total population for the two main districts is estimated at 151,909. This is made up of 62,131 people from Shai Osudoku and 89,777 from North Tongu district.

Volivo is surrounded by nine (9) main communities under the Dorfor electoral area: Kewu, Atrobinya, Avakpo, Volivo-Lanor, Mafikoper, Chiefkoper, Amegbolor, Atabui and Duffor. Traditionally, the community is headed by the community chief and his elders. The people of Volivo are mainly Dangmes with a few of the populace being Ewes. Dorfor Adidome, on the other hand, is the largest among 12 communities under the electoral area. Unlike Volivo, Dorfor Adidome is made up of seven (7) main clans and the heads of these clans form the elders of the community. However, the clans are presided over by a main chief who controls the traditional affairs in the community. The people of Dorfor Adidome are mainly Ewes with few Fulanis. Politically, the Assembly members together with their unit committee members run the political administration of both communities.

The survey was aimed at identifying, both qualitatively and quantitatively, the social impacts caused by the construction of the Dorfor Adidome - Volivo Bridge and its approach roads. More specifically, information on the Project Affected Units (PAU), Project Affected Persons (PAPs) as well as their income and livelihood were gathered through interview surveys using questionnaires.

The survey method mainly included a desk study to review earlier documents on the project, a reconnaissance study to help the Consultant to be well acquainted with the area before the studies and consultations/meetings. Enumerators were trained and forms/questionnaires were developed using the KoBo Collect App.

Necessity of Land Acquisition

On the 5th of November, 2014, the GHA carried out an initial inspection and a detailed survey at the project site as part of the basic design in order to identify any land, buildings, crops and other assets that are located within the 90 m Right of Way (RoW) set by the GHA for the project-affected area along the Eastern Corridor. The earlier survey revealed there would be the acquisition of bare lands in areas where currently no road exists.

A review of the 2015 ARAP, inspection of the site in has been carried out in January 2020 and this still confirmed the absence of involuntary resettlement as only farmlands fall within the demarcated RoW in both towns. There will still be the need to acquire a limited number of non-governmental plots that are to be affected. A more detailed survey was carried out with the affected persons on the 15th, 16th and 17th of January 2020 to confirm the exact extent of land acquisition by measuring the size of the land subject to seizure, to identify property owners, to identify the scale and types of crops and other assets affected, and also to estimate their monetary value in order to calculate an appropriate amount of compensation to be made to each of the PAPs.

Legal Framework and Land Acquisition

The laws in Ghana state that if land is to be expropriated by the State against the free will of the land owner, it must be carried out in accordance with relevant statutory procedures. While the extent of public involvement stipulated in the laws appears to be rather limited, they require fair and adequate compensation or alternative assistance to eligible PAPs. Various legal framework concerning land acquisition in Ghana discussed are Constitution of the Republic of Ghana 1992, Administration of Lands Act 1962, The State Lands Act 1962, Lands (Statutory Way-Leaves Act) 1963, Road Sector Resettlement Policy Framework 2017 etc.

This chapter also elaborates on the five types of land titles stipulated in the RPF, the land acquisition process (refer to Figure 4-2) as well as eligibility of entitlement with regards to lost assets (Table 4-6). It also compares Ghana's laws and policies with JICA's Environmental and Social Considerations Guidelines (Table 4-9 & 4-10) to draw out differences and explain how these will be used together during the implementation phase of the project.

Scale and Extent of Land Acquisition, Involuntary Resettlement, and Assets Lost

As per the current design, further survey conducted in January 2020 to update the 2015 ARAP proved that there will still be no need for involuntary resettlement; farmlands will mainly be affected by the project. In addition, the two baobab trees standing in the middle of the planned approach road that are considered religiously important will also be affected. According to the religious leader of the Fetish group and other community leaders in Dorfor Adidome village, both baobab trees can be removed or relocated as long as proper religious and cultural procedures are followed.

The number of land owners affected by the project and the number of household members is shown in Table 5-1, and the scale of land acquisition and assets lost by the project are presented in Table 5-2, 5-3 and 5-4.

Of the 29 PAPs enumerated for the socio-economic survey, twenty-four (24) are males, representing 82.8 percent, while five (5) are females, making up 17.2 percent. The age range of PAPs was from twenty-one (21) years to over eighty (80) years. The age distribution of many (65.5%) of the PAPs falls within fifty-one (51) to eighty (80) years. The lowest number of PAPs recorded is those who aged above eighty (80) years (3.4 %) whereas about 6.9 percent are between forty-one (41) years and fifty (50) years.

The twenty-nine (29) PAPs who were enumerated are into various occupations. Whereas four (4) PAPs are into masonry, shoe repair, security work and tailoring, twenty-five (25) PAPs representing 86.2 percent are all crop farmers.

During PAPs' interviews, they identified several positive impacts that could result from the project including attraction of other developmental projects i.e. drainage and utility services (10.4%), easy access to transport services and travel comfort (14.4%), employment opportunities for the skilled, unskilled and the youth (17.6%), improvement in local economic activities (12.8%), and development and beautification of the community. The PAPs were not oblivious of the projects' negative impacts which include demolition of properties, noise and water pollution, disruption in the use of utility services as well as increase in road accidents. Majority of the project affected persons (71.4%) prefer to be compensated in monetary terms in the form of cheques (88%).

Recommended Compensation

It should be noted that in Ghana, compensation for land will be provided to the land owners while that for the crops grown on the land will be given to the people that grow the crops rather than to the land owners. In either case, the form of compensation is likely to be provision of cash for this project reflecting the will of the PAPs.

The total estimated compensation required for all affected PAPs is **GHC 269,551.51**. The estimated value is made up of estimated cost of affected farms, land and vulnerability for PAPs of Volivo and Dorfor Adidome for the bridge construction as well as the proposed rest stop. Details of individual PAPs are shown in appendices

Data on crop and land ownership shows that six of the PAPs at Dorfor Adidome, five of the PAPs at the Dorfor Rest Stop and thirteen of the PAPs at Volivo were land and crop owners, while one PAP at the Rest Stop and six PAPs at Volivo were crop owners only. One of the PAPs at Volivo was only a land owner.

The methods adopted in this project by the GHA for valuating the land and other assets to be lost and subsequently the amount of compensation are the "replacement cost method" and "direct comparison method". The structure and crops, including economic trees are assessed based on the replacement cost of the lost property while the land is assessed based on the comparison of a number of transactions relating to plots similar to the subject land and located in similar neighbourhood. Using these two methods, the GHA aims to compensate for the full replacement cost of both the land and other assets to

be lost as a result of the project.

Two government agencies play an important role in valuating the lost assets and payment of entitlements to the PAPs: GHA valuation unit and the Land Valuation Division (LVD) of the Lands Commission (LC). The ROW is defined by the GHA and they identify the properties that are to be affected. The LVD and the GHA Valuation Unit conduct joint inspection/referencing of the affected properties. The LVD also vets and approves of the compensation sum each PAP is entitled to.

According to the Resettlement Policy Framework (RPF), the people eligible to receiving compensation include:

- Affected persons with formal legal rights documented in the form of land title registration certificates, leasehold indentures, tenancy agreements, rent receipts, building and planning permits, business operating licences, and utility bills, among others.
- Affected persons with no formal or recognised legal rights at the time but who have a claim to such land or assets (which becomes recognisable during the survey).

Grievance Redress Procedures

The objective of the Grievance Redress Procedure is to address and resolve grievances or complaints from affected persons promptly, fairly, and in a manner that is, to the extent possible, acceptable to all parties.

The Grievance Committee (GC) will be made up of the following officers of GHA; Director of Survey & Design, the Chief Valuer, Manager of Environmental Management Unit (EMU) and the Chief Legal Officer, Manager of EMU, representative from the relevant District Assemblies and a representative of the PAPs.

There will be two contact people from the GC to attend to all complaints as the first step by recording all complaints. The record will include name and contact of complainant, issue of complaint, date and time and receiving officer. The complainant will verify that the complaint lodged has been appropriately captured on the complaints sheet (to be designed and provided by GHA/Environmental Management Unit).

In receiving the grievances of vulnerable affected persons (e.g. women, those above 70, the illiterate, or the physically challenged), the GHA's EMU shall pay particular attention to any special needs, difficulties or concerns that they may have.

It is expected that all grievances will be addressed amicably at the committee level. However, in the unlikely case that a particular issue proves difficult to address, the complainant has the option of seeking redress at a higher level i.e. the court of law.

Institutional Responsibility for Implementation

Several organizations will work hand in hand during the implementation of the ARAP. These include the GHA, LC / LVD, Metropolitan, Municipal, and District Assemblies (MMDA), Land Use and Spatial Planning Authority, and Environmental Protection Authority (EPA).

Schedule for Implementation

The GHA (i.e. head office) will disclose the ARAP through the media and the Ministry of Roads and Highway (MRH) website to inform the PAPs. Hard copies of the ARAP will also be placed in the offices of the GHA (i.e. head office and relevant assemblies) for public viewing throughout the construction stage of the project.

The Authority will again prepare the terms of reference for the Grievance Redress Committee specifying the number, membership, and sitting days. The Grievance Redress Committee's membership is defined in Chapter 7.

The LVD will also process compensation for the PAPs and the GHA will make payment upon completion of the necessary documentation process.

Property Impact Assessment

The basis of valuation is the Market Value and it is defined as “the best price at which the sale of an interest in property may reasonably be expected to have been completed unconditionally for cash consideration on the date of valuation”. Property valuation is guided by professional practices and standards, and was undertaken in conformity to the practices and standards of the Ghana Institution of Surveyors, the Land Valuation Division of the Lands Commission and the MRH's RPF and guidance notes and regulations of international agencies, for this specific assignment. Hence, for the purpose of this valuation, the Full Replacement Cost of affected assets is assessed.

Discussions with the traditional authorities and assembly members revealed that land for agricultural purposes was practically free and in instances where cash transactions occur, these are usually “drink money” which range from GH¢1,500.00 to GH¢3,500.00 per acre. For the purpose of analysis and comparison, information on land values for developable (urban use) was obtained and shows that these land values range from GH¢16,000.00 to GH¢26,000.00 per acre for leasehold terms of 60 to 99 years. Having carefully considered the type of interest held in these farm lands, namely customary freeholds, an analysed unit rate of GH¢4,680.00 was adopted.

Food, cash and tree crops rates per acre were obtained from the Lands Valuation Division and adopted for the assessment of the interim values. These are the 2018 rates, and an upward adjustment factor of 12% and 15% was made for perennial (tree) crops and food crops respectively to reflect prices of March

2020. Provision of 10% was added to assessed crop values to arrive at Full Replacement Cost of food crops and perennial crops while additional support was provided for affected farmers with vulnerability.

Estimated Costs for Land Acquisition

Based on the lost asset inventory survey, the estimated amount of compensation that is needed for the project has been assessed. The total amount of compensation for the actual land acquisition is estimated to be GHS 155,661.66 while that for valuable trees and crops is to be GHS 109,158.41. In addition, an amount of GHS 4,731.11 will be required to compensate vulnerable PAPs who will lose their livelihoods. The cost involved in the purification of the baobab trees prior to removal would be covered by the GHA, of which the details are provided in section 13.2. A breakdown of the estimation is shown in Table 11-1 and 11-2 of Chapter 11. In addition, roughly 25 percent of the total cost would be required to cover the cost for administration, monitoring, and evaluation.

Monitoring and Evaluation

The GHA will establish two monitoring mechanisms in implementing the ARAP: internal monitoring; and external monitoring.

Internal monitoring will be carried out by the EMU of the GHA, the MRH and other organisations to ensure that the GHA's Project Implementation Committee follows the schedule and abides by the principles of the ARAP. The services of an external monitoring organisation such as the EPA will be procured to regularly conduct independent monitoring and evaluation of the activities stipulated in the ARAP. The purpose of independent monitoring is to provide an evaluation and to review the overall implementation from a broad, long-term and objective point of view. The roles and responsibilities of the organisations concerned with monitoring of the ARAP are described in Table 12-1 of the report. The monitoring activities including the indicators, means of verification and time of implementation are also presented in Table 12-1.

In addition to periodic monitoring and evaluation that would be carried out during the planned project period, an audit will take place upon the project's completion to determine whether the efforts to restore the living standards of the PAPs have been properly designed and executed. The completion audit will verify that all physical inputs earmarked in the ARAP have been delivered and all services have been provided. The audit will also evaluate if mitigation actions prescribed in the ARAP have had the desired effect. This will allow any corrective actions that the auditors may recommend to be carried out before

the project is completed.

Stakeholder Consultations

Various engagements and consultations have been held with relevant stakeholders and the project affected communities over the years since the inception of this project from 2014. As part of the requirements by EPA and JICA, engagements were held to seek the views, perspectives and concerns of the stakeholders into the project. PAPs, opinion leaders and community members had the opportunity to make meaningful contributions to the project.

Below are some of the concerns raised by the people during the meetings:

- ❖ The people raised concerns that there are no documents for some of their lands because they inherited it directly from their forefathers. They therefore suggested that other alternative measures be used to identify the rightful owners such as confirmation by community elders and neighbouring farmers who share common boundaries.
- ❖ PAPs were of the view that ever since the first visit from about six years ago, pictures of PAPs' farmlands were taken and they were asked to stop farming on those lands because of the project. They have advised that some considerations should be made when calculating their compensation to include losses made over the past years.
- ❖ Burrow pits dug during the construction of the road should be recreated into dugouts to provide water for livestock.
- ❖ Construction materials, especially toxic chemicals, that may be used for the project should be properly disposed of in order not to cause any damage to the water bodies.
- ❖ They also advised GHA to be diligent in selecting contractors for the construction of the bridge. A contractor who is devoid of corruption is the one they opt for.

1.0 INTRODUCTION

1.1 Project Background

Road transportation accounts for approximately 95 percent of the total transportation in the Republic of Ghana. However, only about 12 percent of roads are paved (i.e. asphalt concrete and cement concrete pavement) and can accommodate heavy traffic loads. Hence, there is a great need to improve the roads in order to sustain economic growth.

The trunk highway network in Ghana consists of three international corridors (i.e. Central, Western and Eastern) connecting the coastal area of the Gulf of Guinea with Burkina Faso, and the West African Highway Corridor along the Gulf of Guinea connecting Cote d'Ivoire and Togo. The Eastern Corridor is the shortest route connecting the most important port of Ghana, Tema Port, and Burkina Faso, and developing this corridor will contribute to the improvement of less-developed areas along this corridor. Development of the Eastern Corridor, therefore, has a high priority and development plans have been carried out with financial assistance from some development partners, including Japan.

Japan International Cooperation Agency (JICA) has identified the importance of the Eastern Corridor in the cooperation policy for Ghana, "Development of infrastructure to support economic growth", and has conducted the "Preparatory Survey on the Eastern Corridor Development Project" [Master plan and feasibility study (F/S)] to assist the development of the Eastern Corridor. They proposed the construction of approximately 1,540m of new road, including a new bridge across the Volta River, after comparing various alternatives. The construction of the new bridge across the Volta River, which is to strengthen and secure the transport capacity of the Eastern Corridor in Ghana, thereby contributes to economic revitalization and poverty reduction in the area along the corridor and neighbouring countries.

Based on this proposal, the GoG has secured and received a Japanese Official Development Assistance (ODA) loan from JICA to finance the construction by applying the Special Terms for Economic Partnership (STEP) scheme, in order to construct a high-quality, durable, and economically viable bridge using various Japanese technologies.

This ARAP is an update to the 2015 ARAP on the project that was prepared by the Ghana Highway Authority (GHA) with assistance from the detailed design study team of JICA. The ARAP serves as a guideline for the project implementation agency (i.e. the GHA) as well as other government agencies concerned with land acquisition regarding the project.

1.2 Objectives of the Abbreviated Resettlement Action Plan

Objectives of the ARAP are as follows:

- To relieve the damages and afflictions caused to the communities and people affected by the project, land acquisition in particular, by preparing and publicizing a fair and reasonable plan for relocation, land acquisition and compensation based on the Project Affected Persons' (PAPs) socio-economic conditions and existing laws and regulations in Ghana,
- To ensure that the standard of living of PAPs is improved or at least restored to prevailing levels prior to the beginning of the project implementation,
- To provide information that helps the GHA and other government agencies concerned in preparing the budget needed for relocation, land acquisition, compensation and other associated activities, and
- To reassure the GHA and other government agencies concerned, and most importantly the PAPs, of the principles and activities associated with relocation and land acquisition to be followed.

As will be depicted in the chapters that follow, the project entails acquisition of private and communal land that do not belong to the GHA as well as removal or relocation of religiously sensitive assets. To date, the GHA has been handling these issues in close coordination with the Assemblymen of the two villages affected and based on the informed consent of the various leaders in the villages and the PAPs. The GHA is also prepared to make compensation to the PAPs taking into account the voices heard on the ground, official steps and procedures in Ghana, and the environmental guidelines of JICA. As of January 2020, the PAPs were generally in favour of the project and no major obstacle is foreseen with regards to land acquisition for the project.

2.0 OUTLINE OF THE STUDY

2.1 Objective of the Study

The objective of this study is to carry out a review of the ARAP compiled by JICA's team in 2015 in order to achieve efficient and proper preparation and implementation of the project.

2.2 Description of the Project

The project site is located approximately 75 km north-east of Accra on the Eastern Corridor across two districts (i.e. Shai Osudoku District¹ on the south side of the river bank and North Tongu District² on the northern side). The location is shown in Figure 2-1 and drawings of the project including the bridge and approach roads are shown in Figure 2-2. The major scope of the project is as follows:

- Construction of a new bridge across the Volta river: approximately 540m
- Construction of approach roads on both sides of the new bridge: approximately 1,000m in total
- Construction of toll plazas
- Design and installation of lighting system

¹ The former Dangme West District was sub-divided into Shai Osudoku District and Ningo Prampram District in July 2012, and Asutsuare and Volivo have been under Shai Osudoku District since then.

² The former North Tongu District was sub-divided into North Tongu District (mainly south of the Volta River) and Central Tongu District in July 2012. However, Dorfor Adidome remains in North Tongu District according to a district assembly official.

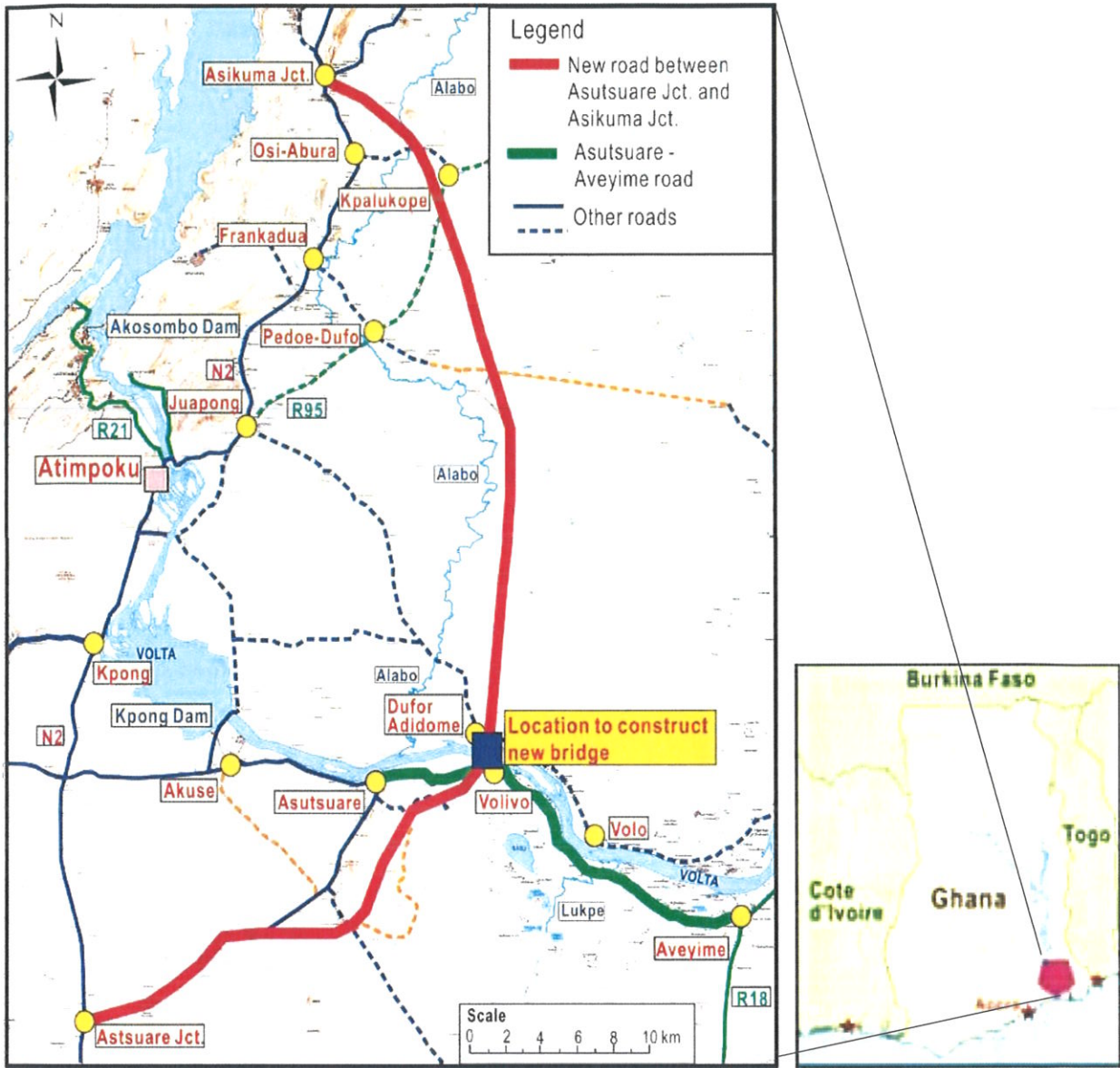
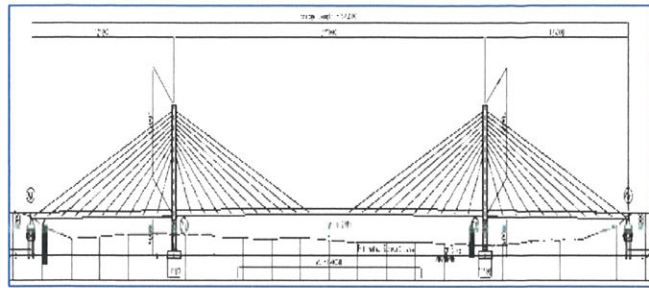
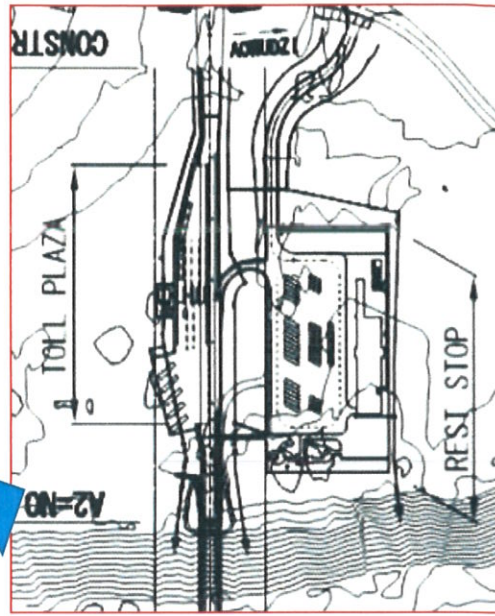


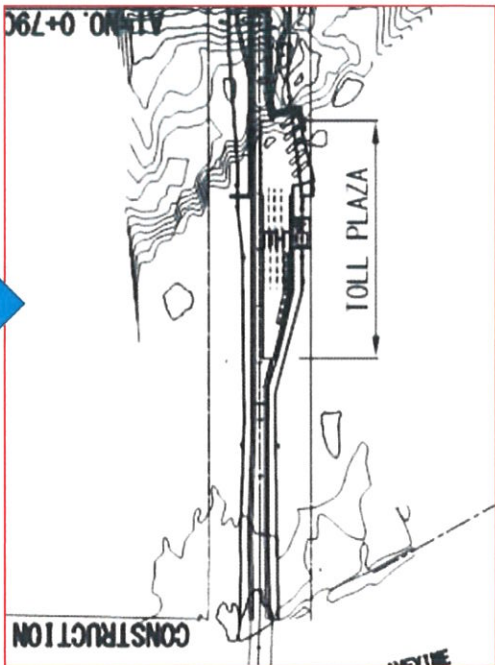
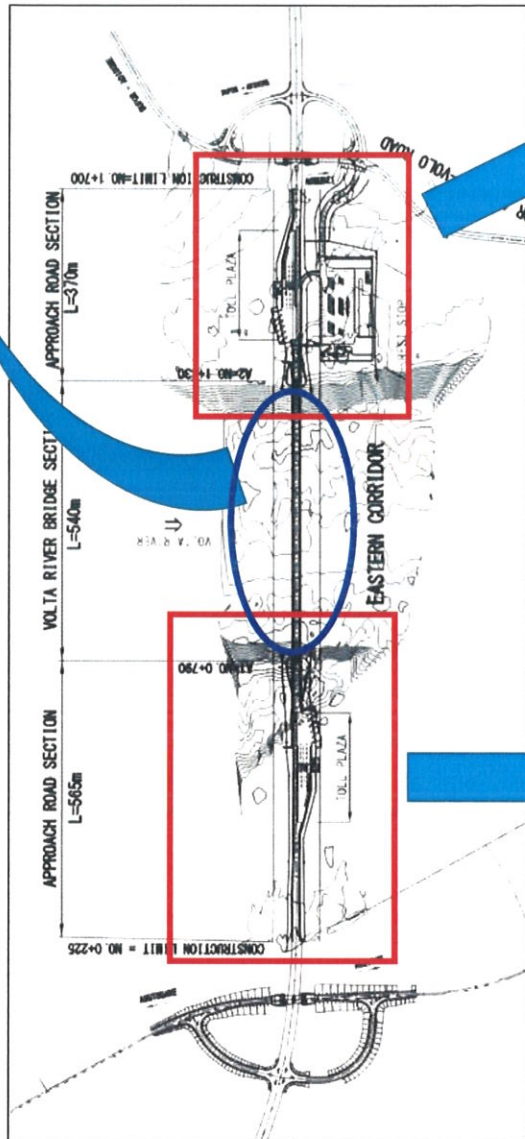
Figure 2- 1: Location of the project site



Planned Bridge



Approach Roads
(above: north bank; below: south bank)



Source: Study Team

Figure 2- 2: Overall Design of the Project

2.3 Project Area Characteristics

2.3.1 Population

The project catchment area falls within two main Districts: Shai Osudoku and North Tongu District. The total population for the two main districts is estimated at 151,909. This is made up of 62,131 people from Shai Osudoku and 89,777 from North Tongu district. Males form the majority (51.3%) in Shai Osudoku while females form the majority (52.7%) in the North Tongu district.

Table 2- 1: Population Sizes of Project Districts Area

Districts	Male	Female	Total
Shai Osudoku District (2017 Projection)	31,873 (51.3%)	30,253 (49.7%)	62,131
North Tongu (2010 Population)	42,492 (47.3%)	47,285 (52.7%)	89,777
Total			151,909

Source: GSS

On the other hand, the total population of the two communities is also estimated at 8,809 made up of 3000 people from Volivo and 5,809 from Dorfor Adidome. Details of gender disaggregation distribution are shown in the table below:

Table 2- 2: Estimated Population Size of the Project Communities

Community	Male	Female	Total
Volivo	1659 (55.3%)	1341 (44.7%)	3000
Dorfor Adidome	2986 (51.4%)	2823 (48.6%)	5809
Total			8809

2.3.2 General Community Structure / Settlement

- **Volivo**

Volivo is surrounded by nine (9) main communities under the Dorfor electoral area. These communities are Kewu, Atrobinya, Avakpo, Volivo-Lanor, Mafikoper, Chiefkoper, Amegbolor, Atabui and Duffor. Traditionally, the community is headed by the community chief and his elders while an elected Assembly member supported by a unit committee runs the political day-to-day administration of the community. The people of Volivo are mainly Dangmes with a few of the populace being Ewes. There are about 700 households with an average household size of 5 people per house in the community. Culturally, the people of Volivo celebrate “Jehayem” every May. Jahayem is celebrated to shame hunger.

- **Dorfor Adidome**

Dorfor Adidome is the largest among 12 communities under the electoral area. Unlike Volivo, Dorfor Adidome is made up of seven (7) main clans and the heads of these clans form the elders of the community. However, the clans are presided over by a main chief who controls the traditional affairs in the community. Each clan has their unique symbol but the Baobab Tree is the universal symbol for the community. Politically, the Assembly member together with the unit committee members runs the political administration of the community. According to the community elders, the estimated average household size is five (5) people per house. The people of Dorfor Adidome are mainly Ewes with few Fulanis. The people culturally celebrate the “Ayimagonu” and “Dzrafedu-Za” festivals in November and March / April respectively. The festival is celebrated to remind community members of how their forefathers became victorious in the 1870 Global War.

2.3.3 Economic Activities

The economy of the two communities is dominated by agricultural activities on subsistence basis in a labor-intensive manner. The most dominant crop under cultivation is rice and this is cultivated district-wide. At Volivo, the rice farming is mainly done on irrigation basis. Water is usually drawn from irrigation facilities in Akuse and Asutsuare. Again, Volivo is known for the production of fruits such as bananas, mangoes and pineapples. Other major crops cultivated in both communities are cassava, maize, pepper, oil palm, etc.

The agricultural land is farmed by its owners and there are no tenant farmers. This was confirmed by the Assembly man of Dorfor Adidome. Golden Exotic Estate has a plan of extending its 800ha banana plantation to 3,000ha and Tropo Farms has a 5ha fish farm.

Another considerable farming activity undertaken in both communities is the fishing activity which is mainly done on the Volta River. The river is mainly known for the production of tilapia. Traditional fishing communities include Bakpa, Mafi, Mepe, Battor and Volo in the catchment area. Also, livestock farming forms part of the farming activities undertaken by the communities. The Fulanis at Adidome are mainly noted for the rearing of cattle in the area.

Another area of interest that has gainfully engaged the youth and women in the area is oyster shell mining and processing. Oyster shells are naturally found on the grounds in both communities. The shells are processed by way of crushing by machine used for poultry feed. They are also processed for paints such as white wash paints and emulsion paints. There are also few artisans such as masons, welders, seamstress/tailors, electrician, etc. in the area.



Source: Field Survey

Photograph 2- 1: Oyster shell mining activities ongoing at Dorfor Adidome

2.3.4 Community Facilities

The two communities have a basic school each, covering from Nursery to JHS level. Every Monday is a market day in Dorfor-Adidome. Volivo does not have a market. However, trading activities are usually carried out every Sunday at Asutsuare.

With respect to health, there are two health facilities in Adidome: one of which is a privately owned clinic and the other a health centre. On the other hand, Volivo has a CHPS Compound that serves the health needs of the people.

The main source of water for drinking and domestic use is the Volta River for both communities. However, both communities have two borehole facilities each which are currently broken down.

Although, there are few household pit latrines made of mud swish in the communities, majority of the community members do not have toilet facilities. The main place for defecation is the bush.

The communities are connected to the national grid with majority having access to electricity. Additionally, the main telephone networks; MTN, Airtel/Tigo and Vodafone are available in the communities but need some more improvement as certain areas within the communities do not have adequate network coverage.

Approach roads are planned to cross existing electricity lines. Limited but additional social services may be introduced during the construction stage, possibly improving the situation.



Photograph 2- 2: A household toilet facility at Volivo

Photograph 2- 3: A broken down borehole at Volivo

Source: Field Survey

2.4 Methodology

This survey is aimed at identifying, both qualitatively and quantitatively, the social impacts caused by the construction of the Dorfor Adidome - Volivo Bridge and its approach roads. More specifically, information on the Project Affected Units (PAU), Project Affected Persons (PAPs) as well as their income and livelihood were gathered through interview surveys using questionnaires.

2.4.1 The Survey Method

Desk Study

The Consultant studied earlier reports and other secondary materials. The information from these sources served as a guide for empirical data collection and also provided baseline information incorporated into the ARAP. These documents include the following;

- Questionnaire forms
- Compensation Matrix
- Compensation modality
- Grievance forms
- Data base and data base templates
- Electronic (and geo-referenced) forms for field data input

As part of the deskwork, the Consultant reviewed particularly the questionnaire forms, the electronic forms for field data entry and the database template in relation to work to be done and the data to be collected to ascertain their adequacy.

Reconnaissance Study

The Consultant together with the implementing team embarked on a one-day reconnaissance visit on 30th October, 2019 to the proposed sites in Volivo and Dorfor Adidome. This enabled the Consultant to be familiarized with the conditions of the site and also observe some important indicators which could

trigger resettlement in the area. From our observations, there was not much impact in both communities; areas to be affected are mainly farm lands.

Consultations/Meetings

The ARAP preparatory process used participatory approaches to involve all key stakeholders i.e. PAPs, community leaders and host communities in discussions and decision-making concerning the ARAP. These consultations sought to elicit views on the project, clarifications on customs, social phenomenon that are of importance to the project as well as project impacts, resettlement options, compensations, and many more. Three strategies were adopted to engage the PAPs and communities i.e. (1) Focus Group Discussions (FGDs) with some community leaders, (2) Meetings with governmental officials and interviews with PAPs.

Minutes of public meetings held with communities and PAPs, participants' lists, and photographs were kept for reference (Attached as Appendix 3).

2.4.2 Preparation for Fieldwork

The Consultant undertook a number of activities in preparation for field studies including:

- Development of Forms / Questionnaires using KoBoCollect
- Training of enumerators

2.4.3 Field Data Collection

Activities conducted in the field included:

- **Census of PAPs** (Collection of bio-data, household data, data on livelihoods, incomes and expenditures, assets, etc.). Identification of PAPs was done by inviting all owners of affected lands on the route earmarked for the project to identify their boundaries. Details of all affected persons including their locations were captured using a tablet with the KoBo Software.
- **Property Impact Assessment**
Food crops which will be adversely affected by the project (through relocation or demolition) were enumerated for compensation assessment.
- **FGDs with Community Leaders and Community Members**
Discussions were held with community leaders in communities which will be losing communal properties to discuss the project design as well as to seek their opinions about the uprooting of the sacred baobab trees.

3.0 NECESSITY OF LAND ACQUISITION

On the 5th of November, 2014, the GHA carried out an initial survey/inspection at the project site as part of the basic design in order to identify any land, buildings, crops and other assets that are located within the 90 m Right of Way (RoW) set by the GHA for the project-affected area along the Eastern Corridor. The inspection revealed there would be the acquisition of bare lands in areas where currently no road exists

Following the initial survey, a more detailed survey was carried out by the GHA in the detailed design stage on the 3rd of February and on the 26th, 27th and 30th of March, 2015. The objectives of the detailed survey were to confirm the exact extent to which bare lands and structures will be affected by the project and to enumerate farms to be destroyed for the assessment of the appropriate amount of compensation each PAP is entitled to.

During the review of the 2015 ARAP, inspection of the site in January 2020 still confirmed the absence of involuntary resettlement as only farmlands fall within the demarcated RoW in both towns. There will still be the need to acquire a limited number of non-governmental plots that are to be affected. A more detailed survey was carried out with the affected persons on the 15th, 16th and 17th of January 2020 to confirm the exact extent of land acquisition by measuring the size of the land subject to seizure, to identify property owners, to identify the scale and types of crops and other assets affected, and also to estimate their monetary value in order to calculate an appropriate amount of compensation to be made to each PAP.

4.0 LEGAL FRAMEWORK AND LAND ACQUISITION

4.1 Legal Framework

The laws in Ghana state that if land is to be expropriated by the State against the free will of the land owner, it must be carried out in accordance with relevant statutory procedures. While the extent of public involvement stipulated in the laws appears to be rather limited, they require fair and adequate compensation or alternative assistance to eligible PAPs. Table 4-1 and the following sections outline the legal framework in Ghana including the constitution and acts, regulations and policies concerned with land acquisition.

Table 4- 1: Legal Framework related to Land Acquisition in Ghana

Name	Content/Explanation	Remarks
Constitution of the Republic of Ghana 1992	Fundamental human rights and freedom Protection from compulsory acquisition	Act 20
Administration of Lands Act 1962	Management and administration of stool lands for the rights of ownership	Act 123
The State Lands Act 1962/The State Lands Regulation 1962	Mandatory requirement for acquiring land for development of public infrastructure Procedure of land acquisition	Act 125 /LI 230
Lands (Statutory Way-Leaves) Act 1963/ Lands (Statutory Way-Leaves) Regulation 1964	Compulsory acquisition of land by the President	Act 186 /LI 334
State Lands (Amendment) Act 2000	Process of compensation to be made to persons with a claim	Act 586
Environmental Assessment Regulations 1999 and Amendment 2002	Regulations relevant to environmental matters	LI 1652 and LI 1703
The Ghana Land Policy 1999	Broad framework and policy guidelines for land administration and utilisation	
Resettlement Policy Framework For Road Sector 207	Basic policy for land acquisition and involuntary resettlement	MoT

Source: Study Team

4.1.1 The Constitution of the Republic of Ghana 1992

As in any country, the Constitution of the Republic of Ghana (1992) forms the basis of all laws and regulations in the country. It upholds the principle of private ownership over land and provides for adequate safeguards against deprivation of private property rights. Even the State's inherent power to seize private property is somewhat controlled. Article 20 of the Constitution prescribes that under no circumstance should private properties be forcefully taken unless there are important and justifiable grounds for such acquisition, which invariably must be in the public interest.

It is expressly stipulated in the Constitution that "No property of any description or interest in or right over any property shall be compulsorily taken possession of or acquired by the State unless the following conditions are satisfied", stipulating the specific conditions that allow such compulsory acquisition of land. The article also calls for prompt payment of fair and adequate compensation and provides for the right to appeal at the High Court with regard to the amount of compensation to which a person is entitled. Another important provision in the Constitution includes the giving back of land to

the owner in case the land is not used for the purpose for which it was compulsorily acquired in the public interest.

In Article 36, the Constitution ensures the full integration of women into mainstream economic development in Ghana and the protection and promotion of all basic human rights and freedoms including the rights of the disabled, the aged, children and other vulnerable groups. It also stipulates that the State shall take appropriate measures needed to protect and safeguard the national environment.

4.1.2 Administration of Lands Act 1962

Act 123 of the Administration of Lands Act 1962 was enacted to facilitate the management and administration of stool lands, in addition to other lands. The Act empowers the Minister responsible for lands to manage stool lands in accordance with the provision of the law. Section 7 of Act 123 stipulates that the President of the Republic of Ghana may, by executive instrument, declare any stool land to be vested in trust and accordingly the State could administer such land as a trustee for the stool involved. In such case, the legal rights to sell, lease, collect, rent, litigate and manage are taken away from the customary land owners and vested in the State. However, the equitable right in the land, which is the right to enjoy the benefits, is retained by the land owner.

Similarly, the Act provides in Section 10 that “the President may authorise the occupation and use of any land for any purpose which, in his opinion, is conducive to public welfare or in the interest of the State”. It is a requirement that a public notice be published in the Gazette in this case giving particulars of the land to be taken and its usage. Persons whose interests are affected by “reasons of disturbance as a result of the authorisation” so made are entitled to be compensated. The entitlements are, however, to be assessed by considering the value of the land (and other losses suffered) and the benefits to be derived by the people in the area from the way in which the land is intended to be used by the State.

The inherent problem of this law is that the nature of interest taken is not clearly defined. Stakeholder consultation and community involvement are not highlighted. It must be noted that the State does not normally use this section of the Act for land acquisition.

4.1.3 The State Lands Act 1962/The State Lands Regulation 1962

The State Lands Act 1962 is the principal law under which private lands can be compulsorily acquired. The Act empowers the President to acquire any land for public interest. The Act and its Regulation detail the mechanism and procedures for compulsory land acquisition. It is a mandatory requirement that a copy of the methods of acquisition be shared with any person having an interest in the land or be posted at a convenient place on the land. It is also to be published three times in a newspaper circulated in the district where the land is situated.

The Act emphasises payment of compensation to the people affected by land acquisition. The basis of compensation should be either the market or replacement value of the land. Costs for disturbance and incidental expenses or other damages suffered are also to be considered in awarding compensation.

One critical limitation of the Act is that little attention is given to public involvement in the acquisition process. Community consultations and involvement are not mandatory. In order to ensure that the project achieves the desired outcome, it is important that the project owner carries out thorough consultation with all major stakeholders and the affected communities in particular, at every stage of project implementation.

4.1.4 Lands (Statutory Way-Leaves) Act 1963/Lands (Statutory Way-Leaves) Regulation 1964

The Lands (Statutory Way-Leaves) Act 1963 (Act 186) was enacted to facilitate the entry into any land for the purpose of construction, installation and maintenance of public utility works and the creation of

ROWs and other similar rights related to such works. “Highways or works for purposes of, or in connection with, any public utility works” is stated as the works for which ROWs may be created. Highways are defined in the Act as “any road, street, path, pavement, or square and includes any bridge, or other structure associated therewith”.

The Act and its accompanying Regulation, the Lands (Statutory Way-Leaves) Regulation 1964 (LI 334), provides the modalities and procedures for acquiring statutory ROWs. The mechanism of entry for survey works and construction is spelled out in detail. The owner/occupier is required to be given formal notification at least one week in advance about the intent to enter, and at least 24 hours prior to actual entry.

A ROW is legally established by the publication of an executive instrument. Losses and damages suffered are to be compensated for in accordance with the State’s procedures for compensation. Provision has also been made for restoration of affected lands where that is possible. It is stated that, in assessing the appropriate compensation to be made, consideration must be given to the increase in land value as a result of installation or construction of works. The right to appeal vested in an aggrieved person is also provided for.

Clearly the desired issue of community consultation has not been given serious consideration here. Again, the provision for compensation assessment is unfair. In particular, it stipulates the exemption from payment of compensation in case the land affected does not exceed 20% of the total land area held by the land owner.

4.1.5 State Lands (Amendment) Act 2000

This Act is an amendment to Act 125 as follows:

Repeal of Section 3 and insertion that the High Court shall determine the rights or interest of any person:

- i) where there is a dispute as to the right or interest claimed by reason of conflicting claims or interest
- ii) where the person is dissatisfied with the compensation assessed by the Lands Commission

Substitution of Section 4 with the following: Claims of Compensation

- 1) ...any person with a claim shall submit in writing within 6 months from the date of publication of the instrument to the Lands Commission:
 - i) particulars of his claim or interest in the land,
 - ii) the manner in which his claim has been affected,
 - iii) the extent of damage done, and
 - iv) the amount of compensation claimed and the basis for the calculation of compensation.
- 2) The Lands Commission, shall upon receipt of the claim, cause to be assessed the payment of fair and adequate compensation by the government for the land acquired to the owner.
- 3) In assessing the compensation for the land, the following shall be considered:
 - i) The market or replacement value/cost of the land.
 - ii) The cost of disturbance or any other damage incurred.
 - iii) The benefits to be derived by the people of the area in which the land is situated from the use for which the land is acquired.

Table 4- 2: Objection Procedures against EPA’s Decision or Action

1.	A complainant submits a complaint to the Minister of MEST.
2.	Within 14 days, the Minister shall appoint a panel composed of representatives from each of the following: MEST not below the rank of Director Attorney-General’s Department not below the rank of Senior State Attorney

Ministry with responsibility for the undertaking
 Two persons specialising in the relevant field of the undertaking concerned

3. The Minister shall refer the complaint to the panel and the panel shall give a fair hearing to all parties and determine the issue as it considers appropriate.
4. After hearing from all the parties, the panel may:
 - alter the decision of the EPA;
 - request the EPA to make a decision on the application where applicable within a specified period;
 - and
 - give any other orders as it considers necessary
5. The panel shall determine the matter and report to the Minister within 60 days from the Minister's request to the panel. The proceedings of the panel shall be fully documented together with reasons for the panel's decision.

Source: Regulation 27 Complaints by aggrieved, Environmental Assessment Regulations 1999 (LI 1652)

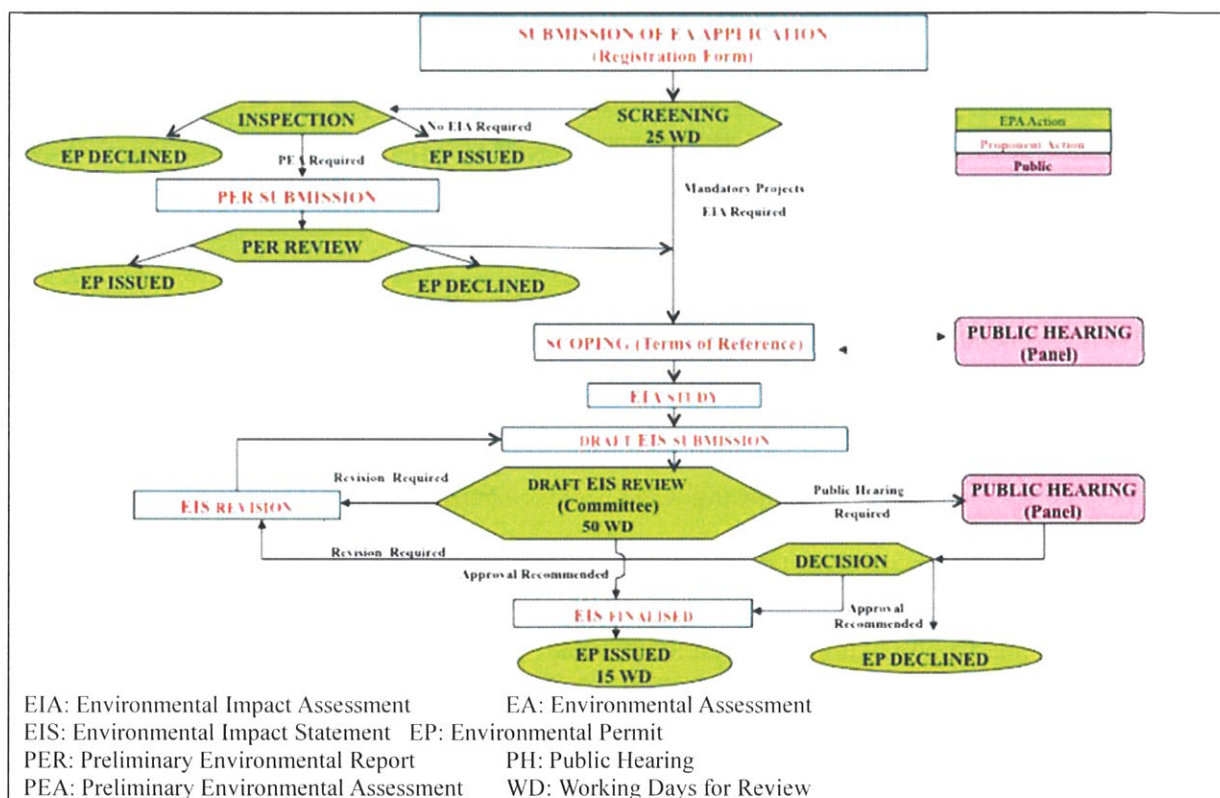


Figure 4- 1: EIA Process in Ghana

Source: GHA

4.1.6 The Ghana Land Policy 1999

In 1999, the GoG put in place a policy to serve as a broad framework and policy guideline for land administration and utilisation. The main objective is to provide guidelines aimed at enhancing land management systems, land use, conservation of land resources, and environmental quality. All these are intended to ensure coordinated and orderly use of land, a vital resource to be enjoyed across generations. Ultimately, the policy seeks to give protection to proprietary rights and promote the concept of prompt payment of adequate compensation for compulsory seizure of lands and also to create an enabling environment for community participation in sustained land management.

4.1.7 Road Sector Resettlement Policy Framework 2017

The Road Sector Resettlement Policy Framework (RPF) aims at continuously improving the nation's rural and urban road network in a sustainably-, environmentally-, and socially-sound manner. Its principles are summarised in Table 4-4.

Table 4- 3: Principles of the RPF

1) <u>Involuntary resettlement should be avoided where possible; where population displacement is unavoidable, it should be minimised by exploring all viable project options.</u>
2) <u>Persons affected by land acquisition and facing relocation or loss of incomes associated with a change in land use due to the project should be given compensation so that they can improve or at least maintain their former standard of living.</u>
3) <u>The estimation of the compensation cost and/or benefit should be based on an appropriate method so that the cost of land and other properties taken and demolished are accounted for. This will ensure that the living standards of PAPs are maintained or raised to a substantial level.</u>
4) <u>PAPs should be given full information on the qualification (eligibility), mode of compensation, plan for restoring production income, and the project's progress and be involved in the enforcement of resettlement arrangements (community participation).</u>
5) <u>The land and/or property affected should be taken only when the PAPs are satisfied with the compensation arrangements.</u>
6) <u>The implementing agency should supervise resettlement activities including payment of compensation as well as monitoring and evaluation.</u>

Source: RPF

4.2 Land Acquisition

4.2.1 Categories of Land Type

Five types of land title are stipulated in the RPF, namely, allodial title, customary freehold, customary tenancies, common law freehold, and leasehold as described in Table 4-5.

Table 4- 4: Land Titles in Ghana

Type of Land Title	Description
Allodial Title	In the Ghanaian context, this is the highest interest capable of being held in land. The allodial title is customarily communally owned and is generally held or vested in stools or skins. In some traditional areas, it is held by clans, families or individuals. Being generally in the form of communal interest in land it accrues to the entire community and is administered by recognised traditional authority. The owner of the allodial title has complete and absolute freedom to use and dispose of the land and is only subject to the restrictions, limitations or obligations as may be imposed by the general laws of the country. The mode of acquisition of the allodial title is by: discovery by hunters or pioneers of the stool etc. of unoccupied land and subsequent settlement thereof and use by the subject; or conquest, purchase or gift.
Customary Freehold	The customary freehold is an interest or title which a member of the larger community that holds the allodial title acquires in the communal land. It is an interest which is held as of right by virtue of being a member of the community. It is of indefinite duration and thus potentially subsists forever. The member who holds such interest has the right of beneficial occupation and unfettered use (also subject to the laws of the country). Upon death, the interest devolves to his/her successors in title <i>ad infinitum</i> . This interest prevails throughout the country including the allodial title from which it was derived. The customary freehold may however be terminated by the occurrence of any of the following: failure of successors; compulsory acquisition by the State; sale or gift by owner; and

		abandonment or forfeiture in rare circumstances where, for example, the holder refuses absolute title as the allodial owner.
Customary Tenancies		<p>These are lesser interests in land and are created by the holder of the allodial title or customary freehold (or common law freehold). These types of tenancies are by nature sharecropping arrangements. They are quite common in Ghana and occur when a tenant farmer gives a specified portion of the farm produce to the land owner at each harvest time as a consideration for use of the land. The two popular tenancy arrangements are the "Abusa" and "Abunu" schemes.</p> <p>There are other forms of customary tenancies in which the consideration from the tenant is not sharing of crops but cash or a combination of crops and money. The customary tenancy is in this category.</p>
Common Freehold	Law	<p>This is an interest held for an indefinite period. It is derived from the rules of common law. The holder of this interest has the right of beneficial occupation and may be subject to the laws of land use in any manner.</p> <p>This type of freehold is created only by express grant. The grantor may thus impose terms on the grantee provided such terms are reasonable and neither contrary to public policy nor unconscionable. Currently, the laws of the land forbid non-Ghanaians from acquiring freehold lands in Ghana.</p>
Leasehold		<p>This type of interest is also a creation of the common law and not Ghanaian customary law. It is an interest in land for a specified period. The leasehold may be granted by the allodial holder in respect of lands in which no conflicting interest exists; or by a customary freeholder; or by a common law freeholder.</p> <p>In Ghana, leasehold may be for a maximum duration of 99 years (cf. Non-Ghanaians can only acquire leases of up to 50 years). Various terms and conditions may be imposed by the grantor including the payment of rent as a consideration for the grant.</p>

Source: RPF

4.2.2 Process of Land Acquisition

The general land acquisition process in Ghana is shown in Figure 4-2.

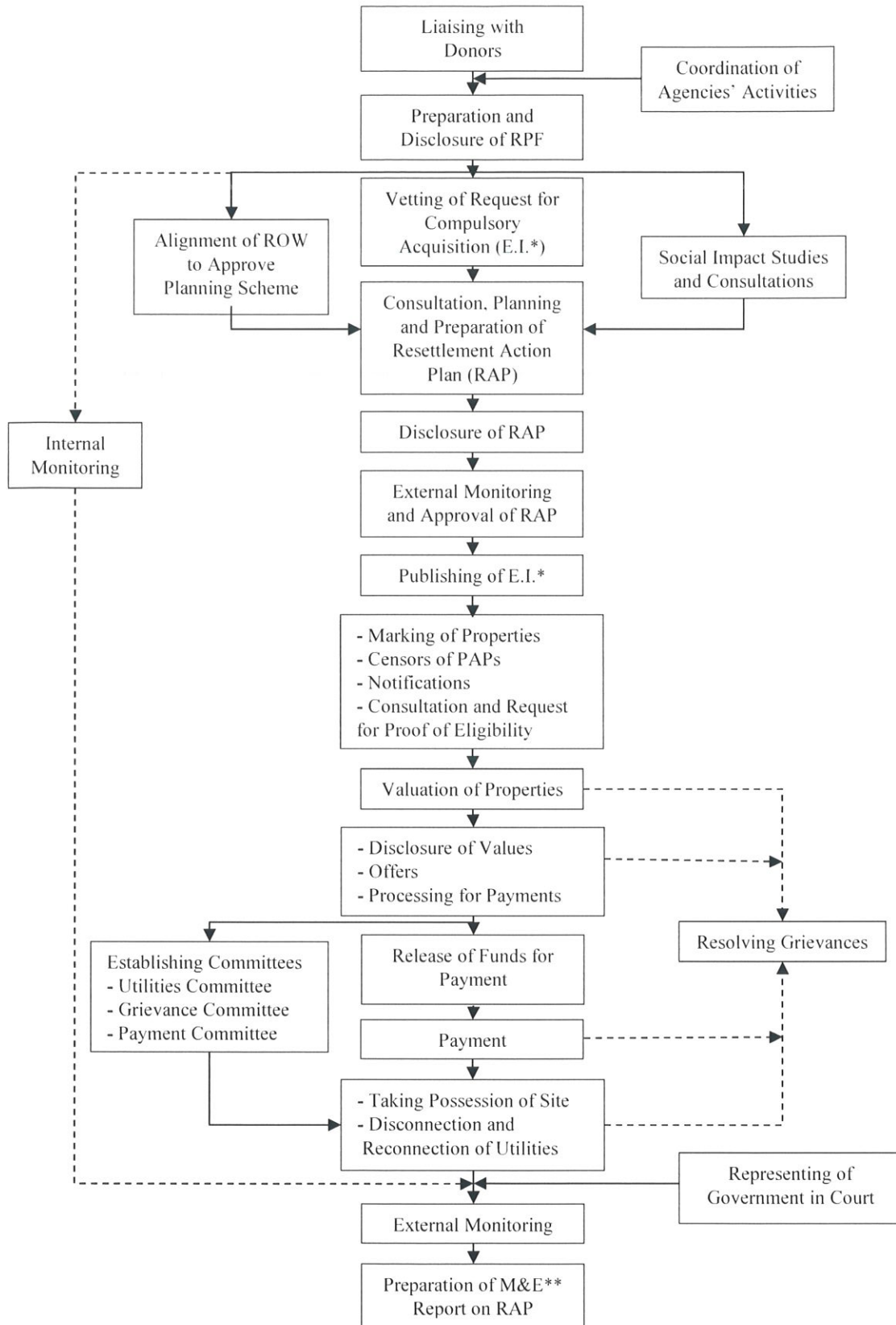


Figure 4- 2: Land Acquisition Process in Ghana

Notes: *E.I.: Executive Instrument - Vetting of Request for Compulsory Acquisition

**M&E: Monitoring and Evaluation

Source: RPF

4.2.3 Eligibility of Entitlement

The RPF adopts all major conditions set forth in the World Bank's (WB) operational policies (OP) including the understanding towards eligibility and entitlement over lost assets and opportunities. The criteria for eligibility adopted in the RPF are identical to those stipulated in Clause 15 of the WB OP 4.12 as reproduced below. Table 4-6 presents the relationship between the type of loss, eligible persons, and their entitlement indicated in the RPF.

- Those who have formal legal rights to land including customary and traditional rights recognised under the laws of the country
- Those who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets provided that such claims are recognised under the laws of the country or become recognized through a process identified in the resettlement plan
- Those who have no recognised legal rights or claim to the land they are occupying

Table 4- 5: Entitlement Matrix in the RPF

Type of Loss	Eligibility Criteria	Entitlement
Loss of land (urban or rural)	Various interests and rights – allodial title holders, freeholders, leaseholders, tenants, licensees	Compensation – capital market value of asset
Loss of structure	Various interests and rights – freeholders, leaseholders	Compensation – capital market value of asset
Business losses Loss of business income Loss of business goodwill Loss of rented income Loss of wage income Loss of fees from trainees/apprentices	Business owners/operators Business owners/operators Landlords/leasers Business employees/attendants Trainers/persons offering training/apprenticeship job training	Supplemental assistance based on: Average net monthly profit Monthly rent passing Equivalent of rent in advance to be refunded Monthly wages earned Training fees to be refunded *Calculated for a specific period taking into consideration the reinstatement period
Loss of business, residential or industrial accommodation or room	Residential/commercial/industrial tenants Owners of buildings during the reinstatement period	Supplemental assistance based on: Comparable open market rent for alternative accommodation based on specific period (reinstatement period) Transportation rates for the transfer of chattels or movable properties
Loss of location for temporary structure: expense for moving structure loss of utility service line	Owners of temporary structures/squatters	Supplemental assistance based on: Transportation rates for the transfer of structures Disconnection of utility service lines at old site Reconnection of utility service lines at new site
Loss of training or apprenticeship	Apprentice/trainee	Supplemental assistance based on comparable fees for

		alternative training
Loss of economic or perennial trees Loss of food crops Loss of grazing land	Various rights and interest holders – sharecroppers, licensees, lessees	Compensation – Open market value for assessed crops/plants

Source: RPF

In case affected persons do not possess any formal or recognised proof to show their eligibility over the assets to be lost, the RPF states that different criteria shall be developed paying attention to particularly the situation and peculiarities such as the following:

- Affidavit signed by landlords and tenants; and
- Witnessing or evidence by recognised traditional authority, customary heads, community elders, family heads and elders and the general community

4.2.4 Monitoring and Evaluation During and After Land Acquisition

In order to ensure enforcement of the RPF and relevant safeguard measures, the RPF adopts: 1) internal monitoring; 2) external monitoring; and 3) completion audit each of which are explained below.

Table 4- 6: Type of Monitoring and Evaluation

Type of Monitoring/Evaluation	Description
Internal Monitoring	Internal monitoring will be undertaken by the Ministry of Roads and Highways (MRH) and its agencies. The frequency of monitoring will be defined in the (A)RAP.
External Monitoring	External monitoring will be carried out by the national and regional offices of the EPA. In addition, involvement of NGOs is an option.
Completion Audit	A completion audit will be carried out to evaluate the design and its implementation as well as the effectiveness of the mitigation measures. The audit will verify the initial plan stipulated in the (A)RAP, all physical inputs delivered, and all services provided and evaluate their desired effects. The baseline conditions of the PAPs before the project will be used as the basis for restoring their socio-economic situation. The completion audit will take place after all (A)RAP activities have been completed.

Source: Study Team

4.3 Comparison between Ghanaian Laws and Policies, and JICA's Environmental and Social Considerations Guidelines

4.3.1 JICA's Guidelines for Environmental and Social Considerations

JICA revised, through a continuous public consultation process, new guidelines for environmental and social considerations in 2010. Applying these guidelines, JICA evaluates all technical cooperation, Official Development Assistance (ODA) loan, or grant aid programmes that the organisation carries out. The objectives of the guidelines are to encourage project proponents and others to properly consider environmental and social impacts as well as to ensure that JICA's support for, and examination of, environmental and social considerations are conducted accordingly. The guidelines outline JICA's responsibilities and procedures along with its requirements for project proponents and other parties in

order to better achieve the set objectives. In doing so, JICA endeavours to ensure transparency, predictability and accountability in its support for environmental and social considerations. The seven most important principles of the JICA Environmental Guidelines are shown in Table 4-8.

Table 4- 7: JICA's Seven Most Important Principles in its Environmental Guideline

1) Attention to a wide range of Impacts	The types of impacts addressed by JICA cover a wide range of environmental and social issues.
2) Application of the JICA Environmental Guidelines from an early stage to the monitoring stage	JICA applies a Strategic Environmental Assessment (SEA) when conducting Master Plan Studies etc., and encourages project proponents, etc. to ensure environmental and social considerations from an early stage to the monitoring stage.
3) JICA's responsibility for accountability for assistance	JICA ensures accountability and transparency when implementing cooperation projects.
4) Stakeholders' participation	JICA incorporates stakeholder opinions into decision-making processes regarding environmental and social considerations by ensuring meaningful participation of the stakeholders in order to consider environmental and social factors and to reach a consensus. JICA replies to stakeholders' questions. Stakeholders that participate in meetings are responsible for what they say.
5) Information disclosure	JICA itself discloses information on environmental and social considerations in collaboration with project proponents etc., in order to ensure accountability and to promote participation of various stakeholders.
6) Enhancement of organisational capacity	JICA makes efforts to enhance the comprehensive capacity of organisations and operations in order for project proponents, etc. to consider environmental and social factors, appropriately and effectively, at all times.
7) Serious attempts at promptness	JICA addresses requests to accelerate the implementation of projects while undertaking environmental and social considerations.

Source: JICA

4.3.2 Comparison of Ghanaian Laws and Policies with JICA Environmental Guidelines

Since the RPF and JICA Environmental Guidelines both fully conform to the WB involuntary resettlement policy (WB OP 4.12), the RPF and JICA Environmental Guidelines (JICA Guidelines) are compatible with each other. The following table shows a comparison between the laws and policies in Ghana and the JICA Environmental Guidelines/WB OP 4.12.

Table 4- 8: Comparison of Ghanaian Laws/Policies with JICA Guidelines/WB Policies (1)

No.	JICA Environmental Guidelines/ WB OP 4.12	Laws and Policies in Ghana	Difference	Policy Applied to the Project
1	Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives (JICA Guidelines).	The principles of the RPF stipulate that: involuntary resettlement should be avoided where possible; where population displacement is	The resettlement policy stipulated in the JICA Environmental Guidelines is	Policies for land acquisition will be as adopted in the RPF, which is in accordance with the JICA Environmental

2	When population displacement is unavoidable, effective measures to minimise the impact and to compensate for the losses must be agreed upon with the people who will be affected (JICA Guidelines).	unavoidable, it should be minimised by exploring all viable project options; and estimation of the compensation cost and/or benefit should be based on an appropriate method so that the cost of land and other	adopted in the RPF and hence there is no difference.	Guidelines *No involuntary resettlement is expected in this project.
3	People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported by project proponents etc. in a timely manner so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels (JICA Guidelines).	properties taken and demolished are accounted for. This will ensure that the living standards of PAPs are maintained or raised to a substantial level		
4	Compensation must be provided based on the full replacement cost prior to displacement wherever possible (JICA Guidelines).	The RPF states that: "displaced persons will be compensated for their losses at full replacement cost prior to beginning of civil works"; "full payment of compensation is done before possession of acquired sites"; and "demolition shall occur only after the full payment of compensation". The State Lands (Amendment) Act 2000 states that "in assessing the compensation for the land, consideration shall be paid to...the market or replacement value/cost of the land". The State Lands Act 1962/The State Lands Regulation 1962 mentions that the basis of compensation should be either the market or	Compensation is not clearly defined by law to be either market value or replacement value nor to be made prior to the beginning of civil works. However, RPF indicates that it has to cover the full replacement cost and that compensation needs to be made before possession of acquired sites and demolition.	Compensation will be made based on the replacement cost prior to beginning of civil works in accordance with the RPF and JICA Environmental Guidelines.

		<p>replacement value of the land.</p> <p>Prompt payment of fair and adequate compensation is defined under the Constitution of the Republic of Ghana 1992.</p>		
5	<p>For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public (JICA Guidelines).</p>	<p>Project affected persons will be consulted and involved in all resettlement activities: planning, implementation and monitoring (RPF).</p>	<p>While public participation is not given enough focus under the laws, the RAP is generally in accordance with the JICA Environmental Guidelines.</p>	<p>An ARAP will be prepared in accordance with the JICA Environmental Guidelines.</p>
6	<p>In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance (JICA Guidelines).</p>	<p>Mechanisms will include public meetings, participation in site preparation, resettlement committees for PAPs and communities and interagency committees for participating stakeholders (RPF).</p>		
7	<p>When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people (JICA Guidelines).</p>	<p>Mechanisms for community entry, consultation and participation of PAPs will be addressed in the RAPs (RPF).</p>		
8	<p>Appropriate participation of affected people must be promoted in the planning, implementation, and monitoring of resettlement action plans (JICA Guidelines).</p>			

Table 4- 9: Comparison of Ghanaian Laws/Policies with JICA Guidelines/WB Policies (2)

No.	JICA Environmental Guidelines/ WB OP 4.12	Laws and Policies in Ghana	Difference	Policy Applied to the Project
9	Appropriate and accessible grievance mechanisms must be established for the affected people and their communities (JICA Guidelines).	The Constitution of the Republic of Ghana 1992 and the State Lands (Amendment) Act 2000 provide that if the PAPs are dissatisfied with the solution, he/she has the right to access the High Court. The conflict resolution mechanisms will be addressed in the (A)RAP. Implementing agencies will facilitate setting up of Grievance Redress Committees (comprised of members nominated by the PAPs directly and opinion leaders) in each of the affected settlements (RPF).	A grievance redress mechanism has been established in Ghana in accordance with the JICA Environmental Guidelines.	A grievance redress mechanism will be established in accordance with the JICA Environmental Guidelines. To ensure that the mechanism is properly implemented, its activity will be comprehensively monitored.
10	Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advantage of such benefits (WB OP 4.12 Para.6).	According to the RFP, a social survey is required for the (A)RAP, and the cut-off date is set at and enforced during the socio-economic survey.	The (A)RAP is developed based on the results of a social survey in accordance with the JICA Environmental Guidelines.	A social survey will be carried out in order to provide baseline information for the ARAP. Cut-off date will be set at the beginning of the social survey.
11	Eligibility for benefits includes the PAPs who have formal legal rights to land (including customary and traditional land rights recognised under law), the PAPs who do not have formal legal rights to land at the time	Squatters are deemed not to be eligible by Ghanaian laws. RFP adopts the WB OP 4.12 but the eligibility of squatters to receive compensation is not clearly defined (cf. it is included in Table 3	Since the JICA Environmental Guidelines define that the PAPs are eligible to receive compensation regardless of	Squatters are eligible to receive supplemental assistance but no compensation will be made for the land.

	of the census but who have a claim to such land or assets, and the PAPs who have no recognisable legal right to the land they are occupying (WB OP 4.12 Para.15).	(Entitlement Matrix) yet not in Table 2 (Type of Loss and Eligible Persons) in the RPF).	having formal or non-formal legal right to land, there is a level of discrepancy between the two policies.	
12	Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based (WB OP 4.12 Para.11).	Land-based resettlement is not defined in the relevant laws and policies.	Apart from monetary-based compensation, the PAPs can choose land-based resettlement under WB policy.	No involuntary resettlement is expected in this project but only land acquisition. The form of compensation will be decided in consideration of the desire of each PAP.
13	Provide support for the transition period (between displacement and livelihood restoration/WB OP 4.12 Para.6).			
14	Particular attention must be paid to the needs of the vulnerable groups especially those below the poverty line, landless, elderly, women and children, ethnic minorities, etc. (WB OP 4.12 Para.8).	There is no formal requirement for supporting the vulnerable groups.	There is a difference in supporting vulnerable groups.	Some vulnerable groups that require special support have been identified in this project and they would be treated accordingly as stipulated in the WB OP.
15	For projects that entail land acquisition or involuntary resettlement of fewer than 200 people, an abbreviated resettlement plan is to be prepared (WB OP 4.12 Para.25).	An A-RAP is required in Ghana in accordance with the WB policy.	No difference is found between the two policies.	An ARAP will be prepared since the project has fewer than 200 PAPs in accordance with the WB OP 4.12.

Source: Study Team

5.0 SCALE AND EXTENT OF LAND ACQUISITION, INVOLUNTARY RESETTLEMENT, AND ASSETS LOST

5.1 People and Assets Affected by the Project

Based on the site inspection/survey and the detailed survey that were carried out by the GHA in November, 2014 and February, March, and April 2015 respectively, it was confirmed that no involuntary resettlement would take place as a result of the project. Nevertheless, the construction of the bridge and its approach roads and a proposed rest stop at Dorfor Adidome entailed the acquisition of a limited number of farm lands and affected two scared baobab trees considered to be religiously important among the fetish group of the community in Dorfor Adidome village. Some parts of a cemetery situated on the west side of the planned intersection between the Eastern Corridor and Dorfor Adidome-Volivo road in the north bank was also to be affected as they lie within the 55m-ROW of Dorfor Adidome-Volivo road.

As per the current design, further survey conducted in December 2019 to January 2020 to update the 2015 ARAP proved that there will still be no need for involuntary resettlement. The survey proved that farmlands are the properties that will mainly be affected by the project. In addition, the two baobab trees standing in the middle of the planned approach road that are considered religiously important will also be affected. According to the religious leader of the fetish group and other community leaders in Dorfor Adidome village, both baobab trees can be removed after proper religious and cultural procedures have been adhered to. Again, two electricity lines may also be affected by the project during construction. However, some parts of the cemetery which is situated on the west side of the planned intersection will no longer be affected as per the current design.

The number of land owners affected by the project and the number of household members is shown in Table 5-1 and the scale of land acquisition and assets lost by the project are presented in Table 5-2, 5-3 and 5-4.

Table 5- 1: Number of Affected Land Owners and Household Members

District	Community	Sex	Number of PAPs	No. of Other Household Members
North Tongu District	Dorfor Adidome	Male	10	28
		Female	2	20
Shai Osudoku	Volivo	Male	14	67
		Female	3	81
Total			29	196

Source: Field Survey

Table 5-2 and 5-3 offer an overview of the property owners within the project area.

Table 5- 2: List of Project Affected Persons (Volivo)

#	Full Name of PAP or Representative	Sex	Age	Tel. No.	Marital Status	Household Size
1	Amanor Darkey	M	78	247466341	Widow/er	12
2	Joseph Amanor Odonkor	M	68	241934165	Married	11
3	Tetteh Peter Kwao	M	52	244206359	Married	8
4	Kwaku Amediavor (Farmer on Amanor Kwame Isaac's land)	M	58	248627107	Consensual Union	3
5	Philip Kwablah Amanor	M	62	243950173	Divorced	6
6	Appiah Narteh	M	60	241934165	Widow/er	9
7	Tetteh Raphael (Land owner)	M	61	548160171	Married	7
8	Tetteh Henry for Blessed Nartey (Raphael Tetteh- Land owner)	M	25	241930485	Single	6
9	Regina Ayorkor Mensah (Land Owner)	F	51	276942208	Married	6
10	Kwabena Kwao	M	37	249629502	Consensual Union	8
11	Odonkor Kwasi for Honyadzi Tetteh	M	40	248357864	Married	8
12	Atterh Kofi	M	71	246224976	Married	17
13	Amanor Kwame Isaac (Land owner/farmer)	M	52	242859995	Married	26
14	Nicholas Teye Young	M	43	247958757	Married	6
15	Emmanuel Kwao	M	27	556542757	Married	7
16	Narkortu Bernice Maku	F	52	C/o 0241810809	Divorced	15
17	Adjo Kwao (Amanor Darker-Owner)	F	30	None	Divorced	13

Source: Field Survey

Table 5- 3: List of Project Affected Persons (Dorfor Adidome)

#	Full Name of PAP	Sex	Age	Tel. No.	Marital Status	Household Size
1	Mary Kwao	Female	70	247629621	Widow/er	4
2	Azietor Wisdom for Azietor Family	Male	64	506708069	Married	3
3	Nukpedu Tsorme Jacob Tornyeli	Male	73	249693050	Married	8
4	Agbohla Francis for Agbohla Mawuena	Male	34	550317686	Consensual Union	3
5	Dzetorme Kwasi (Kosi)	Male	75	244727902	Consensual Union	7
6	Peter Zigi	Male	32	592904142	Consensual Union	6
7	Ben Azietor	Male	70	249391872	Married	2

8	Nukpedu Tsorme Jacob Tornyeli	Male	73	249693050	Married	8
9	Christiana Nukpedu	Female	83	557638755	Widow/er	8
10	Dzetorme Kwasi (Kosi)	Male	75	244727902	Consensual Union	7
11	Azietor Wisdom for Azietor Family	Male	64	506708069	Married	3
12	Moses Kabutey	Male	45	547562250	Married	6

Source: Field Survey

Table 5- 4: Project Affected Crops and Land Sizes

#	Names of PAPs	Size of Farm land (acres)	Size of Crop Area (acres)	Crops Cultivated
BRIDGE – VOLIVO				
1	Kwabla Kwao	0.96	0.72	Cassava
2	Philip Kwabla Amanor	0.96	0.96	Oil palm
3	Amanor Darkey	3.44	2.55	Oil Palm, Cassava, Maize
4	Henry Tetteh For Blessed Nartey	0.34	0.34	Maize
5	Joseph Amanor Odonkor	0.28	0.28	Maize
6	Narkotu Bernice Maku	0.23	0.23	Cassava, Maize
7	Adjo Kwao	0.06	0.06	Maize
8	Emmanuel Kwao	0.36	0.11	Oil palm, Cassava
9	Kwaku Amediavor		0.8	Plantain, Yam
10	Honyadzi Tetteh	0.43		
11	Kwabla Kwao	0.78	0.78	Maize, Cassava
12	Tetteh Peter Kwao	1.02	0.78	Oil palm, Mango, Cassava, Pepper, Yam
13	Mensah Regina Ayorkor	0.4	0.4	Oil palm, Cassava, Maize, Yam
14	Atteh Kofi	1.15	1.11	Oil palm, cassava, Maize, Plantain
15	Amanor Kwame Isaac	1.65	1.02	Oil palm, Mango
16	Appiah Narteh	0.01	0.012	Oil palm, Plantain, Pepper
17	Kwaku Amediavor		0.02	Plantain, Cassava
BRIDGE - DORFOR ADIDOME				
18	Peter Kwame Zigi	1.42	0.6	Oil palm
19	Jacob Tsornyeli Nukpedu	2.01	0.05	Oil palm
20	Mary Kwao	0.38	0.13	Oil palm
21	Agbohla Francis For Agbohla Mawuena	0.14	0.14	Oil palm
22	Wisdom Azietor	1.14	0.67	Oil palm
23	Kwasi Dzetorme	3.14	0.34	Oil palm, Mango, Cassava, Maize
REST STOP - DORFOR ADIDOME				

24	Wisdom Azietor	1.28	1.17	Oil palm
25	Christiana Nukpedu	0.67	0.42	Oil palm
26	Ben Azietor	1.24	1.3	Oil palm
27	Jacob Nukpedu Tsornyeli	3.34	3	Oil palm
28	Moses Kabutey	0.83	0.33	Oil palm
29	Kwasi Dzetorme	3.53	1.06	Pawpaw, Cassava

Source: Field Survey

5.2 Demographics

5.2.1 Age and Sex Distribution

Of the 29 PAPs enumerated for the socio-economic survey, twenty-four (24) are males, representing 82.8 percent, while five (5) are females, making up 17.2 percent. The age range of PAPs was from twenty-one (21) years to over eighty (80) years. The age distribution of many (65.5%) of the PAPs falls within fifty-one (51) to eighty (80) years. The lowest number of PAPs recorded is those who aged above eighty (80) years (3.4 %) whereas about 6.9 percent are between forty-one (41) years and fifty (50) years. The data is presented below.

Table 5- 5: Age and Sex Distribution of PAPs

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
21 - 30	2	6.9	1	3.4	3	10.3
31 - 40	4	13.8			4	13.8
41 - 50	2	6.9			2	6.9
51 - 60	4	13.8	2	6.9	6	20.7
61 - 70	6	20.7	1	3.4	7	24.1
71 - 80	6	20.7			6	20.7
Over 80			1	3.4	1	3.4
Total	24	82.8	5	17.2	29	100.0

Source: Field Survey

5.2.2 Age and Sex Distribution of PAPs' Household Members

Majority of the total number of affected household members (143 out of 225) are above eighteen (18) years while about a third (36.4%) are below 18 years. The sex is well-balanced with 119 male and 106 female members.

Table 5-6 shows the age distribution by sex of the household members of PAPs.

Table 5- 6: Age and Sex Distribution of PAPs' Household Members

Age Range	Male		Female		Total	
	No.	%	No.	%	No.	%
Below 18 yrs.	46	20.4	36	16.0	82	36.4

18 yrs. and above	73	32.4	70	31.1	143	63.6
Total	119	52.9	106	47.1	225	100.0

Source: Field Survey

5.3 Occupation of PAPs

The twenty-nine (29) PAPs who were enumerated are into various occupations. Whereas four (4) PAPs are into masonry, shoe repair, security work and tailoring, twenty-five (25) PAPs representing 86.2 percent are all crop farmers. This is presented in the table below.

Table 5- 7: Occupation of PAPs

Occupation	No.	%
Crop Farmer	25	86.2
Mason	1	3.4
Cobbler	1	3.4
Security work	1	3.4
Tailor	1	3.4
Total	29	100.0

Source: Field Survey

5.4 Occupation of PAPs' Household Members

About sixty-eight (68) PAPs' household members are into various occupations. Whereas one (1; 1.15%) each of the PAPs' household members are teachers, cobblers and security personnel, three (3; 4.4%) each are seamstresses and masons respectively and twenty (20; 29.4%) are traders. On the other hand, the majority numbers of thirty-nine (39), representing 57.4 percent, are all crop farmers. This is presented in the table below.

Table 5- 8: Occupation of PAPs' Household Members

Occupation	No	%
Crop Farmer	39	57.4
Seamstress	3	4.4
Trader	20	29.4
Mason	3	4.4
Teacher	1	1.5
Cobbler	1	1.5
Security Personnel	1	1.5
Total	68	100.0

Source: Field Survey

5.5 Household Monthly Income

The survey on PAPs' household monthly income gathered that two (2) households each (representing

6.9 percent) earn 2001 – 2500 Ghana cedis and 2501 to 3000 Ghana cedis respectively. Four (4) PAPs indicated that their household monthly income is between 501 to 1000 Ghana cedis representing 13.8 percent, whereas six (6) household's income is between 150 – 500 Ghana cedis representing 20.7 percent. Eight (8) household monthly incomes are above 3000 Ghana cedis representing the highest percentage of 27.6 percent. The average income per household per month is GH¢ 1924.00. The data is presented below.

Table 5- 9: Household Monthly Income

Amount (GH¢)	No.	%
150 - 500	6	20.7
501 - 1000	4	13.8
1001 - 1500	7	24.1
2001 - 2500	2	6.9
2501 - 3000	2	6.9
Above 3000	8	27.6
Total	29	100.0

Average Income per Household = GH¢ 1,924.00 per month

5.6 Monthly Expenditure of PAPs Household

The table below presents the monthly expenditure of PAPs on the following items: food, health, education, transport and utilities (electricity/water). While almost all the PAPs spend on food (28 out of 29), only seven (7) spend on transportation. For those who spend on food, a quarter (25%) spends between GH¢201 and GH¢400, another quarter spends between GH¢601 and GH¢800, 17.9 percent spends between GH¢10 and GH¢200, 21.4 percent spends between GH¢401 and GH¢600, 3.6 percent spends between GH¢801 and GH¢1000, and 7.1 percent spends above GH¢1000. For those who spend on transportation, 57.1 percent spends between GH¢10 and GH¢200 while 42.9 percent spends between GH¢201 and GH¢400.

Table 5- 10: Monthly Expenditure of PAPs Household

Amount (GH¢)	Food		Health		Education		Transport		Utilities (Electricity / Water)	
	No.	%	No.	%	No.	%	No.	%	No.	%
10 - 200	5	17.9	11	47.8	7	33.3	4	57.1	14	77.8
201 - 400	7	25.0	6	26.1	7	33.3	3	42.9	1	5.6
401 - 600	6	21.4	4	17.4	2	9.5			2	11.1
601 - 800	7	25.0	2	8.7						0.0
801 - 1000	1	3.6								0.0
Above 1000	2	7.1			5	23.8			1	5.6
Total	28	100	23	100	21	100	7	100	18	100

Source: Field Survey

5.7 Household Asset Ownership

PAPs were asked about the type of assets owned by their households, majority (27) have ninety-three

(93) mobile phones representing an average number of 3 mobile phones owned by each of the household. Twenty-seven (27) numbers of households also owned thirty-nine (39) houses representing an average of 1 house owned by a household; whereas twenty-two televisions representing an average of 1 owned per household by sixteen (16) numbers of households who owns the asset. Private Vehicle and Canoe had one (1) each of both number of households who owned the asset as well as the total number of the assets owned respectively. The total number of radio owned by eighteen (18) numbers of households who owns asset is thirty (30) representing two (2) on the average number of assets owned per household. The data is presented below.

Table 5- 11: Household Asset Ownership

Type of Asset	No. of Households who owns asset	Total no. of assets owned	Average no. of assets owned per Household
Private Vehicle	1	1	1
Motor bikes	5	8	2
Bicycle	8	9	1
Television	16	22	1
Living Room Furniture	13	13	1
Canoe	1	1	1
Fishing Net	2	6	3
Mobile phones	27	93	3
House owned	27	39	1
Fridge/Freezer	15	17	1
Radio	18	30	2

Source: Field Survey

5.8 Resettlement/Compensation Preferences

PAPs were asked to describe what type of compensation should be given if their property and livelihood are affected during the construction of the bridge and rest stop. In response, majority (71.4%) of the PAPs suggested that compensations should be in monetary form. However, about 22.9 percent preferred in-kind compensation, 2.9 percent proposed scholarships for household children, and another 2.9 percent preferred houses as compensation. The data is presented below.

Table 5- 12: Suggested Types of Compensation for PAPs

Response	No.	%
House	1	2.9
In-kind compensation (Replacement of affected property)	8	22.9
Monetary compensation	25	71.4
Scholarships for household children	1	2.9
Total	35	100

Multiple Responses

Source: Field Survey

5.9 Preferred mode of payment for cash compensation

PAPs who opted for monetary compensation were asked of their preferred mode of payment. In response, the largest proportion (88 %) preferred to be paid through cheques whereas 8 percent prefer bank transfer. A further 4 percent prefer mobile money. Below is the presented data.

Table 5- 13: Preferred mode of payment for cash compensation

Preferred Mode	No.	%
Bank Transfer	2	8
Cheque	22	88
Mobile money	1	4
Total	25	100

Multiple Responses

Source: Field Survey

5.10 Positive Impacts of the Project

During PAPs' interviews, they came up with a number of positive impacts that could result from the project. These include attraction of other developmental projects i.e. drainage and utility services (10.4%), easy access to transport services and travel comfort (14.4%), employment for the skilled, unskilled and the youth (17.6%), boost in women's activities i.e. vending of food, provisions, etc. (11.2%), improvement in local economic activities (12.8%), and development and beautification of the community. The positive impacts brought up by the PAPs are tabulated below.

Table 5- 14: Positive Impacts of the Project

Positive Impacts	No.	%
Attraction of other developmental projects i.e. drainage, utility services	13	10.4
Reduction in cost of transportation and travel time	8	6.4
Reduction in rate of accidents	5	4
Easy access to transport service and travel comfort	18	14.4
Improvement in local economic activities	16	12.8
Creation of safe environment for people in the community	6	4.8
Reduction in dust levels in the community	2	1.6
Development and beautification of the community	13	10.4
Boost in women activities i.e. vending of food, provisions, etc.	14	11.2
Employment for the skilled, unskilled and the youth	22	17.6
Improvement in road infrastructure	8	6.4
Total	125	100

Multiple Responses

Source: Field Survey

5.11 Negative Impacts of the Project

The project is bound to affect the PAPs negatively in diverse ways. For the PAPs, five percent are of the view that diversions and road blocks will cause delays, traffic and inaccessibility, 18.3 percent are worried about the demolition of houses, properties and structures, and 13.3 percent are concerned about the loss of properties or decrease in the value of some businesses/shops. About a quarter (25%), on the other hand, see no negative impacts resulting from the project.

Table 5- 15: Negative Impacts of the Project

Negative Impacts	No.	%
Diversions and road blocks causing delays, traffic and inaccessibility	3	5.0
Too much noise from vehicles and people	1	1.7
Not enough space for pedestrians to use the road	2	3.3
Not enough space for pedestrians to use the road	2	3.3
Loss of properties or decrease in the value some of businesses/shops	8	13.3
Inconvenience to shops and houses due to trenches and gutters	4	6.7
Increase in criminality and prostitution	4	6.7
Influx of criminals into the community in the name of work	3	5.0
Likelihood that nature of road and the construction site may cause accidents	3	5.0
Disruption in supply of utility services	2	3.3
Increase in accidents due to over speeding and reckless driving	2	3.3
Demolition of houses, properties and structures	11	18.3
No negative impact	15	25.0
Total	60	100

Multiple Responses

Source: Field Survey

6.0 RECOMMENDED COMPENSATION

No resettlement is expected to take place as a result of the project and compensation is required mainly for land acquisition. It should be noted that in Ghana, compensation for the land will be provided to the land owners while that for the crops grown on the land will be given to the people that grow the crops rather than to the land owners. In either case, the form of compensation is likely to be provision of cash for this project reflecting the will of the PAPs.

Dorfor

6.1 Methods for Valuating Lost Properties

The methods adopted in this project by the GHA for valuating the value of land and other assets to be lost and subsequently the amount of compensation are the “replacement cost method” and “direct comparison method”. The structure and crops, including economic trees are assessed based on the replacement cost of the lost property while the land is assessed based on comparison of a number of transactions relating to plots similar to the subject land and located in similar neighbourhood. Using these two methods, the GHA aims to compensate for the full replacement cost of both the land and other assets to be lost as a result of the project.

In addition to the above two methods, there are other methods for appraising properties. These include the investment method. Nevertheless, this method is considered unsuitable for the project since it requires information on the rental net income flow in relation to the properties to be lost. The investment method is applicable in a situation where there is enough evidence of data on current sales of comparable properties in the subject neighbourhood). The three valuation methods are described in Table 6-1.

Table 6- 1: Description of the three Valuation Methods

Evaluation Method	Description
Replacement Cost Method	This method is based on the assumption that the value of a property tends to reflect the value of the subject plot plus the current cost of all improvements on the land after deducting any depreciation which might have accrued as a result of the use, age, curable and incurable defects and obsolescence among others. The method is normally adopted where there is no comparable market for the property under consideration. Also this is the only method that has been adopted for rating purposes under the Local Government Act 1993 (Act 462). Rates adopted in this method take the market condition in the construction industry into consideration. The value of the plot is however determined by the Direct Comparison Method.
Direct Comparison Method (Market Approach)	This method compares the worth of the subject with the worth of similar properties which have recently changed hands on the property market within the subject or similar neighbourhoods. The prices obtained for the comparable properties are analyzed and the evaluation will take into account the differences and similarities between them.
Investment Method	This method involves capitalization of the net annual income that accrues to a property by using an appropriate interest rate. The net income is derived by deducting outgoings such as rates, management cost, insurance, taxes, repairs, and so on from the gross annual income accruing to the property.

Source: GHA

It is worth noting that the expropriated person is entitled to compensation not only for the worth of the interest taken but losses he may suffer as a result of acquisition. Compensation sum is therefore in two parts; money for the interest taken and money for disturbance claim, (i.e. expenses incurred as a result of the compulsory taking of the land).

6.2 Organisations Responsible for Valuation

Two government agencies play an important role in valuating the lost assets and payment of entitlements to the PAPs: GHA valuation unit and the Land Valuation Division (LVD) of the Lands Commission. The RoW is defined by the GHA and identify the properties that are to be affected. The LVD and the GHA Valuation Unit conduct joint inspection/referencing of the affected properties. The LVD vets and approves the compensation sum each PAP is entitled to.

6.3 Criteria and Proof of Eligibility

The PAPs are eligible to receiving compensation and other forms of social support (other physical and emotional support for loss of livelihood / assets) for the land and assets lost at the time of the cut-off date. In the case of this project, a provisional cut-off date was initially set as the day the affected properties were identified and marked by GHA, which was the 5th of November, 2014. However, upon reviewing the RAP in 2019/2020, a new cut-off date has been established on 25th of February 2020. This day was the last of data collection. The actual counting and measuring of the affected assets was carried out during the detailed survey from December 2019 to February 2020 which serve as the *de facto* cut-off date for the project. Such compensation and support will take different forms depending on the type of losses incurred (cf. land as opposed to income-earning opportunity) and the title PAPs have over the lost property (cf. land with no title as opposed to land with legal ownership).

The GHA and LVD are willing to include various forms of evidence to prove whether one is eligible to receive such compensation or support. According to the RPF, the people eligible to receiving compensation include:

- Affected persons with formal legal rights documented in the form of land title registration certificates, leasehold indentures, tenancy agreements, rent receipts, building and planning permits, business operating licences, and utility bills, among others.
- Unprocessed/unregistered formal legal documents will not bar eligibility.

- Affected persons with no formal or recognised legal rights at the time but who have a claim to such land or assets (which becomes recognisable during the survey).

The entitlement matrix in Table 6-2 shows the assets that are considered to be affected by the project, the type of compensation and support such loss entails, and the person or entity eligible to receiving such compensation/reinstatement.

Table 6- 2: Entitlement Matrix for the Project

Type of Loss	Eligible Entity	Compensation	Responsible Organization
Land	Owner of land	Land-to-Land or Land-to-Cash compensation for lost plot of land at full replacement cost measured in open market price	MRH/GHA
Structure (Permanent)	Owner of structure	Cash compensation at full replacement cost measured in open market price	MRH/GHA
Valuable crops and trees	Owner of crops and trees	Cash compensation at full replacement cost measured in open market price	MRH/GHA
Power lines/poles	Power company (GRIDCo and ECG)	Cash compensation to cover the full cost for relocation and restoration of service (if applicable)	GHA/ECG/GRIDCo

Source: Study Team

6.4 Compensations for Different Categories of PAPs

6.4.1 Property Owners

People who have legitimate title over the land located within the project-affected area would receive compensation worth the replacement value of the lost land either as an additional area of land or as cash depending on the title holders' preference and availability of such land. In the case of the subject project, cash-based compensation is to be adopted for most, if not all, cases reflecting the preference of the PAPs.

6.4.2 Owners of Permanent and Non-Permanent Structures

It has been well established that no permanent structure will be affected by the project. However, in the event where any permanent structure is affected during implementation, owners of the permanent or immovable structures are entitled to receiving compensation for their structures at a replacement cost measured in market price. Owners of non-permanent or movable structures, on the other hand, are entitled to receiving supplemental assistance to cover the cost for relocating such structures if such transportation cost is considered necessary. It should be noted that such non-permanent structure is not expected to be affected by the project. No compensation will be provided to cover any part of the structure unless it is damaged in part or in full by the project.

6.4.3 Owners of Crops and Valuable Trees

All PAPs that possess crops (e.g. maize) and trees (e.g. mango trees) that are lost are entitled to receiving compensation measured in market price.

6.4.4 Electricity Companies

Power companies are entitled to receive the full cost for relocation and restoration of the power lines and power poles where such action is necessary. In addition, they should be entitled to compensation in one form or another if the business becomes affected due to relocation or removal of the power lines as a result of the project.

6.4.5 Others

There were limited numbers of fishermen found in the basic design stage that were receiving small cash payment by carrying passengers to the other side of the river using their canoes. These people had been considered to potentially lose this income-earning opportunity once the bridge has been completed. However, the share of this business in the fishermen's total income was found to be negligible at best through the income and livelihood survey conducted in the detailed design. It is therefore considered not necessary to provide compensation for this.

6.5 Vulnerability Analysis

Four (4) main indicators were used in assessing the vulnerability levels of PAPs as guided by the IFC Performance Standard 5. The factors used are as follows:

1. Female-Headed Household: Female PAPs who are household heads (breadwinners) and have dependents in their households are considered vulnerable.
2. Disability: PAPs with disability i.e. PAPs who have impediment in seeing (blindness), walking, hearing, etc.
3. Poverty: Households with incomes falling under the generally accepted indicator of poverty (Less than \$2 per day)
4. Age: PAPs who are 70 years old and above are considered old, and cannot work effectively as they used to.

6.5.1 PAPs Considered as Vulnerable

The table below presents a summary of the indicators used to categorize the vulnerability status of PAPs on the corridors of the project area.

Table 5- 16: Summary of Vulnerable Persons

#	INDICATORS
1	Female Headed Households with dependents
2	PAPs with disability
3	Households with incomes of less than \$2 per day
4	Elderly PAPs with no means of support

6.5.2 Vulnerability Scale

PAPs who are affected by at least one (1) of the above four (4) indicators are classified as vulnerable whilst PAPs who are affected by two (2) of the indicators are classified as more vulnerable. PAPs who are affected by three (3) of the indicators are classified as most vulnerable whilst PAPs affected by all four (4) indicators are classified as critically vulnerable as displayed in the table below.

Table 6- 3: Vulnerability Scale

#	SCALE OF VULNERABILITY	NUMBER OF INDICATORS	RATE FOR VULNERABILITY
1	Vulnerable	1 Indicator	2.5% of Compensation value
2	More Vulnerable	2 Indicators	5% of Compensation value
3	Most Vulnerable	3 Indicators	7.5% of Compensation value
4	Critically Vulnerable	4 or more Indicators	10% of Compensation value

The following numbers of PAPs and their household members were identified to be vulnerable during the survey: Ten males and one female were found to be vulnerable, one male and two females were found to be more vulnerable whilst one female was assessed to be critically vulnerable. Details of the indicators assessed are presented in the table below

Table 6- 4: PAPs and Household Members Identified to be Vulnerable

Vulnerability Scale	Vulnerable Indicators	Male		Female		Total	
		No.	%	No.	%	No.	%
Vulnerable	Elderly	6	40.0			5	33.3
	Female Headed Household			1	6.7	1	6.7
	PAP with Disability	4	26.7			4	26.7
Vulnerable Total		10	66.7	1	6.7	11	73.3

More Vulnerable	Elderly+Female Headed Household			1	6.7	1	6.7
	Elderly+PAP with Disability	1	6.7			1	6.7
	Female Headed Household+PAP with Disability			1	6.7	1	6.7
More Vulnerable Total		1	6.7	2	13.3	3	20.0
Critically Vulnerable	Elderly + Female Headed Household+PAP with Disability+Household with income less than US\$ 2 / day			1	6.7	1	6.7
Total		11	73.3	4	26.7	15	100.0

In order to have an equitable distribution of compensations, PAPs considered to be critically vulnerable were allocated higher values in terms of supplemental assistance followed by the most vulnerable, the more vulnerable and the vulnerable. The recommended additional compensation was also presented and have been calculated based on the compensation amount assessed by the Valuer.

6.5.3 Summary of Amounts Due Vulnerable Persons

A total amount of GH¢ 4,731.44 is assessed for all the 15 PAPs determined as vulnerable. The breakdown of the total amount is spelt out in the table below. Details of the assessed amounts for the individual PAPs are attached in the appendices.

Table 6- 5: Amounts Due Vulnerable Persons

Vulnerability Indicator	No. of PAPs	Amount (GH¢)
Vulnerable	11	3,498.78
More Vulnerable	3	935.87
Critically Vulnerable	1	296.79
Total	15	4,731.44

6.5.4 Summary of Estimated Compensation Values

The total estimated compensation required for all affected PAPs is **GH¢ 269,551.51**. The estimated value is made up of estimated cost of affected farms, land and vulnerability for Volivo and Dorfor Adidome for the bridge construction as well as the proposed rest stop. The table below provides details of the total compensations for all affected PAPs. Details of individual PAPs are shown in appendices.

Table 6- 6: Summary of Compensation Values

Description	No. of Farms	Estimated Crop Compensation Value (GH¢)	Estimated Land Compensation Value (GH¢)	Total Value (Land + Crops) (GH¢)	Vulnerability Amount (GH¢)	Total Compensation
Volivo	20	50,938.67	57,208.11	108,146.78	1,542.97	109,689.75
Dorfor-Adidome	6	12,662.13	42,378.28	55,040.41	1,011.88	56,052.29
Dorfor Rest Stop	6	45,557.60	56,075.27	101,632.87	2,176.59	103,809.46
Total	32	109,158.41	155,661.66	264,820.07	4,731.44	269,551.51

7.0 GRIEVANCE REDRESS PROCEDURES

The objective of the Grievance Redress Procedure is to address and resolve grievances or complaints from affected persons promptly, fairly, and in a manner that is, to the extent possible, acceptable to all parties. The following principles will be applied:

- Provide straightforward and accessible ways for affected persons to voice complaints or resolve any disputes that might arise related to Project implementation;
- Seek solutions to any tensions and conflicts early on, to avoid the use of a ‘firefighting’ approach
- Identify and implement appropriate and mutually acceptable actions to address complaints;
- Respond in a timely manner, and with sensitivity to the needs of complainants
- Ensure that claimants are satisfied with outcomes of the corrective actions, and maintain a dialogue with them to the extent possible; and
- Avoid resorting to higher levels of adjudication, such as judicial proceedings, as much as possible.

7.1 Institutional Arrangements for Redressing Grievances

It is expected that all grievances would be addressed amicably at the committee level. However, in the unlikely case that a particular issue proves difficult to address, the complainant has the option of seeking redress at a higher level i.e. court of law.

7.3 Grievance Procedures

All grievances will be received by the Grievance Committee (GC), which will be made up of the following officers of GHA; Director of survey & Design, the Chief Valuer, Manager of EMU and the Chief Legal Officer, Manager of EMU, representative from the relevant District Assembly and a representative of the PAPs. The GC will respond to any grievances that the PAPs may have during the RAP implementation.

There will be two contact people from the GC to attend to all complaints as the first step by recording all complaints. The record will include name and contact of complainant, issue of complaint, date and time and receiving officer. The complainant will verify that the complaint lodged has been appropriately captured on the complaints sheet (to be designed and provided by GHA/Environmental Management Unit).

The grievances most likely to occur during the implementation of the RAP may include the following:

- Disagreement over compensation amount assigned
- Delays in receiving compensation
- Disagreement over asset ownership
- Disagreement over proportionate sharing of assets with joint ownership
- How PAPs with lost identity documents can receive their compensations

The details of each grievance will be recorded on a Grievance Form, along with name and address of the applicant, the application date, type of application, and the name of the officer receiving the grievance. A database of recording grievances along the lines described above will also be developed. In receiving the grievances of vulnerable affected persons (e.g. women, those above 70, the illiterate, or the physically challenged), the GHA's EMU shall pay particular attention to any special needs, difficulties or concerns that they may have. In all instances parties are advised to resolve the issue amicably; where there is no understanding they are encouraged to go to court for the issue to be resolved and report the outcome to the Authority.

The steps for grievance redress are as follows:

- (1) Designated PAP representatives already serving on the GC shall receive grievances/complaints for the attention of the Grievance Committee. The GC shall inform the complainants on the status of their grievances within 7 days after the application.
- (2) If the grievance can be resolved by the GC (i.e., if it necessitates no consultation with other organizations), possible corrective actions will be determined within 10 days. If resolution of grievance is seen to require commitment beyond the Grievance Committee, the members shall coordinate and consult with the relevant officials. In such cases, the time frame for the determination of possible corrective actions shall be 15 days.
- (3) A complainant is allowed to procure the services of a private valuer at no cost to the PAP who would help that person determine an acceptable compensation. This can be presented to the committee as a grievance. The GC will investigate the compensation complaints.
- (4) The Committee will communicate their proposed solution to the complainant.
- (5) There are adequate measures put in place for negotiation where the PAP engages the services of the Private Valuer. The compensation amount is communicated to the PAPs for acceptance before same is communicated to the GHA'

- (6) If the said GC recommends payment of the claim, then the GHA Environmental Management Unit would ensure that it is done before the structure under review is taken over.
- (7) Once an agreement has been reached between the applicant and the responsible party on the corrective actions, the applicant will be asked to sign off the grievance closeout form on his/her acceptance of the solution.
- (8) If the applicant remains dissatisfied with the outcome, additional corrective action will be agreed on and carried out by the responsible party.
- (9) Whenever a complainant's claim cannot be resolved satisfactorily, the aggrieved PAPs / claimants are permitted to seek redress in the Court of law as the law resort as provided under Section 20 under Chapter 5 of the Constitution of the Republic of Ghana.

8.0 INSTITUTIONAL RESPONSIBILITY FOR IMPLEMENTATION

Several organizations will work hand in hand during the implementation of the ARAP. These are the Ghana Highway Authority (GHA), Lands Commission (LC) / Lands Valuation Division (LVD), Metropolitan, Municipal, and District Assemblies, Land Use and Spatial Planning Authority, Environmental Protection Authority, Utility Agencies and the Attorney General's Department. Their roles on the project are detailed below.

8.1 Ghana Highway Authority

As the implementing agency, the GHA has the ultimate responsibility for implementing the ARAP for the project. Through its Road Safety and Environment Division as well as the Valuation Section under the Contract Division, the GHA is directly responsible for ensuring that compensation and/or supplemental assistance is provided to every PAP entitled to receiving them in a timely manner.

The GHA will also work in collaboration with local officials to secure the area of land needed for construction. The GHA will inform the Municipal Assembly about the date it plans to start clearing the land so that the PAPs can also be informed in advance. The EMU under the GHA has two environmental officers/engineers who have oversight on environmental and social issues of the road sector. The Unit has direct responsibility over operations concerned with the social impact including those affected as a result of resettlement and land acquisition.

8.2 Lands Commission/Land Valuation Division

The LC, through the LVD and the Public and Vested Lands Management Division that are under the LC, values the land, buildings, economic activities and any other valuable assets that would be affected by the project and estimates the level of compensation that is considered appropriate for each PAP.

Formerly known as the Land Valuation Board, the LVD was formally set up in 1986 to perform functions related to the valuation of various properties for specified purposes. The LVD is accordingly the statutory agency responsible for processing compensation claims on compulsory land acquisitions. The LVD will be supported by the GHA in identifying permanent and temporary structures and determining the appropriate level of compensation to be made. The list showing the estimated monetary value of the affected assets will be forwarded to the GHA for payment.

8.3 Metropolitan, Municipal and District Assemblies

The Assemblies play a key role in carrying out resettlement, relocation and land acquisition. They also serve as fora for public education and community consultations. Some of the administrative structures of the Assemblies, namely the offices of the Assemblyman and the Unit Committees, normally inform and educate the people living in the project area about the intended projects, their impact and proposed mitigation measures. The Assembly members also act as witnesses for making payment or providing supplemental assistance to the PAPs. For the subject project, the Assemblymen will coordinate the interests of the PAPs and also serve as mediators between the GHA and the PAPs. The District Assemblies will also assist the GHA in identifying rightful owners of the properties and crops and in awarding compensation to the PAPs.

8.4 Land Use and Spatial Planning Authority

The Land Use and Spatial Planning Authority (formerly the Town and Country Planning Department) and was set up, among others, to ensure that development is carried out in an orderly manner and land use is maximised. It is responsible for preparing town and city plans. It also vets and approves designs from prospective developers, especially private estate developers, and specifies all reservations based on projected landuse plans. The Authority receives applications for development permits, vets them and recommends their approval or otherwise. The Authority ensures that the ROW is implemented according to the approved planning schemes.

8.5 Environmental Protection Agency

EPA was established by the EPA Act of 1994 (Act 490). The EPA is charged with the duty of prescribing standards and guidelines relating to environmental protection and/or pollution. The Agency may, by giving notice in writing, direct any developer carrying out a project to conduct an EIA and submit an EIA report. The Environmental Assessment Regulation of 1999 lists developments that require clearance with the EPA. Roads are one of the undertakings that require registration and an environmental permit, and the construction of roads and highways is one of the undertakings for which an EIA is mandatory for the issuance of an environmental permit.

8.6 Utility Agencies

The Utility companies that may play a role in this project are the electricity companies, namely GRIDCo

and ECG. GRIDCo will relocate the power lines and poles and ECG will disconnect and reconnect the PAPs to their services before and after relocation as the case may be.

8.7 Attorney General's Department

The Attorney General's Department has redress mechanisms in place for aggrieved persons. Affected persons who are not satisfied with the compensation due them are empowered by the Constitution to seek redress in a court of law as explained in "Chapter 7: Grievance Redress Procedures". In such cases, the Attorney General's Department represents the government in the court's proceedings. The Department is also responsible for drafting the executive instrument for acquiring the land needed for the project.

9.0 SCHEDULE FOR IMPLEMENTATION

The procedures for land acquisition and compensation of persons adversely affected by the project are guided by the RPF. The activities that are to be carried out at this stage and in the future, organisation(s) responsible, and the approximate timeframe are shown in Table 9-1.

Table 9- 1: Operational Procedures of Land Acquisition and Responsible Authorities

No.	Activity	Responsible Organization	General Timeframe
1	Consultations, planning and preparation of A-RAP (draft)	GHA	1 month
2	Disclosure of A-RAP (draft)	GHA/MRH	3 weeks
3	External monitoring and approval	EPA, NGO, Donors	1 year
4	Gazette/publishing of E.I.	Lands Commission, Attorney General's Office, Ministry of Land, Forestry and Mines	6 months
5	Marking of affected properties Preparing of inventory of affected properties Notifications Request for proof of eligibility Consultations	GHA, LVD, Local Assembly	1 week
6	Valuation of properties	LVD, GHA	1-2 weeks
7	Establishing of committees The Grievance Redress Committee establishes procedures for dispute resolutions The Payment Committee establishes payment modalities	GHA/MRH/LVD GHA/MRH/LVD	1 week
8	Disclosure of values Making of offers Processing for payments	GHA/MRH	1-2 weeks
9	Release of funds for payment	Ministry of Finance and Economic Planning, GHA/MRH	6 months
10	Payment	Payment Committee (GHA/MRH, LVD)	1 week
11	Grievance and dispute resolution	Grievance Redress Committee (GHA/MRH/LVD)	(normally) 1 month
12	Taking possession of site	GHA	2-3 weeks
13	External monitoring	EPA, NGO, Donors	1 year
14	Representing government for any law court redress cases	MRH/GHA, LVD, Attorney General's Office	1 year
15	Preparation of monitoring and evaluation report of A-RAP and disclosure	GHA/MRH, EPA	2 months

Source: RPF and Study Team

9.1 Disclosure of ARAP

The GHA (i.e. head office) will disclose the ARAP through news media and the MRH's website and will inform the PAPs. Hard copies of the ARAP will also be placed in the offices of the GHA (i.e. head office and relevant assemblies) for public viewing throughout the construction stage of the project.

9.2 Formation of Grievance Redress Committee

The GHA will prepare the terms of reference for the Grievance Redress Committee specifying the number, membership, and sitting days. The Grievance Redress Committee membership is as defined in “Chapter 7: Grievance Redress Procedures” above.

9.3 Payment of Compensation

The LVD will process compensation for the PAPs and the GHA will make payment upon completion of the necessary documentation process. More specifically:

- PAPs due for compensation or additional compensation shall confirm their entitlements through the GHA.
- Complaints regarding the amount of compensation for affected structures shall be referred from the Grievance Redress Committee to the LVD. A meeting will be set up between the complainant and his/her valuer and the LVD where the independent valuer will be required to state the rationale and rates used to arrive at the compensation claim. After the negotiations with the complainant, the LVD shall forward its decision to the Grievance Redress Committee.
- Once the LVD recommends payment, the GHA shall ensure that payment has been effected before the structure in question is demolished.

In providing compensation, a team is formed: comprised of a staff from the Finance Division and Valuation Section of the GHA as well as an opinion leader, that helps in identifying rightful owners of the affected properties. After the claimant submits his/her identification card, a passport photograph is taken of them holding a tag to their chests with their names written on them. The claimant will sign the payment voucher and receipts. The duplicate copy of the receipt is kept at GHA for record purposes while the original receipts and undertaking are given to the PAP. Land acquisition needs to be completed physically prior to commencement of construction yet effectively before commencement of the tendering process for the construction, according to JICA’s rules.

10.0 PROPERTY IMPACT ASSESSMENT

10.1 Identification of Losses & Inventory of Affected Assets and Persons

The nature and extent of property loss was assessed taking into consideration whether impact was permanent/temporarily, partial or full and on what type of property, whether moveable or immovable properties. Impacts on the likely to be affected properties were:

- Permanent loss of agricultural or farming land for crop farming;
- Loss of farm crops being perennial (tree) crops and food crops; and
- Disturbance to owners' livelihood.

Table 10- 1: Total Number of Farms Identified and Surveyed

Area	Number of Farms	Number of Owners	Comment
Dorfor Adidome	6	6	3 Owners have 2 of their farms affected
Dorfor Rest Stop	6		
Volivo	20	17	1 Owner has 4 farms affected

Source: Field Survey

10.1.2 Nature of Farm Crops Affected

The study collated personal data of PAPs as per their national identification cards as well as the contact details of representatives in the event that they are absent. Property data collection entailed physical inspection to ascertain the physical characteristics. The farm inspection process involved having each farmer show the boundary of their farm and taking the physical measurements of the affected land area. This was also sketched down on paper. Additionally, data entailed taking GPS coordinates of the farm. Within each farm boundary established, the Valuation team inspected the crops to obtain crop specific data in conformity with the requirements of Form F of the Lands Valuation Division. Collating crop specific data entailed identifying dominant crop, interspersed crop (if any), planting densities/voids, and growth stage/age. The farm inspection forms were filled out to include personal data of crop farmers as well as land owners.

Table 10- 2: Perennial Crops and Food Crops Identified

Perennial Crops	Food Crops
Oil Palm (Agric)	Cassava
Mango	Maize
Pawpaw	Yam
Plantain	Pepper

Data collated shows that farmers within the Dorfor area were perennial crop farmers whilst farmers at Volivo were mainly mixed crop farmers as shown below:

Table 10- 3: Crops Grown by Farmers at Volivo and Dorfor Adidome

Crop Farm Type	Dorfor Adidome	Dorfor Rest Stop	Volivo
Mono-food Crop	0	0	4
Mixed-Food Crop	1	0	4
Mono-Cash Crop	4	4	3
Mixed-Cash Crop	0	0	1
Mixed Crop	1	2	7
Uncultivated Land	0	0	1

Source: Field Survey

Crops were mainly found at matured stage, for as noted, only two oil palm farms have perennial crops which were are medium stage. However, plantain farms were mainly at medium stage and food crops were also at matured stage.

Data on crop and land ownership shows that most (25 out of the 32) of the identified farms were owner farms, with 7 being crop owners only.

Table 10- 4: Number of PAPs Who Owned Both Land and Crops Against Those Who Owned Just Crops

Area	Land & Crop Owner	Crop Owner only
Dorfor Adidome	6	0
Dorfor Rest Stop	5	1
Volivo	13	6

Source: Field Survey

10.2 BASIS & METHOD OF VALUATION

The basis of valuation is the Market Value and it is defined as “the best price at which the sale of an interest in property may reasonably be expected to have been completed unconditionally for cash consideration on the date of valuation”. Property valuation is guided by professional practices and standards, and must be undertaken in conformity to the practices and standards of the Ghana Institution

of Surveyors, the Land Valuation Division of the Lands Commission and the MRH’s RPF and guidance notes and regulations of international agencies, for this specific assignment.

Hence, for the purpose of this valuation, the Full Replacement Cost of affected assets is assessed.

Replacement cost is defined as the market value of the assets plus transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. Market value is defined as the value required to allow Affected Communities and persons to replace lost assets with assets of similar value (IFC Performance Standards, 2012).

10.2.1 Market Values of Farm Lands

Forming part of the study, limitations of the study include title and tenure verification and validation for the determination of tenure of interest held. This study therefore does not examine the legal title and tenure to landed assets but assesses the value of land for individuals identified on the assumption that good titles are held. Being rural and indigenous communities, it is observed from the land tenure systems that lands are most held by individual usufructs (customary freeholders).

It was noted that there are hardly no land transactions especially land for agricultural use, thus market evidence of such transactions were virtually non-existent. Discussions with the traditional authorities and assembly members revealed that land for agricultural purposes were practically free and in instances where cash transactions occur, these are usually “drink money” which range from GH¢1,500.00 to GH¢3,500.00 per acre. For the purpose of analysis and comparison, information on land values for developable (urban use) were obtained and shows that these land values range from GH¢16,000.00 to GH¢26,000.00 per acre for leasehold terms of 60 to 99 years. Having carefully considered the type of interest held in these farm lands, namely customary freeholds, an analysed unit rate of GH¢4,680.00 was adopted.

10.2.2 Compensation Values for Food Crops & Perennial (Trees) Crops

Crop & Tree Values - Food, cash and tree crops rates per acre were obtained from the Lands Valuation Division and adopted for the assessment of the interim values. These are the 2018 rates, and an upward adjustment factor of 12% and 15% were made for perennial (tree) crops and food crops respectively to reflect prices of March 2020. The table presents rates of identified crops and trees.

Table 10- 5: Rates of Identified Crops and Trees

FOOD CROPS	SMALL RATE / ACRE (¢)	MEDIUM RATE / ACRE (¢)	MATURED RATE / ACRE (¢)
Maize	1,744.00	1,988.00	2,156.00
Pepper	2,790.00	3,194.00	3,451.00

Cassava	1,801.00	1,949.00	2,096.00
Yam	3,445.00	3,655.00	3,822.00
Plantain	4,225.50	6,381.00	9,702.00
Pawpaw	2,323.8	2,703.81	3,265.52
Oil Palm (Agric)	4,018.90	5,049.27	5,417.08
Mango	4,131.19	4,806.77	5,805.37

Disturbance Allowance - Provision of 10% was added to assess crop values to arrive at Full Replacement Cost of food crops and perennial crops.

Vulnerability Allowance - Additional support was provided for affected farmers with vulnerability.

Farm Land Values - Having identified farm land owners from farm crop owners, the Valuation List presents the Estimated Market Value of farm lands separated from the Estimated Replacement Cost Value of the farm crop.

10.3 Summary of Values

The table below shows the estimated compensation required for all affected PAPs

Table 10- 6: Summary of Values

Description	No. of Farms	Estimated Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis	Total Value (Land + Crops)	Vulnerability Amount (GH¢)	Total Compensation
Volivo	20	50,938.67	57,208.11	108,146.78	1,542.97	109,689.75
Dorfor-Adidome	6	12,662.13	42,378.28	55,040.41	1,011.88	56,052.29
Dorfor Rest Stop	6	45,557.60	56,075.27	101,632.87	2,176.59	103,809.46
Total	32	109,158.41	155,661.66	264,820.07	4,731.44	269,551.51

Source: Base on Field Survey

Note: Details of individual compensations are attached separately as appendices

11.0 ESTIMATED COSTS FOR ACQUISITION

11.1 Estimated Cost for Land Acquisition

Based on the lost asset inventory survey, the estimated amount of compensation that is needed for the project has been assessed. The total amount of compensation for the actual land acquisition is estimated to be GHS 155,661.66 while that for valuable trees and crops is to be GHS 109,158.41. In addition, an amount of GHS 4,731.11 will be required to compensate vulnerable PAPs who will lose their livelihoods. The cost involved in the purification of the baobab trees prior to removal would be covered by the GHA, of which the details are provided in section 13.2. This will have to be done in a way that is in accordance with their religious beliefs. Power poles would be relocated based on discussions and coordination with the electricity company/companies, if this is considered necessary. A breakdown of the estimation is shown in Table 11-1 and 11-2. In addition, roughly 25 % of the total cost would be required to cover the cost for administration, monitoring, and evaluation.

Table 11- 1: Estimated Amount of Compensation for Project Affected Assets

Type	Item	Location	Owner	Amount of Compensation
Land	Bridge	Volivo	PAPs	57,208.11
		Dorfor Adidome	PAPs	42,378.28
	Rest Stop	Dorfor Adidome	PAPs	56,075.27
Crops and Tree	Bridge	Volivo	PAPs	50,938.67
		Dorfor Adidome	PAPs	12,662.13
	Rest Stop	Dorfor Adidome	PAPs	45,557.60
	Vulnerable PAPs		All	4,731.44
Religious Asset	Baobab Tree	Dorfor Adidome	Dorfor Adidome Community	Items for performing the ritual would be provided by the GHA (*Refer to “Chapter 12 Public Consultation”)
Power Lines	Pole	Volivo	GRIDCo	No Cost is expected to date
	Pole	Dorfor Adidome	GRIDCo	No Cost is expected to date

Source: Based on Field Survey

Table 11- 2: Breakdown of Compensations for Individual PAPs

#	Names of PAPs	Affected Property		Compensation Values (GH¢)			Total Compensation (GH¢)
		Size of Farm land	Size of Crop Area	Crops Cultivated	Crops (GH¢)	Land (GH¢)	
BRIDGE - VOLIVO							
1	Kwabla Kwao	0.96	0.72	Cassava	1,909.04	1,909.04	1,909.04
2	Philip Kwabla Amanor	0.96	0.96	Oil palm	6,406.89	4,943.27	11,350.16
3	Amanor Darkey	3.44	2.55	Oil Palm, Cassava, Maize	11,056.04	17,713.41	28,769.45
4	Henry Tetteh For Blessed Nartey	0.34	0.34	Maize	1,053.75	1,750.74	2,804.49
5	Joseph Amanor Odonkor	0.28	0.28	Maize	763.66	1,441.79	2,205.45
6	Narkotu Bernice Maku	0.23	0.23	Cassava, Maize	1,237.12	1,184.33	2,421.45
7	Adjo Kwao	0.06	0.06	Maize	163.64	308.95	472.59
8	Emmanuel Kwao	0.36	0.11	Oil palm, Cassava	514.12	1,853.73	2,367.85
9	Kwaku Amediavor		0.8	Plantain, Yam	5,654.99		5,654.99
10	Honyadzi Tetteh	0.43				2,214.18	2,214.18
11	Kwabla Kwao	0.78	0.78	Maize, Cassava	2,215.19	4,016.41	6,231.60
12	Tetteh Peter Kwao	1.02	0.78	Oil palm, Mango, Cassava, Pepper, Yam	4,197.45	5,252.23	9,449.68
13	Mensah Regina Ayorkor	0.4	0.4	Oil palm, Cassava, Maize, Yam	3,296.35	2,059.70	5,356.05
14	Atteh Kofi	1.15	1.11	Oil palm, cassava, Maize, Plantain	3,764.41	5,921.63	9,686.04
							484.30
							10,170.34

#	Names of PAs		Affected Property		Compensation Values (GH¢)			Total Compensation (GH¢)	
			Size of Farm land	Size of Crop Area	Crops Cultivated	Crops (GH¢)	Land (GH¢)		Total (Land + Crops) (GH¢)
15	Amanor Kwame Isaac	1.65	1.02	Oil palm, Mango	6,874.48	8,496.25	15,370.73	15,370.73	
16	Appiah Narteh	0.01	0.012	Oil palm, Plantain, Pepper	823.62	51.49	875.11	896.99	
17	Kwaku Amediavor	0.02	0.02	Plantain, Cassava	1,007.94		1,007.94	1,007.94	
BRIDGE - DORFOR ADIDOME									
18	Peter Kwame Zigi	1.42	0.6	Oil palm	4,004.31	7,311.93	11,316.24	11,316.24	
19	Jacob Tsorniyeli Nukpedu	2.01	0.05	Oil palm	379.2	10,349.98	10,729.18	10,997.41	
20	Mary Kwao	0.38	0.13	Oil palm	1,011.19	1,956.71	2,967.90	3,264.69	
21	AGBOHLA FRANCIS For AGBOHLA MAWUENYA	0.14	0.14	Oil palm	1,112.31	720.89	1,833.20	1,833.20	
22	Wisdom Aziator	1.14	0.67	Oil palm	4,449.23	5,870.14	10,319.37	10,319.37	
23	Kwasi Dzetorme	3.14	0.34	Oil palm, Mango, Cassava, Maize	1,705.91	16,168.63	17,874.54	18,321.40	
REST STOP - DORFOR ADIDOME									
24	Wisdom Aziator	1.28	1.17	Oil palm	7,786.15	6,591.03	14,377.18	14,377.18	
25	Christiana Nukpedu	0.67	0.42	Oil palm	3,159.96	3,449.99	6,609.95	6,940.45	
26	Ben Aziator	1.24	1.3	Oil palm	8554.1176	6,385.06	14,939.18	15,312.66	
27	Jacob Nukpedu Tsorniyeli	3.34	3	Oil palm	22,751.74	17,198.48	39,950.22	40,948.98	
28	Moses Kabutey	0.83	0.33	Oil palm	2,527.97	4,273.87	6,801.84	6,801.84	
29	Kwasi Dzetorme	3.53	1.06	Pawpaw, Cassava	777.66	18,176.83	18,954.49	19,428.35	
Total							264,820.09	4,731.44	269,551.53

Source: Base on Field Survey

11.2 Source of Funding

The ODA loan provided by JICA will cover much of the cost needed for the project. Nevertheless, items such as the costs for land acquisition and compensation, taxes and duties, and administration of the executing agency cannot be covered by the ODA loan financing based on the Japanese ODA policy (Chapter V, Operational Guidance on the Preparation for Japan's ODA Loan Projects). Thus, the GoG needs to secure the necessary budget to cover such costs. The general conditions of Japanese ODA loans are available from the following websites.

Official Development Assistance Loans	http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/index.html
Operational Guidance on the Preparation for Japan's ODA Loan Projects	http://www.jica.go.jp/english/our_work/types_of_assistance/oda_loans/oda_op_info/guidance/index.html

Source: Study Team

12.0 MONITORING, EVALUATION AND AUDIT

12.1 Monitoring and Evaluation

Activities stipulated in the ARAP prepared by the GHA shall be monitored regularly to ensure that they proceed in accordance with the ARAP. The GHA will establish two monitoring mechanisms in implementing the ARAP: internal monitoring; and external monitoring.

Internal monitoring will be carried out by the EMU of the GHA, the MRH and other organisations to ensure that the GHA's Project Implementation Committee follows the schedule and abides by the principles of the ARAP. The services of an external monitoring organisation such as the EPA will be procured to regularly conduct independent monitoring and evaluation of the activities stipulated in the ARAP. The purpose of independent monitoring is to provide an evaluation and to review the overall implementation from a broad, long-term and objective point of view. The roles and responsibilities of the organisations concerned with monitoring of the ARAP are described in Table 12-1. The monitoring activities including the indicators, means of verification and time of implementation are presented in Table 12-2.

Table 12- 1: Role and Responsibility for Monitoring A-RAP Implementation

Responsible Organization	Role and Responsibility
GHA (Environmental Management Unit)	<u>Lead the periodic and day-to-day monitoring</u>
Policy Planning Section and Monitoring and Evaluation Section of the MRH	<u>Lead and coordinate both internal and external monitoring of A-RAP implementation</u>
LVD	<u>Carry out regular monitoring to ensure that the approved compensation is made</u>
EPA	<u>Carry out periodic monitoring on project implementation and its environmental impacts</u>
District Assemblies	<u>Carry out periodic monitoring on project implementation and other developments induced by it</u>
External Consultants	<u>Carry out periodic monitoring, evaluation and auditing of implementation of the A-RAP</u>

Source: GHA

Table 12- 2: Activity, Indicator, and Period of Monitoring

Monitoring Activity	Month into the Project						Monitoring Indicator	Means of Verification
	1	2	3	4	5	• • •		
Education and awareness building about A-RAP and compensation							Number of workshop and community member covered	Report

Provision of compensation							Number of PAPs compensated	Report, name, picture, address and signature of PAPs compensated
Interaction with PAPs to identify any problem							Number of grievance registered and solved	Report or minutes
Follow-up meetings with PAPs and visits to address problems							Number and location of follow-up meeting	Report or minutes and extent of compliance to recommendation

Source: GHA

12.2 Completion Audit

In addition to periodic monitoring and evaluation that would be carried out during the planned project period, an audit will take place upon the project's completion to determine whether the efforts to restore the living standards of the PAPs have been properly designed and executed. The completion audit will verify that all physical inputs earmarked in the ARAP have been delivered and all services have been provided. The audit will also evaluate if mitigation actions prescribed in the ARAP have had the desired effect. The baseline conditions of the PAPs before land acquisition will be used as a measure against their socio-economic status after land acquisition. The audit will:

- Appraise the extent of achievement of the activities related to land acquisition;
- Gauge the level of satisfaction of the PAPs;
- Measure the socio-economic status of the PAPs; and
- Assess the adequacy of the planned actions carried out.

The following methods will be employed to carry out the evaluation:

- Consultation;
- Focus group discussion; and
- Interview to determine:
 - ❖ Completion of payment to PAPs;
 - ❖ Extent of recovery of farming activities;
 - ❖ Any expansion or shrinkage of livelihood;
 - ❖ Problems encountered; and

◇ General perception towards the project.

To be effective, the completion audit will take place after all ARAP activities have been completed but before the financial commitments to the program are finished. This will allow any corrective actions that the auditors may recommend to be carried out before the project is completed.

13.0 STAKEHOLDER CONSULTATION

Various engagements and consultations have been held with relevant stakeholders and the project affected communities over the years since the inception of this project from 2014. As part of the requirements by EPA and JICA, engagements were held to seek the views, perspectives and concerns of the stakeholders about the project.

As part of the review of the ESIA process on the bridge project over the Volta River, community and stakeholder consultations have been held to effectively provide some concerns and opinions regarding the project before its implementation. PAPs, opinion leaders and community members had the opportunity to make meaningful contributions to the project. In addition, the consultations provided participants the opportunity to point out major concerns regarding the previous consultations held in 2014.

13.1 Meetings Held

The initial stakeholder consultations involved meetings with concerned individuals. The objective was to inform them about the project as well as discuss the environmental and social issues of the proposed bridge as well as the mitigation measures that would be necessary.

As part of the review exercise for the construction of the bridge, further consultations have been carried out with stakeholders, community members and PAPs. The consultations were held to point out to them the need for a review of the exercise carried out in 2016. Again, the consultations seek to incorporate their perspectives and concerns into the project. The discussions were held on the 14th and 15th of January 2020 at Volivo and Dorfor Adidome respectively. In addition, consultations with the PAPs were also done within the same period. The PAPs' census survey was also carried out within four (4) days from the 14th January 2020 to 17th January 2020.

13.2 Overview of Meetings

It has been confirmed by the survey that no residential land, permanent house or building will be affected by the project on either the Volivo or the Adidome side of the bridge. There are, however, some crop

farms that would be impacted. On the Dorfor Adidome side of the bridge, the two Sacred Baobab trees that were initially in the ROW are still affected by the revised design. In addition, there are electric power poles in the ROW that belong to GRIDCo, a state institution in charge of electric power distribution. On the other side, the Adidome Cemetery which used to be in the ROW, is no longer affected due to the revised design.

No objections to the proposed projects were made. In general, the attendants agreed with the proposed project and are looking forward to seeing them being implemented. Details of affected persons can be found in tables 5-2 and 5-3 above.

Further discussions with the community members, opinion leaders and Assemblymen revealed that there is still a need for rituals to be performed before the baobab trees are uprooted. A list of items (tabulated below) needed for performing the rituals was provided.

Table 13- 1: Items Needed for Performing Ritual for Removing Sacred Baobab Trees

Items	Quantity
Billy goats	2
Fowls	1 red and 1 white
Rum	1 bottle
Local gin (<i>Akpeteshie</i>)	1 bottle
Schnapps	12 bottles
Sweet corn drink	5 gallons
Soft drink	6 bottles
White calico	2 pieces
Fund	GH¢ 5,000

Source: Field Survey

13.2.1 Issues and Concerns Raised

Below are some of the concerns raised by the people during the meeting:

- ❖ The people raised concerns that there are no documents for some of their lands because they inherited it directly from their forefathers. They therefore suggested that other alternative measures be used to identify the rightful owners. This includes confirmation by community elders and neighbouring farmers who share common boundaries.
- ❖ PAPs are of the view that ever since the first visit from about six years ago, pictures of PAPs' farmland were taken and they were asked to stop farming on those lands because of the project. They have advised that some considerations should be made when calculating their compensation to include losses made over the past years. The people also requested that since the project is taking away their lands, which has been their only source of livelihood, they wish to be engaged as workers during the project implementation.

- ❖ They also advised GHA to be diligent in selecting contractors for the construction of the bridge. A contractor who is devoid of corruption is the one they opt for.
- ❖ Land may be destroyed by construction activities that will take place; rendering some completely unusable in the process. It was suggested that some environmental measures should be put in place to restore some of the land after construction.
- ❖ Accident rates may be on the rise on the approach roads. Community members suggested that traffic regulations such as pedestrian walkways and flagmen should be put in place to control the incidence of road accidents.
- ❖ Burrow pits dug during the construction of the road should be recreated into dugouts to provide water for livestock.
- ❖ Construction materials, especially toxic chemicals, that may be used for the project should be properly disposed of in order not to cause any damage to the water bodies.
- ❖ Community members asserted that every proposed project is anticipated to lead to increased rates of child trafficking and child labour. Again, cyber-crime may be on the rise. It was suggested that security measures should be enhanced within the communities. The number of police officers should be increased in the districts.
- ❖ The police should follow up on reported cases of rape and defilement that may arise during the implementation of the proposed project. Some pictures from the various consultations are shown below.



Photograph 13- 1: Community Consultations at Volivo



Photograph 13- 2: Community Consultations at Dorfor Adidome

Source: Field Survey

13.3 Future Consultations

The initial consultations during the design phase and ESIA study should be followed by more consultations during the construction and operation phases. On the part on the contractor, he is advised to consult with the locals to avoid creating nuisances. The GHA will also consult North Tongu Municipal Assembly, Shai Osudoku Municipal Assembly and the PAPs to inform and involve them during the implementation of the ARAP.

REFERENCES

1. Administration of Lands Act 1962
2. Constitution of the Republic of Ghana 1992
3. Environmental Assessment Regulations 1999 and Amendment 2002
4. Ghana Highway Authority, Resettlement Policy Framework for Road Sector 2017
5. http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/guideline100326.pdf. The new "JICA Guidelines for Environmental and Social Considerations"
6. http://www.jica.go.jp/english/our_work/social_environmental/guideline/ref.html. "References (Screening Form, Environmental Checklists, Monitoring Form)"
7. http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/objection100326.pdf. "The new "Objection Procedures"
8. http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/faq.pdf "Frequently Asked Questions (FAQs) and JICA's answers"
9. http://www.jica.go.jp/english/our_work/social_environmental/index.html "JICA Environmental and Social Considerations portal"
10. International Finance Corporation (IFC) Performance Standards, PS 5 and 6.
11. Lands (Statutory Way-Leaves) Act 1963/ Lands (Statutory Way-Leaves) Regulation 1964
12. State Lands (Amendment) Act 2000
13. The Ghana Land Policy 1999
14. The State Lands Act 1962/The State Lands Regulation 1962
15. World Bank Operational Policy

APPENDICES

APPENDIX 1: VALUATION SHEETS
A. VOLIVO

KWABLA KWAO

SEX: MALE

AGE: 40years

VOTER ID: 7541005778

PHONE No: 0249629502

LOCATION: Volivo



FARM CODE: V001

CONTACT PERSON: Peter Akaba (0244098593)

FARM SIZE: 0.96Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Food Crop TYPE OF FARMER: Share Cropping

LAND OWNER: Philip Kwabla Amanor INTEREST: Customary Freeholder

SIZE OF FARM LAND	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Estimated Crop Compensation Value in Ghana Cedis	Market Value of Land
0.96	0.72	Cassava - matured	1,909.04	-

KWABLA KWAO

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

PHILIP KWABLA AMANOR

SEX: MALE

AGE: 62years

PHONE No: 0243950173

VOTER ID:

LOCATION: **VOLIVO**

FARM CODE: V001A

CONTACT PERSON:

FARM SIZE: 0.96Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING:

Mono Cash Crop

TYPE OF FARMER: Owner farmer

LAND OWNER:

Philip Kwabla Amanor

INTEREST:

Customary Freeholder

(Note: Kwabla Kwao is tenant farm growing cassava)

SIZE OF FARM LAND	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Estimated Crop Compensation Value in Ghana Cedis	Market Value of Land
0.96	0.96	Oil Palm Tree at matured stage - 80 trees	6,406.89	4,943.27

PHILIP KWABLA AMANOR

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AMANOR DARKEY

SEX: MALE

AGE: 78years

PHONE No: 0242466341

VOTER ID: 1585003625

LOCATION: **VOLIVO**

VULNERABILITY: Medium



FARM CODE: V002

CONTACT PERSON: George Teye Noi (0244492928)

FARM SIZE: 0.76Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner farmer

LAND OWNER: Amanor Darkey

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.76	0.03	Oil Palm Tree at matured stage - 2 trees	3,125.55	3,913.43
	0.47	Cassava - matured		
	0.47	Maize - matured		

AMANOR DARKEY

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

HENRY TETTEH for BLESSED NARTEY

SEX: MALE

AGE: 33years

PHONE No.: 0241930485

VOTER ID: 1585006917

LOCATION: **VOLIVO**



FARM CODE: V003

CONTACT PERSON: Abraham Tetteh Foafor (0248638081)

FARM SIZE: 0.34Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mono-Food Crop TYPE OF FARMER: Share Cropping

LAND OWNER: Tetteh Raphael INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.34	0.34	Maize - matured	1,053.75	1,750.74

BLESSED NARTEY

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

JOSEPH AMANOR ODONKOR

SEX: MALE

AGE: 69years



PHONE No.: 0241934165

VOTER ID: 6687004686

LOCATION: **VOLIVO**

FARM CODE: V004

CONTACT PERSON: Patience Odonkor (0552412619)

FARM SIZE: 0.28Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Joseph Amanor Odonkor

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.28	0.28	Maize - matured	763.66	1,441.79

JOSEPH AMANOR ODONKOR

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

NARKOTU BERNICE MAKU

SEX: FEMALE

AGE: 53years

PHONE No.: 0241810809

VOTER ID: 1585007055

LOCATION: VOLIVO



FARM CODE: V005

CONTACT PERSON: Prince Ayitah (0241810809)

FARM SIZE: 0.23Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Food Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Narkotu Bernice Maku

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.23	0.23	Cassava- matured	1,237.12	1,184.33
	0.23	Maize - Matured		

NARKOTU BERNICE MAKU

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

ADJO KWAO

SEX: FEMALE

AGE: 30 years

PHONE No.:

LOCATION: **VOLIVO**



FARM CODE: V006

CONTACT PERSON: Kwabena Kwao

FARM SIZE: 0.06Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING:

Mono- Food Crop

TYPE OF FARMER:

Share Cropping

LAND OWNER: Amanor Darkey

INTEREST:

Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.06	0.06	Maize - matured	163.64	308.95

ADJO KWAO

Witness name:

.....
Signature/Thumbprint

.....
Signature/Thumbprint

:

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

EMMANUEL KWAO

SEX: MALE

AGE: 28years

PHONE No.: 0556542757

LOCATION: **VOLIVO**

VOTER ID: 2617200429



FARM CODE: V007

CONTACT PERSON: Odonkor Kwesi (0248357864)

FARM SIZE: 0.36Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER:

LAND OWNER: Emmanuel Kwao

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.36	0.03	Oil Palm Tree - 2 medium	514.12	1,853.73
	0.11	Cassava - Matured		

EMMANUEL KWAO

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AMANOR DARKEY

SEX: MALE

AGE: 78years

PHONE No.: 0242466341

LOCATION: **VOLIVO**

VUNERABILITY: Medium

VOTER ID: 1585003625



FARM CODE: V008

CONTACT PERSON: George Teye Noi (0244492928)

FARM SIZE: 0.25Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Food Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Amanor Darkey

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.25	0.25	Maize - matured	774.81	1,287.31

AMANOR DARKEY

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24th FEB. 2020

HONYADZI TETTEH

SEX: MALE

AGE:

PHONE No.: 02436178931

LOCATION: **VOLIVO**



FARM CODE: V009

CONTACT PERSON: Odonkor Kwesi (0248357864)

FARM SIZE: 0.43Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Uncultivated

LAND OWNER: Honyadzi Tetteh

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.43	-	Uncultivated	-	2,214.18

HONYADZI TETTEH

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AMANOR DARKEY

SEX: MALE

AGE: 78years

PHONE No.: 0242466341

LOCATION: **VOLIVO**

VOTER ID: 1585003625



FARM CODE: V010

CONTACT PERSON: George Teye Noi (0244492928)

FARM SIZE: 1.01Acre ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Amanor Darkey

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
1.01	0.25	Oil Palm Tree - medium	3,536.07	5,200.74
	0.76	Cassava - medium main crop		

AMANOR DARKEY

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

KWABLA KWAO

SEX: MALE

AGE: 37years

PHONE No.: 0249629502

LOCATION: **VOLIVO**

VOTER ID: 5108018762



FARM CODE V011

CONTACT PERSON: Yohane Kwao (

FARM SIZE: 0.78Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Food Crop TYPE OF FARMER: Share Cropping

LAND OWNER: Nicholas Teye Young

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.78	0.47	Maize - matured	2,215.19	4,016.41
	0.23	Cassava - matured		

KWABLA KWAO

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

TETTEH PETER KWAO

SEX: MALE

AGE: 51years

PHONE No.: 0244206359

LOCATION: **VOLIVO**

VOTER ID: 1585005075



FARM CODE: **V012**

CONTACT PERSON: Tetteh Olivia Dede

FARM SIZE: 1.02Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Food Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Tetteh Peter Kwao

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
1.02	0.27	Oil Palm Tree - matured	4,197.45	5,252.23
	0.02	Mango Tree - matured		
	0.44	Cassava - matured		
	0.17	Pepper - matured		
	0.06	Yam - matured		

TETTEH PETER KWAO

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

MENSAH REGINA AYORKOR

SEX: FEMALE

AGE: 52years

PHONE No.: 0276942208

LOCATION: **VOLIVO**

VOTER ID: 1462002682



FARM CODE: V013

CONTACT PERSON: Patience Afiyo Mensah

FARM SIZE: 0.40Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Mensah Regina Ayorkor

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.40	0.20	Oil Palm Tree - matured	3,296.35	2,059.70
	0.24	Cassava - matured		
	0.15	Yam - matured		
	0.22	Maize - matured		

MENSAH REGINA AYORKOR

Witness name:

.....
Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AMANOR DARKEY

SEX: MALE

AGE: 78years

PHONE No.: 0242466341

LOCATION: **VOLIVO**

VOTER ID: 1585003625

VUNERABILITY: Medium



FARM CODE: V014

CONTACT PERSON: George Teye Noi (0244492928)

FARM SIZE: 1.42Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop Farming

TYPE OF FARMER: Owner Farmer

LAND OWNER: Amanor Darkey

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
1.42	0.25	Oil Palm Tree - matured (15)	3,619.61	7,311.93
	0.43	Cassava- matured		
	0.14	Maize - matured		

AMANOR DARKEY

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

ATTEH KOFI
AGE: 76years

SEX: MALE

PHONE No.: 0246224976

LOCATION: **VOLIVO**

VOTER ID: 1585003617

VUNERABILITY: Medium



FARM CODE: V015

CONTACT PERSON: Comfort Atteh (0249869225)

FARM SIZE: 1.15Acres

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Atteh Kofi

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
1.15	0.18	Oil Palm Tree - matured (11)	3,764.41	5,921.63
	0.12	Cassava- young		
	0.52	Maize - matured		
	0.29	Plantain - 35 suckers		

ATTEH KOFI

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AMANOR KWAME ISAAC

SEX: MALE

AGE: 52years

PHONE No.: 0242859995

LOCATION: **VOLIVO**

VOTER ID: 1585005216



FARM CODE: V016

CONTACT PERSON: Juliana Amanor (0240674696)

FARM SIZE: 1.65Acres

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Amanor Kwame Isaac

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
1.65	1.02	Oil Palm Tree - matured (61)	6,874.48	8,496.25
	0.01	Mango Tree - matured (1)		

AMANOR KWAME ISAAC

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

APPIAH NARTEH

SEX: MALE

AGE: 60years



PHONE No.:

LOCATION: **VOLIVO**

VOTER ID:

FARM CODE: V017

CONTACT PERSON: Joseph Amanor Odonkor (0552412619)

FARM SIZE: 0.02Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Joint-Owner Farmer

LAND OWNER: Appiah Narteh

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0.01		Oil Palm Tree - matured (4)	823.62	51.49
	0.01	Plantain - matured (13)		
	0.002	Pepper - matured		

APPIAH NARTEH

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

KWAKU AMEDIAVOR

SEX: MALE

AGE: 58years

PHONE No.: 0248627170

LOCATION: **VOLIVO**



FARM CODE: V018

CONTACT PERSON: Amanor Kwame Isaac

FARM SIZE: 1.65

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Share Cropping

LAND OWNER: Amanor Kwame Isaac

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0	0.53	Plantain - medium (63)	5,654.99	-
	0.27	Yam - medium (16 molds)		

KWAKU AMEDIAVOR

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

KWAKU AMEDIAVOR

SEX: MALE

AGE: 58years

PHONE No.: 0248627170

LOCATION: **VOLIVO**



FARM CODE: V019

CONTACT PERSON: Joseph Amanor Odonkor

FARM SIZE: 0.01Acre

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: mixed Food Crop TYPE OF FARMER: Share Cropping

LAND OWNER: Appiah Nartey

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Market Value of Land
0	0.01	Plantain – medium 53	1,007.94	-
	0.01	Cassava		

KWAKU AMEDIAVOR

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 15th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

C. DORFOR ADIDOME

PETER KWAME ZIGI

SEX: MALE
32years
VOTER ID: 2039011065

AGE:

PHONE No.: 0243174493 (contact)

LOCATION: **DORFOR ADIDOME**



FARM CODE: D002

CONTACT PERSON: PRINCE ZAO

FARM SIZE: 1.42 Acres

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mono Cash Crop TYPE OF FARMER: Share Cropper (Abunu)

LAND OWNER: Nukpedu Jacob Tsornyeli INTEREST: Customary Freehold

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	SIZE OF FARM LAND	Estimated Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 36 trees	0.60	1.42	4,004.31	7,311.93

PETER KWAME ZIGI

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

JACOB TSORNYELI NUKPEDU

SEX: MALE

AGE: 73years

PHONE No.: 0249693050

LOCATION: **DORFOR ADIDOME**

VULNERABILITY: Medium



FARM CODE: D003

CONTACT PERSON: George Nukpedu

FARM SIZE: 2.01Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Nukpedu Jacob Tsornyeli

INTEREST: Customary Freehold

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	Size of Affected Farm (Acres)	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 3 trees	0.05	2.01	379.20	10,349.98

JACOB TSORNYELI NUKPEDU

Witness

name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

MARY KWAO

SEX: FEMALE

AGE: 70years

PHONE No.: 0541134127

LOCATION: **DORFOR ADIDOME**

VULNERABILITY: Medium



FARM CODE: D004

CONTACT PERSON: Florence Kwao (0545038544)

FARM SIZE 0.38Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Mary Kwao

INTEREST: Customary Freeholder

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	Size of Affected Farm (Acres)	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 8trees	0.13	0.38	1,011.19	1,956.71

MARY KWAO

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

AGBOHLA FRANCIS for AGBOHLA MAWUENYA

SEX: MALE

AGE: 43years

PHONE No.:0244182212

LOCATION: **DORFOR ADIDOME**



FARM CODE: D005

CONTACT PERSON: Agbohla Francis (0550317686)

FARM SIZE: 0.14Acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Agbohla Mawuenuya

INTEREST: Customary Freeholder

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	Size of Affected Farm (Acres)	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 10trees	0.14	0.14	1,112.31	720.89

AGBOHLA MAWUENYA

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

WISDOM AZIETOR

SEX: MALE

AGE: 64years

PHONE No.: 0506708069

LOCATION: **DORFOR ADIDOME**



FARM CODE: D006

CONTACT PERSON: Azietor Tse Kofi (0248579999)

FARM SIZE: 1.14Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Wisdom Azietor

INTEREST: Customary Freeholder

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	Size of Affected Farm (Acres)	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 40trees	0.67	1.14	4,449.23	5,870.14

WISDOM AZIETOR

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

KWASI DZETORME

SEX: MALE

AGE: 75years

VOTER ID: 2039004201

PHONE No.:

LOCATION: **DORFOR ADIDOME**

VULNERABILITY: Medium



FARM CODE: D007

CONTACT PERSON: Azietor Tse Kofi (0248579999)

FARM SIZE: 3.14Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed Crop TYPE OF FARMER: Owner farmer

LAND ONWNER: Kwasi Dzetorme

INTEREST: Customary Freeholder

Crop Type and Maturity level	Size of Affected Crop Area (Acres)	Size of Affected Farm (Acres)	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
Oil Palm Tree at matured stage - 5trees	0.08	3.14	1,705.91	16,168.63
Mango matured - 5 trees	0.06			
Cassava - medium	0.10			
Maize - medium	0.10			

KWASI DZETORME

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

D. DORFOR ADIDOME REST STOP

WISDOM AZIETOR

SEX: Male AGE: 64

PHONE #: 0506708069

LOCATION: **DORFOR ADIDOME**



FARM CODE: D001

CONTACT PERSON: Azietor Tse Kofi (0248579999)

FARM SIZE: 1.28Acres

ROAD/ROUTE SIDE: LHS

METHOD OF FARMING: Mixed Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Wisdom Azietor

INTEREST: Customary Freeholder

SIZE OF FARM LAND	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Estimated Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
1.28	1.17	Oil Palm Tree at medium stage -70 trees	7,786.15	6,591.03

WISDOM AZIETOR

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGhIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

CHRISTIANA NUKPEDU

SEX: Female AGE: 83

VULNERABILITY: Medium

PHONE #:0557638755

NHIS ID: 55973668



FARM CODE: D005 CONTACT PERSON: Jacob (0)

FARM SIZE: 0.67 Acre ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono-Cash Crop TYPE OF FARMER: Owner Farmer

LAND OWNER: Christiana Nukpedu INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
0.67	0.42	Oil Palm Tree at matured stage - 25 trees	3,159.96	3,449.99

CHRISTIANA NUKPEDU

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24th FEB. 2020

BEN AZIETOR

SEX: Male AGE: 70

VULNERABILITY: Medium

PHONE #:0249391872



FARM CODE: 001

CONTACT PERSON: Prosper Azietor

FARM SIZE: 1.25Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono-Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Ben Azietor

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
1.24	0.63	Oil Palm Tree at matured stage - 38trees	8554.1176	6,385.06
	0.67	Oil Palm Tree at young stage - 40trees		

BEN AZIETOR

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

**JACOB NUKPEDU
TSORNYELI**

SEX: Male AGE: 73

VULNERABILITY: Medium

PHONE #:0249693050



FARM CODE: 002

CONTACT PERSON: Rueben Nukpedu-Tsorme (0240692509)

FARM SIZE: 3.34Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Nukpedu Jacob Tsornyeli

INTEREST: Customary Freehold

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
3.34	3.00	Oil Palm Tree at matured stage - 180trees	22,751.74	17,198.48

JACOB TSORNYELI NUKPEDU
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Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

MOSES KABUTEY

SEX: Male

AGE: 45

PHONE #:0547562250



FARM CODE: 003

CONTACT PERSON: Georgina Kabutey (0247620632)

FARM SIZE: 0.83acre

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mono Cash Crop

TYPE OF FARMER: Owner Farmer

LAND OWNER: Moses Kabutey

INTEREST: Customary Freehold

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
0.83	0.33	Oil Palm Tree at matured stage - 20trees	2,527.97	4,273.87

MOSES KABUTEY

Witness name:

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Signature/Thumbprint

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Signature/Thumbprint

KWASI DZETORME

SEX: MALE

AGE: 75years

VOTER ID: 2039004201

PHONE No.:

LOCATION: **DORFOR ADIDOME**

VULNERABILITY: Medium



FARM CODE: D007

CONTACT PERSON: Nukpedu Tsorme Jacob Tornyeli

(0249693056)

FARM SIZE: 3.53Acres

ROAD/ROUTE SIDE: RHS

METHOD OF FARMING: Mixed-Food Crop

TYPE OF FARMER: Owner farmer

LAND ONWNER: Kwasi Dzetorme

INTEREST: Customary Freeholder

Size of Affected Farm (Acres)	Size of Affected Crop Area (Acres)	Crop Type and Maturity level	Total Crop Compensation Value in Ghana Cedis	Estimated Land Compensation Value in Ghana Cedis
3.53	1.00	Pawpaw matured - 60	777.66	18,176.83
	0.06	Cassava - medium		

KWASI DZETORME

Witness name:

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Signature/Thumbprint

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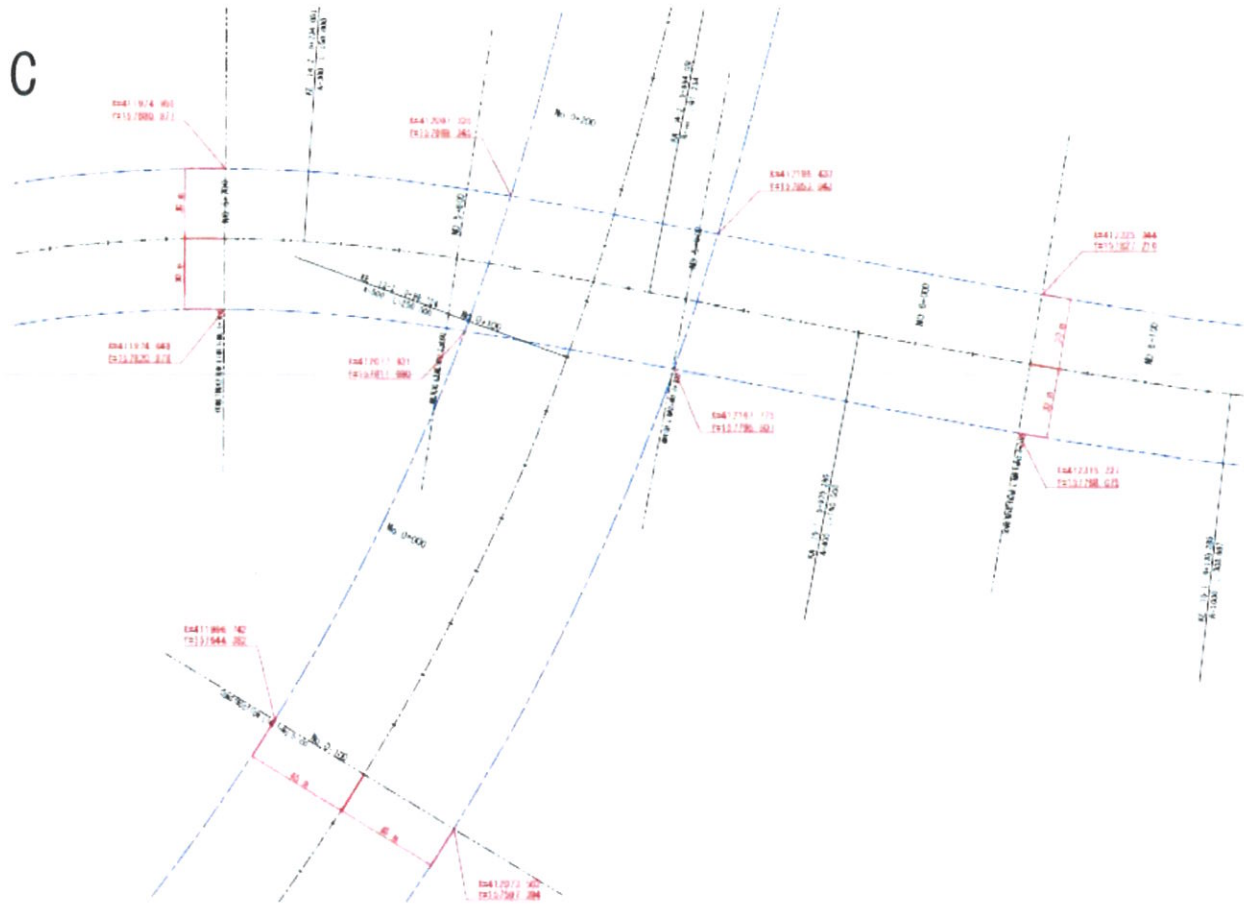
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CERTIFIED VALUER: HELEN ARTHUR (MRS) MGHIS

DATE OF INSPECTION: 16th JAN. 2020

DATE OF VALUATION: 24TH FEB. 2020

The Survey Area (Volivo/South side)



APPENDIX 3: COMMUNITY ENGAGEMENTS

A. PHOTOGRAPHS



Photograph 1: Focus group discussion at Dorfor Adidome



Photograph 2: Focus group discussion at Volivo



Photograph 3: One of the baobab trees to be uprooted



Photograph 4: Interview with a PAP



Photograph 5: Valuation of the farms of PAPs at Volivo



Photograph 6: The environmentalist at the bank of the river at Volivo



Photograph 7: Reconnaissance studies of project sites

B. PARTICIPANTS' LISTS

**REVIEW OF DETAILED DESIGN STUDY OF THE CONSTRUCTION OF A NEW BRIDGE
ACROSS THE VOLTA RIVER ON THE EASTERN CORRIDOR PROJECT**

RESETTLEMENT ACTION PLAN (RAP)

PARTICIPANTS' LIST

MEETING WITH CHIEF AND OPINION LEADERS

MMDA: Shai Osudoku

COMMUNITY: Volivo

DATE: 14th January, 2020

#	Name Of Participant	Age	Gender	Education Level	Occupation	Position	Contact
01	Hon. Nicholas Owen	30	Male	Tertiary	Farmer/ Lab Scien...	Assembly member	0542446925/0549815463
02	Teye Gideon	29	Male	SSCE	Farmer	Unit Committee Member	0245876018
03	Isaac K. Amanor	52	Male	MSLC	Farmer	Youth Leader	0242859995
04	Teye Comfort	30	Female	JHS	Farmer	Unit Committee Member	0557698926
05	Comfort Alema	55	Female	MSLC	Farmer	Women Leader	0540265181
06	Emmanuel Martey	40	Male	Tertiary	Farmer	Youth Leader	0546586224
07	Seth Kpokponton	37	Male	SSCE	Farmer	Youth Representative	0245398269
08	Samuel Dзокpor	53	Male	JHS	Farmer	Youth Leader	0249578581
09	Narh Fio N.	54	Male	JHS	Farmer	Opinion Leader	0246812118
10	Odonkor Kwesi	40	Male	JHS	Farmer	Opinion Leader	0248357864
11	Tetteh Peter K.	52	Male	MSLC	Farmer	Opinion Leader	0244206359
12	Florence Hondyazi	50	Female	JHS	Petty Trader	Women Leader	0558706392
13	Emmanuel Boaduah	45	Male	MSLC	Farmer	Youth Leader	0240799988

14	Regina A. Mensah	57	Female	MSLC	Farmer	Women Leader	0276942208
15	Wayo Asuwed Samuel	33	Male	Tertiary	Prison officer	care	0247005373
16	Thomas Tetteh Wayo	58	Male	MSLC	Farmer	Youth Leader	0241197157
17	Gladys Egble	70	Female	MSLC	Farmer	Opinion Leader	0545735875
18	Mabel Lawer	40	Female	MSLC	Trader	Women Leader	0541391405
19	Alice Hondyazi	40	Female	MSLC	Trader	Women Leader	
20	Joyce Narh Wayo	35	Female	MSLC	Trader	Women Leader	
21	John Hondyazi	51	Male	MSLC	Farmer	Opinion Leader	0248177954
22	Philip Ayertey	49	Male	SHS	Farmer	Assembly Member	0247537023
23	Kofi Atterh	71	Male	JHS	Farmer	Opinion Leader	0246224976
24	Nene Ogbey Assuman (IV)	50	Male	MSLC	Farmer	Chief	0243617893
25	Nicholas Amanor D.	79	Male	MSLC	Farmer	Opinion Leader	0242466341
26	James Tetteh	49	Male	SHS	Farmer	Opinion Leader	0509943233
27	Joseph Amanor	71	Male	MSLC	Farmer	Opinion Leader	0241934165
28	Hon. Prince Zao	56	Male	Tertiary	Journalist	Local Contact	0243174493
29	Isaac Matey T.	59	Male	MSLC	Farmer	Opinion Leader	0545140362
30	Emelia Teye	38	Female	MSLC	Trader	Women Leader	0270610941
31	Joseph Guamah	50	Male	MSLC	Farmer	Opinion Leader	0553001581
32	Kwesi Ogbey	42	Male	MSLC	Farmer	Youth Leader	0242880017
33	Janet Tetteh	27	Female	JSS	Petty Trader	Women Leader	0543848987
34	Tetteh Rebecca Abia	43	Female	SHS	Petty Trader	Women Leader	0248718518

35	Teye Patience	32	Female	JSS	Trader	Women Leader	0546638563
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**REVIEW OF DETAILED DESIGN STUDY OF THE CONSTRUCTION OF A NEW BRIDGE
ACROSS THE VOLTA RIVER ON THE EASTERN CORRIDOR PROJECT**

RESETTLEMENT ACTION PLAN (RAP)

PARTICIPANTS' LIST

MEETING WITH CHIEF, OPINION LEADERS AND PAPS

MIMDA: North Tongu

COMMUNITY: Dorfor Adidome

DATE: 14th January, 2020

#	Name of Official	Age	Gender	Educational Level	Occupation	Position	Phone number
01	Saviour Tomenu	21	Male	JHS	Farmer		0244129477
02	Emmanuel Alipe	40	Male	JHS	Farmer		0559545518
03	Amenuma Bekind	40	Male	JHS	Farmer		
04	Aflo Emmanuel	42	Male	SHS	Carpentry		0249233889
05	Nutsi Moses	42	Male	JHS	Farmer		
06	Gbetornu Sefa	30	Male	JHS	Mason		0549520570
07	Dabah Matthew	28	Male	Tertiary	Finance Officer		0541843740
08	Gbotornu Anani	33	Male	JHS	Mason		0249347476
09	Seledzi Stephen	47	Male	MSLC	Farmer		
10	Obani Forgive	24	Male	JHS	Farmer		0550323176
11	Nutsi Solomon	22	Male	JHS	Mason		0545473076
12	Gbetornu Michael	45	Male	JHS	Farmer		0540698765

13	Torfu Jacob	54	Male	MSLC	Operator	Youth Chairman	0242180560
14	Dzetorme Kwesi	75	Male		Farmer		
15	Norvinya Daniel	26	Male	SHS	Electrician		0543017512
16	Norvinya Selorm	30	Male	JHS	Operator		0240246226
17	Azietor Ben	70	Male	JHS	Security guard		0249391872
18	Azietor Tse Kofi	29	Male	Tertiary	Student	Assemblyman	0248579999
19	Nutsi Tse	62	Male	MSLC	Farmer		0545265947
20	Nukpedu Christiana	70	Female		Farmer		
21	Samuel Gakpetor	54	Male	MSLC	Farmer		0541280288
22	Eric Kumah	45	Male	MSLC	Security guard		0541224877
23	Patience Ahoto	80	Female	MSLC	Farmer		0247034687
24	Amansrunu Gladys	58	Female		Farmer		
25	Ahoto Anani	28	Male	JHS			0549734507
26	Ivy Nutsi	27	Female	JHS	Trader		0542221574
27	Prosper Akpaligah	31	Male	JHS	Caterpillar Operator	Member	0246318419
28	Gideon Adzam	28	Male	SHS	Carpenter	Member	0547582676
29	Michael Dzam	30	Male	SHS	Driver	Youth Member	0555024245
30	Famous Dzam	30	Male	SHS	Driver	Member	0249988820
31	Emmanuel Gidi	45	Male	SHS	Farmer	Stool father	0245577351
32	Raymond Dzam	50	Male	SHS	Mason	Youth Member	0552529091

33	Godson Atsu	49	Male	JHS	Farmer	Youth member	0201811125
34	Matthew Nyakpo	52	Male	JHS	Plumbing	Linguist	0540998435
35	Tomenu Wellington	55	Male	Tertiary	Teaching	Opinion Leader	0246605122
36	Simon Agbohla	78	Male	JHS	Mason	Member (Chief)	0241046576
37	Godson K. Amekah	40	Male	Degree (BSc)	Electrical Engineer	Paramount stool father	0243830221
38	Togbe M. Agbohla		Male	SHS	Businessman	Chief	0244844741
39	Kabutey Kwesi	35	Male	JHS	Barber	Member	024466329
40	Raymond Azietor	30	Male	JHS	Tractor Operator	Member	0550608478
41	Afanya Elinam	22	Male	JHS	Welding	Member	0540348936
42	Nelson Gedza	50	Male	Diploma	Teaching	Member	0249482998
43	Maxwell Ataban	55	Male	MSLC	Farmer	PTA Chairman	0558537595
44	Alhassan Ali	28	Male	SHS	Farmer	Member	0240408718
45	Forfoe Frank	25	Male	JHS	Welder	Member	0241027591
46	Gbolomor Raymond	18	Male	SHS	Student	Member	0556113818
47	Akudey Horlasi	18	Male	SHS	Student	Member	0543049327
48	Elizabeth Azietor	40	Female	JHS	Farmer	Member	0245263869
49	Priscilla Fiagbenu	37	Female	JHS	Seamstress	Member	0249407054
50	Peter Akposu	47	Male	Degree	Teacher	Member	0200514844
51	Dzatey Francis	49	Male	JHS	Farmer	Youth Leader	
52	Rejoice Hodgobe	50	Female	MLSC	Farmer	Member	

53	Prince Zao		Male	Tertiary	Journalist	Assembly Member	0243174493
54	Bertha Awunyama	48	Female	None	Farmer		0249067028
55	Bertha Atarli	70	Female	None	Farmer		0541796422
56	Augustina Aglova		Female		Farmer		0557272814
57	Mary Kwao	78	Female		Farmer		0541134127
58	Florence Kwao	65	Female		Farmer		0545038544
59	Dora Adzubu		Female		Farmer		0550614862
60	Kwamw Hodgbe	35	Male		Farmer		
61	Lawrence Gbenuor	63	Male		Trader	Former Assemblyman	0244477834
62	Austine Dabah	42	Male	JHS	Carpenter		0246713507
63	Richard Ahernu	37	Male	JHS	Farmer		0247196227
64	Ahenu Moris	39	Male	JHS	Mason		
65	Desmond Dogli	29	Male	JHS	Mason	Electoral Area Coordinator	0554049217
66	Ben Tofu	25	Male	JHS	Farmer		0547615872
67	Jonathan Doe Nutsi	60	Male	MSLC	Fisherman		
68	Aniako Gifty	33	Female	JHS	Trader		0202354383
69	Afeatorgbor Angela	37	Female	JHS	Seamstress	Ladies' Chairperson Committee	0543798332
70	Faustina Galley	31	Female	JHS		Ladies' committee Organizer	0541196130
71	Sophia Notsi	29	Female	Vocational	Seamstress		0549168747
72	Millicent Azumah	29	Female	JHS	Seamstress		0540974283

73	Mary Adokpa	46	Female	Primary	Farmer		
74	Selege Ametepe	49	Male	JHS	Security guard	0240685106	
75	Awuku Jonathan	39	Male	SHS	Farmer	0249751034	
76	Simon Akude	39	Male	JHS	Operator	0244196602	
77	Moses Tovide	64	Male	JHS	Farmer	0246883821	
78	Amansunu Kofi	42	Male	JHS	Farmer	0249582249	
79	Anita Sodolo	39	Female	JHS	Seamstress	0240213233	
80	Vivian Apotsi	60	Female		Farmer	0545265947	
81	Gamor Dayawa	50	Female	JHS	Farmer	0549734507	