

Ahafo South Resettlement and Livelihood Restoration Completion Audit Final Report

FOR NEWMONT GHANA GOLD LIMITED

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We thank Nick Flanders from the International Finance Corporation for his patience, challenge and prodding, and hope that he finds time to read this final audit report in his retirement!

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Executive Summary

Background

- This Ahafo South Resettlement and Livelihood Restoration Completion Audit Report was prepared to satisfy loan agreement conditions between Newmont Ghana Gold Limited (NGGL) and the International Finance Corporation (IFC).
- The Terms of Reference for the Resettlement and Livelihood Restoration Completion Audit identified the following objectives.
 1. To assess the extent to which NGGL has fulfilled its commitments to resettlement and livelihood replacement as elaborated in the Social Action Plan (SAP) and the RAP in terms of the delivery of entitlements to project affected people.
 2. To assess the level of achievement of the desired quantitative and qualitative livelihood outcomes (“weaning point”).
 3. To assess whether or not the observed livelihood outcomes are likely to result in the desired livelihood impacts by comparing the results of various rounds of quantitative and qualitative socio-economic surveys of PAPs with baseline surveys.
- The RAP completion audit referred to the ‘Sustainable Livelihood’ framework that had been adopted by NGGL to conceptualize and deliver their resettlement program. The Sustainable Livelihood conceives livelihoods in terms of five capitals – human, physical, natural, financial and social.

Scope of Phase 1 Ahafo South Resettlement

- The Ahafo South mining operation has involved development of a greenfield opencast gold mine and construction of associated facilities including four open-cut mine pits, waste rock disposal facilities, a mill and processing plant, water storage for the processing plant, a tailings storage facility, environmental control dams, storm water and sediment control structures and ancillary facilities (buffer zones, bypass and haul roads, accommodation and mine services).
- Phase 1 Ahafo South (covering the first three pits) had a footprint of about 2,994 ha. Construction took 25 months starting in April 2004 with plant commissioning in May 2006. Gold production began in July 2006.
- 823 households (5,185 persons) lost both dwellings and agricultural land to the mine. In addition, 878 households (4,390 persons) were economically displaced through the loss of agricultural fields to the mine area. The total project affected population was 1,701 households made up of about 9,575 persons.

National and Regional Economic Context

- For Ghana, the period 2004-2012 was one of relative political stability, improving fiscal management and steady growth in Real GDP. Increases in the prices and volumes of gold and cocoa exports and commencement of oil production in 2011 have contributed to rapid GDP growth following the 2009 global slump.
- At a national level the following factors have affected Ahafo South displaced households and their livelihood restoration:
- National inflation ran at between 10-25% for all the period between 2003 and 2010, with a potentially erosive effect on the purchasing power of cash compensation and increasing food costs for resettlers;
- Significant inflation in food prices, including a significant spike in the price of key staples occurred between mid-2007 and mid-2008 – over this period, the price of maize rose 57%; millet, 44%; sorghum, 54% and local rice, 25%
- During this time, agricultural production and yields in Asutifi district grew strongly. Agriculture is the primary economic activity of people in the Project area. Seed and propagules distributed by NGGL's AILAP and LEEP almost certainly contributed to a surge in agricultural production post 2005 (see Section 2.3)

Sustainable Livelihoods

- The RAP completion audit adopted the five 'capitals' of the 'Sustainable Livelihood' Model as a framework for reporting its findings (see Section 3.1). The five capitals are human, physical, natural, financial and social capital.

Human Capital

- Human capital refers to the skills, knowledge, ability to labor, good health and nutrition that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.

Health and Sanitation

- The RAP completion audit found that there had been dramatic improvements in the standard of housing, access to improved water supply, sanitation and medical services. These improvements were evident in the conditions of both physically and economically displaced households and should contribute to improved family health in future. Highlights included:
- 98% of physically resettled households (i.e. those living in Ola and Ntotroso) and 96% of economically displaced households were using improved ('safe') water sources – up from 44% of households prior to mine development

- All physically displaced households and 70% of economically displaced households reported using VIP/KVIP type toilets compared to pre-mine usage of improved toilets by about 2% of households
- Provision of National Health Insurance (NHIS) to households under the vulnerable peoples program was valued by recipients and was an important driver in shifting households' reliance from self-medication to mainstream medical services.

Food Security and Nutrition

- Even outside of a resettlement program, it is challenging to define the food security of a household or community. It is a dynamic condition that depends on the complex interaction of agricultural, environmental, socio-economic and biological factors.
- NGGL's vulnerable peoples program provided an important food safety net for households assessed as food-insecure in the critical 3 years following physical displacement. Some 481 households received a monthly food basket until they were assessed as food secure.
- Food baskets notwithstanding, some 43% of surveyed households reported having insufficient food to meet household needs over the year prior to the RAP household questionnaire (2009-10). This is worse than the 12% reported pre-mine (OICI, 2004) but a significant improvement over the 65% of households reporting insufficient food in the dry season and 69% in wet season in 2007 (SDNL, 2008).
- Reasons given for insufficient food in 2010 included not enough farmland (20% of respondents), old age or sickness (10%), drought (5%) and financial constraints (3%). The issue of insufficient land is discussed further in **Section 3.4.3**.

Physical Capital

- By most measures of 'physical capital', resettled households are assessed as much better off than prior to resettlement. Overall, they have secure, long-term tenure over their house plots, improved housing, improved water supply and sanitation and improved access to social services such as schools, medical clinics, public transport and markets.
- Replacement villages are well located to enable resettled households to take advantage of employment, small or micro business opportunities and house rental arising from their peri-urban location and proximity to the NGGL mine.
- Economically displaced households have also been able to achieve significant improvements in their quality of housing and access to social services using their compensation and their own resources.
- The most significant trade-off arising from the Ahafo South resettlement has been the greatly increased time households have had to spend travelling to and from their agricultural land and in collecting fuel wood. This lost time

represents a significant opportunity cost in terms of household productivity. Measures to address this opportunity cost are recommended in **Sections 8.3 and 8.4.**

Natural Capital

- Natural capital refers to the natural resources from which resources and services useful for livelihoods are derived. The audit looked mainly at divisible assets used directly for production such as land, trees and water resources.
- Project incentives to encourage displaced people to access replacement land were largely effective and led to clearing of an agriculture area greater than that acquired by the mine.
- The basic AILAP assumption of 2 acre lots per household was adequate for food sufficiency for the average household, although farmers have subsequently focused on establishing cash crops (e.g. cocoa) at the expense of food production.
- Four to five years after the AILAP land access programs, the RAP completion audit found that a significant majority of households (about 69%) had ongoing access to agricultural land.
- A further 6% of households without land were occupied by non-farm activities or were too elderly or unwell to be capable of farming.
- About 25% of households had no farm land or insufficient farmland and are consequently at risk of ongoing impoverishment. Actions to address this are recommended in **Section 9.3.**
- There is reportedly abundant vacant land suitable for agriculture in the vicinity of the mine, but the rental cost of such land has increased significantly since the mine development. High farm land rentals may be beyond the reach of some households who, for whatever reason, have relinquished their AILAP land, or who were unable to acquire sufficient land to meet their needs.

Financial (Productive) Capital

- Household financial capital includes:
- Savings in forms such as cash, bank deposits or liquid assets such as livestock, gold or jewelry, or access to credit
- Regular inflows of money such as pensions, transfers from the state or remittances.
- For convenience, household employment, income and expenditure were also discussed under the heading of Financial Capital.
- Amoma, in Asutifi District, immediately to the north-east of Ntotroso was used as a nominal 'control' for the completion audit survey. Amoma consists of a population within the NGGL mine area of influence, substantially reliant on agriculture but largely unaffected by physical or economic displacement at the beginning of 2009. A household socio-economic baseline survey of the Amoma area was conducted by RePlan in early 2009.

- Financial capital findings were generally positive. Household income levels were within 80-90% of the nominal 'control group' at Amoma. Once Ahafo South displaced household's cocoa crops mature and cash flows become positive in 1-2 years, Ahafo South income levels should easily match those of their Amoma neighbors.
- Displaced household expenditure on food is comparable to regional averages. Other indicators such as household savings and indebtedness also demonstrate that displaced household economics are normalizing.

Social Capital

- Social capital refers to the networks, groups, relationships and institutions that people draw on to pursue their livelihoods and that provide them with a social safety net during times of hardship or need.
- Resettled Ahafo South households spoke warmly about their community spirit and how they considered their neighbors as 'brothers and sisters'. The audit team was impressed by the general internal harmony and cohesiveness of the two newly formed communities.
- Communities were not concerned about their intra-community relations, but more with their relations with the District Assembly and Traditional Authorities.
- Whilst most of the resettled population acknowledged the existence and influence of the traditional leaders, and understood that they were obliged to adhere to the rules and regulations that the traditional leaders establish, they often expressed the view that the traditional leaders were not interested in their welfare or livelihood.
- For their part, the traditional leaders felt that the influx of outsiders (not specifically referring to resettlers) had weakened local social cohesion and resulted in a loss of respect for the Traditional Authorities.
- These polarized positions and mutual suspicions are not in the best interest of either group, particularly the resettlers and other displaced people who stand to miss out on the benefits of annual mine royalty payments, 45% of which are administered by the Traditional Council. The traditional leaders are also closely involved in defining who is local and who should receive priority for NGGL employment.
- The RAP completion auditors are satisfied that good progress has been made with effecting 'integration' of Ola and Ntotroso into wider government administrative and management systems. NGGL has committed adequate resources for closing out the last remaining issue (transfer of roads and drainage). The process has been protracted but a satisfactory outcome is likely.

Progress with Agricultural Livelihood Restoration

- As part of the Ahafo South resettlement completion audit, agricultural specialists made a field assessment of progress with livelihood restoration on 20 farms.
- An important finding of the completion audit's agricultural field assessment was that those farmers who realized that NGGL was not going to support them indefinitely, and they must work hard to support themselves, had made most progress towards effectively managing their farmland.
- NGGL must publicize clear information about the end of the Ahafo South resettlement program so that farmers realize that going forward, they must once again stand on their own and manage their household's ongoing survival and advancement with their own endeavors.

Suggestions for Future Resettlement

- The Ahafo South resettlement completion audit made a number of suggestions for future resettlement. These are presented in **Section 8**.

Conclusions and Recommendations

- The NGGL Ahafo project has a reputation as perhaps the best resettlement program yet undertaken in Africa. The auditors found much to support this view.

Has NGGL delivered RAP and SAP commitments?

- Based on the activities described in this Ahafo South resettlement completion audit, the auditors consider that NGGL has met its Ahafo South resettlement and livelihood commitments as described in the RAP and SAP.

Has the weaning point been reached?

- The Resettlement Completion Audit Terms of Reference asked the auditors to assess whether the 'weaning point' has been reached i.e. have resettler households received sufficient support and assistance to ensure that they have every chance of restoring their production?
- The answer is about 70-75% of farmers have seized the opportunities offered to them through NGGL's programs and have a good chance of restoring their livelihoods. By international standards, this is a very good outcome.
- With the same opportunities, the other 25 percent of households may not yet have reached this point, with inability to access sufficient replacement land being a key contributory factor.

Actions Arising

- The following principal actions are recommended:
 1. During 2015, by which time all perennial crops planted under the LEEP/AILAP programs should have reached or be very close to full maturity, commission a follow-up field assessment of a small sample of project affected farmers such as that undertaken for this completion audit – RAP auditors and NGGL to agree a reasonable timeframe for completion.
 2. Without creating expectations, analyze why some households remain landless or with insufficient land and, if warranted, examine options for assisting them to access additional farm land – RAP auditors and NGGL to agree a reasonable timeframe for completion.
 3. Publicize a summary of the RAP Completion Audit findings on the NGGL website and in project affected communities to mark closure of the Ahafo South resettlement program – within a reasonable timeframe to be agreed with the RAP completion auditors.
 4. Update stakeholder engagement plans to reflect post-RAP community communication and engagement activities – RAP auditors and NGGL to agree a reasonable timeframe for completion.

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Acronyms

| | |
|-------|---|
| AILAP | Agricultural Improvement and Land Access Program |
| CPI | Consumer Price Index |
| CWIQ | Core Welfare Indicators Questionnaire |
| DFID | Department for International Development (UK Government) |
| DHS | Demographic and Health Survey |
| GFSVA | Ghana Food Security and Vulnerability Analysis |
| GLSS | Ghana Living Standards Survey |
| HIA | Health Impact Assessment |
| IFC | International Finance Corporation |
| KVIP | Kumasi Ventilated Improved Pit Latrine – a type of latrine provided to resettled households |
| LEEP | Livelihood Enhancement and Community Empowerment Program |
| MOFA | Ministry of Food and Agriculture |
| SRID | Statistics, Research and Information Directorate |
| NGGL | Newmont Ghana Gold Limited |
| NHIS | National Health Insurance Scheme |
| OICI | Opportunities Industrialization Centers International |
| RAP | Resettlement Action Plan |
| SDNL | Social Development Networks Limited |

1 Introduction

1.1 Background

This Ahafo South Resettlement and Livelihood Restoration Completion Audit Report was prepared to satisfy loan agreement conditions between Newmont Ghana Gold Limited (NGGL) and the International Finance Corporation (IFC). Terms of Reference for the audit were drafted and agreed in January 2010.

Resettlement and compensation activities for the Ahafo South Project were commenced in 2005. The prevailing resettlement standard was then World Bank Operational Directive 4.30 Involuntary Resettlement (OD 4.30). 823 households (5,185 people) were physically displaced for the Ahafo South mine development. A further 878 families (4,390 people) experienced economic displacement.¹

In its Resettlement Action Plan (RAP)², NGGL committed to a 'Sustainable Livelihood Approach'³ based on a framework conceived by Robert Chambers and others in the 1980s and later popularized by DFID. The framework has been widely adopted for poverty reduction and community development programs. To the auditors' knowledge, Ahafo South was its first application for a resettlement program. The 'Sustainable Livelihood' framework appears to have functioned well to help the NGGL team to conceptualize and deliver their resettlement program.

As part of its loan commitments, NGGL facilitated eight independent social and resettlement compliance monitoring reviews between 2005 and 2009. These were undertaken by specialists, Mr. Frederic Giovannetti and Ms. Tasneem Salam. The Terms of Reference for the independent social monitoring reviews required that the reviewers assess the compliance of resettlement implementation against commitments contained in the RAP and OD 4.30, with a particular focus on:

- Adequacy of impact identification

¹ Figures derived from NGGL records, after screening to remove duplicated household records.

² The Ahafo South RAP can be viewed at: <http://www.newmont.com/africa/ahafo-ghana/public-disclosure-documents>

³ "Sustainable livelihoods are derived from people's capacities to exercise choice, and to access opportunities and resources, and use them for their livelihoods in ways that do not foreclose options for others to make their living, either now, or in the future."

- Effectiveness of delivery of compensation and resettlement entitlements
- Livelihood replacement
- Adequacy of consultation.

Reports of the independent social monitors are available on the Project website: (<http://www.newmont.com/africa/ahafo-ghana/public-disclosure-documents>).

NGGL also commissioned periodic socio-economic monitoring surveys of displaced households. Monitoring surveys were undertaken in 2006, 2008 and 2009 by Opportunities Industrialization Center International (OICI Ghana) and Social Development Networks Limited (SDNL). While not true replicate surveys, these three surveys did provide some useful longitudinal data, especially when compared with the RAP baseline survey conducted in 2004.

This independent Resettlement and Livelihood Restoration Completion Audit represents the culmination of NGGL's Ahafo South resettlement monitoring and evaluation activities. Once the corrective actions identified in this report have been completed, NGGL shall be deemed to have fulfilled its Ahafo South resettlement and livelihood obligations. At this point, resettlement monitoring activities for the Ahafo Phase 1 component of the Project can be ceased.

1.2 Project Description

The Ahafo Gold mining project, operated by NGGL, is located in Asutifi District of the Brong Ahafo Region, 300 km north-west of Accra in Ghana. The mine is located about 42 km from the regional center of Sunyani and close to the twin towns of Kenyasi 1 and Kenyasi 2. NGGL has developed the mine in 2 phases: Ahafo South (Phase 1) and Ahafo North (Phase 2). This completion audit addresses Phase 1 resettlement. The Project has involved development of a greenfield opencast gold mine and the construction of associated facilities including:

- Three open-cut mine pits (Subika, Apensu and Awonsu)
- Waste rock disposal facilities
- Mill and processing plant
- Water storage facility to provide water for the processing plant
- Tailings storage facility
- Environmental control dams, storm water and sediment control structures
- Ancillary facilities (buffer zones, bypass and haul roads, accommodation and mine services)

Phase 1 Ahafo South had a footprint of about 2,994 ha. Construction took 25 months starting in April 2004 with plant commissioning in May 2006. Gold production began in July 2006.

1.2.1 Magnitude of Displacement

823 households (5,185 persons) lost both dwellings and agricultural land to the mine. In addition, 878 households (4,390 persons) were economically displaced through the loss of agricultural fields to the mine area. The total project affected population was 1,701 households made up of about 9,575 persons.

Of the 2,994 Ha Phase 1 mine area, the RAP estimated 1,965 Ha was actively cropped land and 461 Ha was fallow.

Table 1 Summary of Displaced Population

| Category of household | Displaced households (N) | Displaced persons (N) |
|--|--------------------------|-----------------------|
| A. Resident | | |
| ▪ Dwelling in the mine area was primary residence | 399 | 2,594 |
| ▪ Dwelling in the mine area was not primary or sole residence | 424 | 2,586 |
| Subtotal (A) | 823 | 5,185 |
| B. Non-Resident | | |
| ▪ People residing outside of the mine area, but owning land, use rights or businesses within the mine area | 878 | 4,390 |
| Subtotal (B) | 878 | 4,390 |
| Grand Total (A + B) | 1,701 | 9,575 |

Prior to displacement, those households that were physically displaced lived in rural homesteads scattered throughout the mine footprint with only two small settlements at Kodiwohia (117 households) and Kwakyekrom (89 households). Following resettlement, physically displaced households were re-housed in two newly constructed villages on the outskirts of Ntotroso (Ntotroso resettlement village) and Kenyasi 2 (Ola resettlement village). Prior to displacement, most households' primary occupation was farming consisting of cash crops (cocoa, oil palm) and food crops (cassava, plantain, cocoyam, maize and vegetables). Following relocation, most physically and economically displaced families have developed replacement farm area but many also have income from non-farm sources such as wages and employment, small-scale trading, off-farm contracting and artisanal mining (see further discussion in **Section 3.5.4**).

1.2.2 Livelihood Restoration

NGGL supported a number of livelihood initiatives most notably, the Livelihood Enhancement and Community Empowerment Programs (LEEP) in 2005 and 2008,

and the Agricultural Improvement and Land Access Program (AILAP) in 2006. Key features of these programs are summarized in the following table.

Table 2 Summary of LEEP and AILAP Program Components

| Year | Components |
|--------|---|
| 2005-8 | <p>LEEP</p> <ul style="list-style-type: none"> ▪ 5,000 affected people participated ▪ Improved methods of crop production ▪ Integrated crop and pest management ▪ Improved animal production ▪ Post-harvest handling and storage loss reduction ▪ Creation and strengthening of micro enterprises ▪ Technical and vocational skills enhancement of youth for employment and self-employment (e.g. catering, dressmaking, electrical installation, masonry, carpentry, welding and fabrication) ▪ Formation of water and sanitation management committees, sanitation and hygiene training ▪ Alternative livelihoods - vegetable growing, soap-making, bee-keeping, batik-tie & die, snail production, cassava processing, grass cutter rearing & hair dressing ▪ Increasing social and organizational capacities – participatory decision-making processes ▪ Money and financial management |
| 2006-8 | <p>AILAP</p> <ul style="list-style-type: none"> ▪ 3,201 farmers participated from 2006 – 2008 ▪ Facilitated farmer access to: <ul style="list-style-type: none"> - about 6,402 acres of arable land @ 2 acres/farmer - 11,700 acres put under cash & food crops ▪ Payment for clearing and preparing 2 acres of land made up of: <ul style="list-style-type: none"> - GH 75/acre for land access fee; - GH 30 – 40/acre for land clearance fee - GH 50/acre for weeding assistance ▪ Package of field inputs (seeds, fertilizer, weedicide) sufficient for 2 acres, for one crop season ▪ Agricultural extension services ▪ Choice of various crop packages (including cocoa seedlings, plantain suckers, citrus seedlings, oil palm seedlings, seed maize, chili pepper seeds, seed cow peas, cassava sticks and the like) ▪ Business plan training |

Detailed information and evaluation reports for the LEEP and AILAP programs can be found on NGGL’s website.

1.2.3 Vulnerable Program

NGGL also delivered an innovative vulnerable peoples program. This provided each vulnerable household with a tailored package of assistance based on their assessed needs. Vulnerable support ceased once a household was assessed as no longer experiencing transitional hardship. The program was based on the assumption that all people identified as vulnerable could be self-sufficient within three years. 522 households received vulnerable support at some point during the Ahafo South resettlement process.

Table 3 Vulnerable Program Components

| Package | Types of Assistance | Comment |
|---------------------|--|--|
| Nutritional Support | <ul style="list-style-type: none"> ▪ Food basket | 481 households received a monthly food basket until assessed as food secure. |
| Livelihood | <ul style="list-style-type: none"> ▪ Agricultural inputs (seed, livestock, training) ▪ Assistance with access to land ▪ Local apprenticeships ▪ Employment | 522 households participated in AILAP; and, of these 79 households were provided with a second AILAP package to help them achieve food sufficiency. 18 individuals were offered apprenticeships. 7 individuals were employed. |
| Health | <ul style="list-style-type: none"> ▪ Health insurance ▪ Mosquito nets ▪ Health care | 519 households (representing 3,500 individuals) registered with NHIS and had premiums paid to end of June 2010. All received mosquito nets. |
| Education | <ul style="list-style-type: none"> ▪ School/ educational fees and expenses ▪ Vocational training | 68 pupils received school fees scholarships for Senior High School; 28 pupils had completed SHS at the time of the audit. |

A more detailed description of NGGL's Vulnerable Program can be downloaded from its website:

http://www.newmont.com/sites/default/files/Vulnerable_Program_Ahafo_South_Project_0.pdf

1.2.4 Other Value Adding Programs

Other "value adding" programs included the Ahafo Agribusiness Growth Initiative (AAGI) and the Ahafo Linkages Program. In addition, there were a series of programs targeting women. As part of the approach to achieve gender mainstreaming, a Women's Consultative Committee was set up to provide information and gather feedback from community women.

1.3 Objectives

The Terms of Reference for the Resettlement and Livelihood Restoration Completion Audit identified the following objectives.

1. To assess the extent to which NGGL has fulfilled its commitments to resettlement and livelihood replacement as elaborated in the Social Action Plan (SAP) and the RAP in terms of the delivery of entitlements to project affected people.
2. To assess the level of achievement of the desired quantitative and qualitative livelihood outcomes (“weaning point”).
3. To assess whether or not the observed livelihood outcomes are likely to result in the desired livelihood impacts by comparing the results of various rounds of quantitative and qualitative socio-economic surveys of PAPs with baseline surveys.

The Terms of Reference were formulated with input from a stakeholder engagement workshop that included broad representation from the affected communities, traditional leaders and local government administration.

1.4 Audit Approach and Method

Whilst OD 4.30 and subsequent IFC involuntary resettlement policies have espoused as their primary objective the improvement or, as a minimum, restoration of displaced peoples’ standards of living and livelihood, there is as yet no established paradigm for measuring if or when this has been achieved.

The completion audit adopted the following social research best practices:

- Multiple techniques
- Mix of quantitative and qualitative methods
- Triangulation of informants

The key tasks undertaken for the study are illustrated in **Figure 1**.

A household socio-economic survey was conducted in February 2010 and was administered to 672 household heads. Following analysis of the socio-economic survey results, a series of qualitative surveys were conducted in early 2011. These included focus groups, key informant interviews and household case studies. A supplementary agricultural field study was carried out with 20 farmers in November 2011. In total, audit surveys and interviews reached over 950 affected people.

1.5 Limitations of the Audit

The Completion Audit was subject to the following limitations:

1. **Limited sampling of absentee households** - the completion audit reached only a small sample of 'absentee households' i.e. those physically displaced who were no longer living in their resettlement houses at Ola or Ntotroso. It did not reach any of those settler farmers originally from outside Ahafo who used NGGL compensation to return to their home regions. This group included Ewes (from the Volta Region) and Northerners (from the Upper East, Upper West and Northern Regions) whom may have numbered about 400 households.
2. **Limitations of longitudinal data** - whilst 3 very similar household monitoring surveys were conducted by the project in 2006, 2008 and 2009, these were not strictly replicate surveys. The sets of questions used and the wording of some questions were adjusted between surveys so that results were not always directly comparable. This reduced their value as a longitudinal study.
3. **Perennial crops yet to reach full maturity** - the RAP completion audit was completed before resettled households' replacement cash crops had reached full maturity. The agricultural study carried out in late 2011 estimated that sustainable cocoa production for farmers who planted in 2006 would be achieved in 2013. Some farmers planted up to a year later than this. Accordingly, the completion audit focused on measuring progress towards full agricultural production, and the availability of inputs to ensure this was likely, rather than actual achievement of fully restored production.
4. **Survey fatigue and respondent bias** - the project affected population had been intensively consulted and surveyed in the 5-6 years preceding the completion audit. Survey fatigue and a tendency for some respondents to answer questions in a way that they thought might be beneficial to their interests (respondent bias) were observed.

The above limitations notwithstanding, the completion audit team is satisfied that the audit findings are robust. Conclusions are based on the findings of multiple techniques with triangulation of sources wherever possible.

1.6 Waiver

The RAP Completion Audit report is in part based on interviews conducted with project affected people, NGOs and other stakeholders. It was not possible for the Auditors in all cases to verify or substantiate the statements made by interviewees. Due caution should therefore be attributed to all statements reported to have been made by interviewees. Accordingly, the Auditors make no representation as to the substance of reported 'perceptions' or 'beliefs' of interviewees and note that hearsay evidence should not be treated as proof of any specific statement or concern expressed.

The Auditors note that where statements are attributed to others, such statements in no way reflect the views of the Auditors or of NGGL.

Figure 1 Completion audit tasks



2 External Socio-Economic Conditions

One of the challenges of assessing livelihood restoration by comparing pre-resettlement livelihood levels with post-resettlement livelihood conditions is differentiating between the following:

- Macro-economic changes experienced by the population of Ghana as a whole;
- Project-induced socio-economic changes within the project area of influence that present opportunities and challenges for all the local population, although not necessarily equally;
- Changes caused specifically by project-induced physical and economic displacement.

This chapter briefly provides some information about macro-economic changes during the Ahafo South resettlement and livelihood restoration period (2003-2012). It also examines changes in agricultural production and yield in Asutifi district during this period. The underlying assumption was that agriculture is the primary economic activity of people in the Project area. This assumption is an over-simplification. Due in a large part to the development of the NGGL project, the local economy has been subject to major shifts in the supply, demand and pricing of land, goods and services, and labor. The final part of the chapter summarizes some perceptions of the local population with respect to changes in local economic conditions.

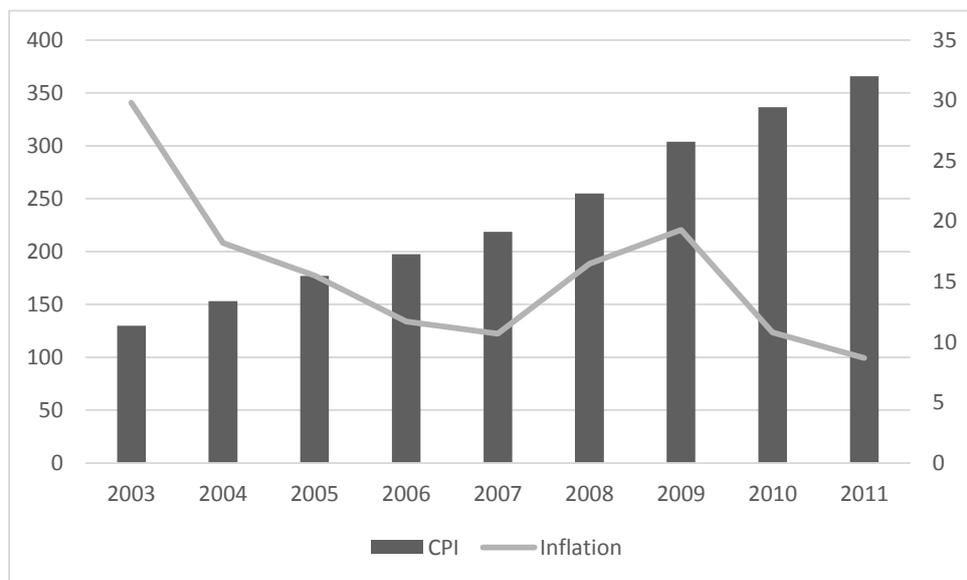
2.1 Macro-Economic Context

Some selected macro-economic and social indicators for Ghana during the 2003 – 2012 period are summarized in **Table 4**. These reflect a relatively positive period in Ghana’s development. Some highlights include:

- Consolidation of democratic rule as evidenced by a smooth presidential election in 2013 following the death of the incumbent president. According to the African Development Bank, Ghana out-performed most other West African nations in measures of civil liberty, political rights and political stability in the decade up until 2012.
- Improving fiscal management with generally steady growth in Real GDP, and improved inflation management, at least since 2009. Whilst remaining negative, Ghana’s fiscal balance has been improving over the last 5 years.
- Increases in the price and volume of gold and cocoa exports and the commencement of significant oil production in 2011 have contributed to rapid GDP growth following the global slump in 2009.

National inflation was running at between 10 and 25% for all the period between 2003 and 2010 during which Ahafo South resettlement planning, land acquisition and compensation payments were made. A high inflation environment has an erosive effect on the purchasing power of compensation monies although NGGL's provision of in-kind housing and replacement crops to some extent insulated affected people from this. Even without the influence of the project, it would hardly be surprising if displaced families had not frequently complained about the rising prices of food, land rentals and houses in the project area. These changes were being experienced throughout Ghana.

Figure 2 Ghana CPI and Inflation 2003-2011



Source: Ghana Statistical Service. Base year for CPI: 2002 = 100

Available regional data shows that Brong Ahafo fared somewhat better than Ghana nationally in terms of CPI increases. In the period 2005–2011, Brong Ahafo CPI increased by 161% compared to 188% for Ghana as a whole. This does not exclude the possibility of more localized CPI changes such as may have occurred in the vicinity of Ahafo mine. NGGL did not undertake monitoring of very local changes in food or other household commodities so no conclusions about project induced price changes could be drawn.

Table 4 Ghana: Selected Macro-Economic and Social Indicators 2003-2012

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|-------|-------|--------|--------|----------|----------|----------|----------|----------|-------|
| GDP growth (annual %) | 5 | 6 | 6 | 6 | 6 | 8 | 4 | 8 | 15 | 8 |
| Life expectancy at birth, total (years) | 60 | 60 | 61 | 62 | 62 | 63 | 63 | 64 | 64 | na |
| GNI per capita, PPP (current international \$) | 1,060 | 1,120 | 1,210 | 1,300 | 1,390 | 1,500 | 1,540 | 1,620 | 1,830 | 1,940 |
| Population (total millions) | 20.3 | 20.84 | 21.38 | 21.95 | 22.53 | 23.11 | 23.69 | 24.26 | 24.82 | 25.37 |
| GDP (current US\$ millions) | 7.63 | 8.88 | 10.73 | 20.41 | 24.76 | 28.53 | 25.98 | 32.30 | 39.18 | 40.71 |
| GDP per capita (current US\$) | 376 | 502 | 930 | 1,099 | 1,234 | 1,097 | 1,331 | 1,578 | 1,605 | na |
| Current account balance (% of GDP) | na | Na | -10.3 | -5.2 | -9.6 | -11.7 | -7.3 | -8.5 | -8.9 | na |
| Foreign direct investment, net (BoP, current US\$ millions) | na | Na | 144.97 | 636.01 | 1,383.18 | 2,714.92 | 2,365.64 | 2,527.35 | 3,196.89 | na |
| Inflation, GDP deflator (annual %) | 28.6 | 15.0 | 80.7 | 16.3 | 20.2 | 16.6 | 16.9 | 11.4 | 14.4 | na |
| Ores and metals exports (% of merchandise exports) | 3.9 | Na | 5.0 | 3.1 | 4.9 | 6.4 | 4.2 | 11.2 | 1.8 | na |

Source: World Bank Open Data Catalogue

2.2 National Food Costs

In addition to prevailing high inflation, during some seasons adverse weather led to decreased harvests of certain staple crops with consequent rapid price increases. Harvests in Northern Ghana in 2007 were particularly poor. As a consequence, during the period July 2007 to July 2008, nationally the price of maize rose 88%. Over the same period, the real prices of sorghum and millet also rose 73% and 65%. The retail price of rice peaked in October 2008 at about 50% over the 5-year average (2002-2006).

Table 5 Average annual inflation-adjusted wholesale prices of selected staple food crops

| Crop | Ghana | | | Brong Ahafo | | |
|------------|--------------------------|----------------|--------------------------|--------------------------|----------------|--------------------------|
| | 2008 average price (GhC) | % change 07-08 | % change vs 5-yr average | 2008 average price (GhC) | % change 07-08 | % change vs 5-yr average |
| Maize | 12.6 | 56.9 | 39.5 | 10.2 | 62.6 | 41.3 |
| Local Rice | 24.1 | 25.0 | 31.5 | 23.2 | 40.8 | 37.0 |
| Millet | 16.5 | 44.4 | 29.7 | 15.7 | 65.3 | 36.2 |
| Sorghum | 15.9 | 54.2 | 38.2 | 13.8 | 67.0 | 25.2 |

Source: Ghana Comprehensive Food Security and Vulnerability Analysis, WFP, 2009

These rapid increases in staple food prices would have benefited those displaced households that prepared replacement fields and planted crops early i.e. in 2006. Those that delayed field preparation and were reliant on purchased food through the 2007-2008 growing season would have suffered from the high prices. The food baskets delivered as part of the vulnerable people's program would have been invaluable for partially insulating households from the 2008 high food prices.

2.3 Asutifi District Food Production

This section is based on research undertaken by the specialist agricultural consultancy, Agricultural Innovation Consult. It demonstrates the positive influence of NGGL's agricultural programs on local food production. It also shows that the growth in production of staple crops significantly exceeded the annual population growth in Asutifi district of 2.5% (2000-2010 inter-censal period) i.e. per capita food availability improved (although not necessarily household's ability to access that food – see **Section 3.2.3**)

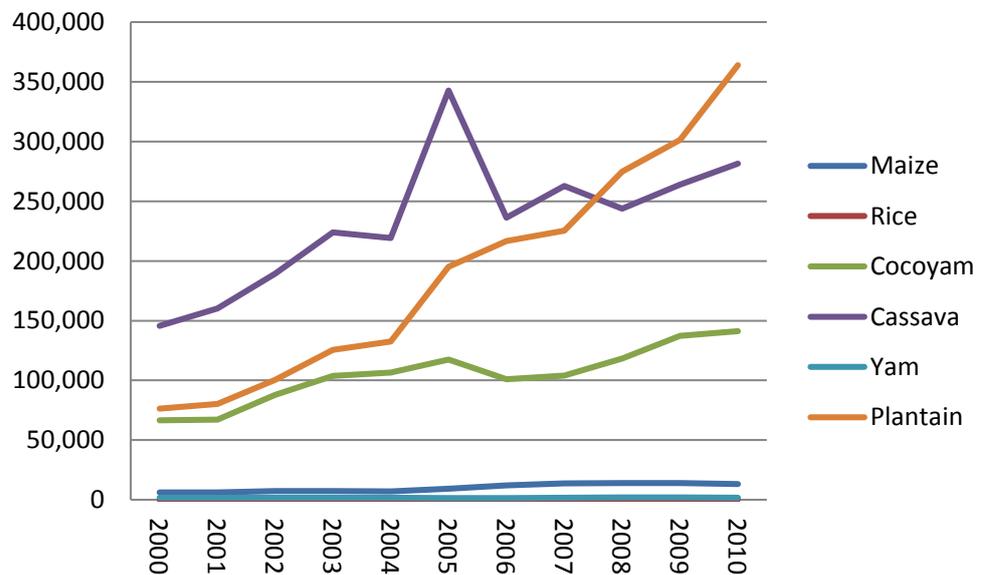
The mainstay livelihood activity for people in the Asutifi district is agriculture. Agriculture employs 78% of the population and contributes 51% of total household income (Asutifi District Medium Term Development Plan: 2006-2009).

Trends in agricultural production are thus a good indicator of local economic conditions and development.

Major cereals grown in the Asutifi district, where NGGL operates, include maize and some rice. Other food crops grown in the district are plantain, cassava, cocoyam and yam. As part of the LEEP and AILAP, NGGL supplied project affected farmers with improved maize seed, plantain suckers and other crop propagules to help with re-establishment of their agricultural livelihoods.

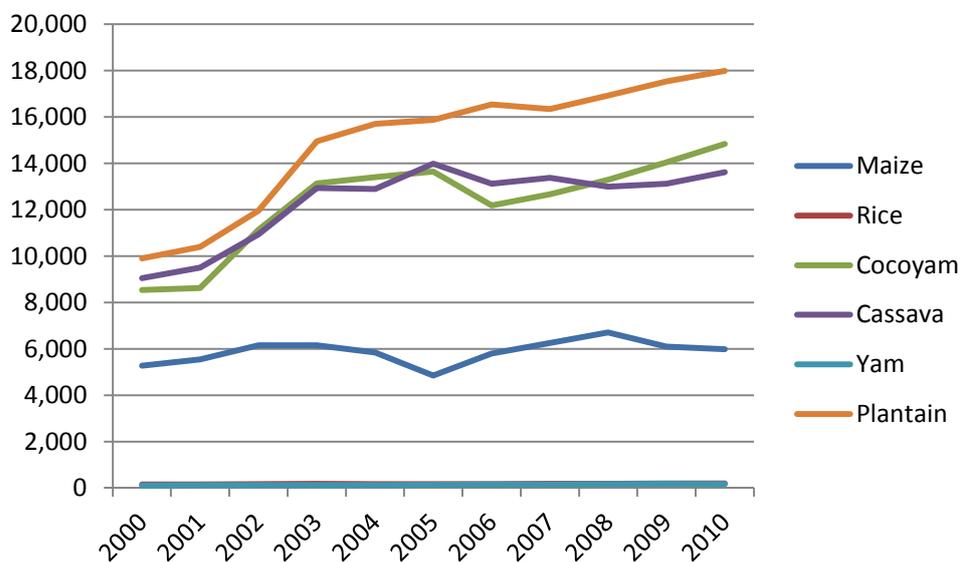
Crop production, area under cultivation and the yields of some selected cereals and food crops produced in the Asutifi district are shown in **Figure 3, 4** and **5**. In general, production of these selected crops in the Asutifi district has increased over the last decade but the increase has been more pronounced since 2005 (**Table 5**). Similarly, the area of these crops under cultivation has also steadily increased together with a corresponding improvement in yields. The post-2005 period corresponds with when the AILAP and LEEP programs began supplying project affected farmers with farm inputs such as improved maize, plantain and fertilizers. There are possibly other factors such as increased rainfall that might have contributed to increased production but almost certainly, the AILAP and LEEP programs contributed to the increase in crop production in the post-2005 period.

Figure 3 Crop production estimates (Million tonnes), Asutifi district, Brong Ahafo



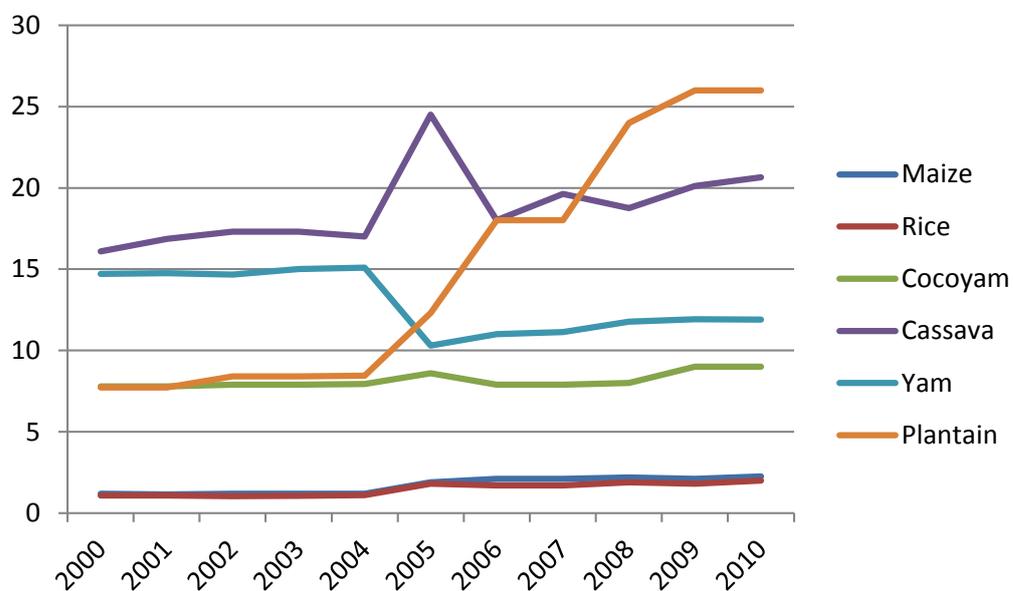
Source: MOFA, SRID, Accra

Figure 4 Area under production, Asutifi district, Brong Ahafo (Ha)



Source: MOFA, SRID, Accra

Figure 5 Yield, Asutifi district, Brong Ahafo (tonnes/Ha)



Source: MOFA, SRID, Accra

At worst, the figures indicate that the excision of 2,994 ha for the Ahafo mine had little or no impact on the Asutifi district's area under primary food crops and production.

Yield is a measure of farm productivity. In **Table 6**, mean yields of selected crops from 2000-2004 and 2005-2010 in the Asutifi district are compared. These periods were selected to indicate yields before and after NGGL supplied agricultural inputs to project affected farmers. The mean yields have increased from 2000-2004 to 2005-2010 for all the crops except yam. The greatest percentage changes in yields occurred with plantain (+155%) and maize (+79%) which were the two primary crops distributed as part of LEEP and AILAP. The reasons for the decline in yam are unknown.

Table 6 Comparison of mean yields of selected crops between 2000-2004 and 2005-2010 (t/ha), Asutifi district, Brong Ahafo.

| Crop | 2000-2004 | 2005-2010 | % change |
|----------|-----------|-----------|----------|
| Maize | 1.18 | 2.11 | +79 |
| Rice | 1.08 | 1.82 | +69 |
| Cocoyam | 7.87 | 8.40 | +7 |
| Cassava | 16.92 | 20.28 | +20 |
| Yam | 14.84 | 11.34 | -24 |
| Plantain | 8.14 | 20.72 | +155 |

Source: Estimates by Agricultural Innovation Consult, 2011

Table 7 shows the percentage contribution of Newmont supplies of plantain suckers and maize seed to the area under cultivation in Asutifi district in 2006. Assuming optimal plant spacing, NGGL supplied plant materials would have covered 15% and 8% of the area under cultivation with plantain and maize respectively. NGGL-supported farmers played a positive role in the productivity increase in the district.

Table 7 NGGL contribution to the area under cultivation in Asutifi district in 2006

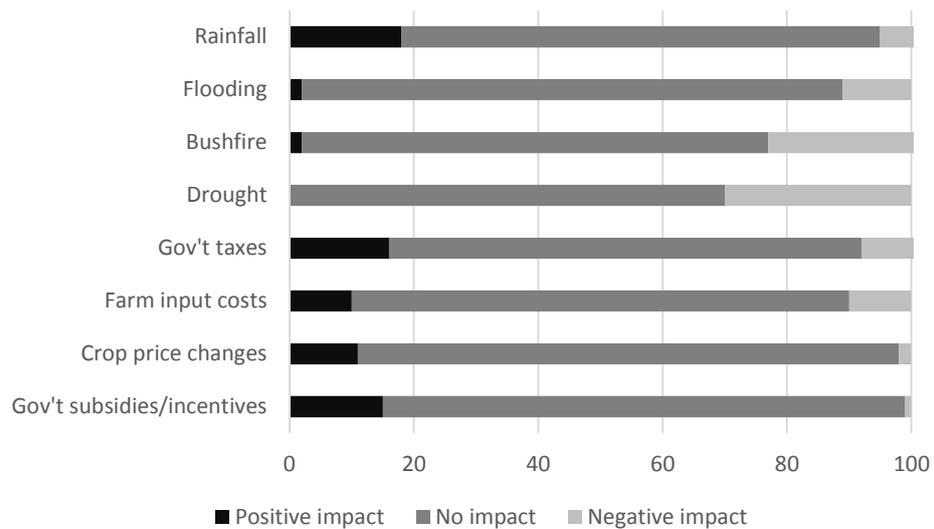
| Crop | Seed/suckers supplied by NGGL | Projected cover of NGGL plants with optimal spacing (ha) | Area under cultivation, Asutifi district (ha) | % contribution of NGGL |
|----------|-------------------------------|--|---|------------------------|
| Plantain | 2,654,461 | 2,441 | 16,543 | 15 |
| Maize | 10,830 | 481 | 5,793 | 8 |

Source: NGGL (AILAP, 2006) and estimates by Agricultural Innovation Consult

2.4 Local Perceptions of Change

As part of the household questionnaire, respondents were asked about major economic or environmental changes that affected their household positively or negatively over the previous 3 years (nominally 2007-2010). Responses are summarized in **Figure 6**.

Figure 6 Major economic or environmental changes affecting the household over the past 3 years



Source: RAP Completion audit household questionnaire, 2010 (Multiple responses from 672 respondents)

Rainfall (18% of respondents), government tax changes (16%), government subsidies and incentives (15%) were most often cited as having had a positive impact on the household. Drought (30%), bushfire (24%) and flooding (11%) were the factors most often cited as having had a negative impact.

The audit used the household questionnaire, key informant interviews and focus group discussions to elicit local peoples' views of change in the local economy. Peoples' perceptions are driven by their interpretation of local events, often uninformed by any knowledge of national economic trends. Positive changes observed by displaced people included the following:

- Increased economic activity and development;
- More employment opportunities for some; and
- Improved social services and amenities provided through NGGL support.

Negative changes identified by displaced people included:

- Reduced household income and increased cash expenditure on food due to loss of farmlands;
- Increased prices of goods and services; and
- Increased unemployment due to loss of farmland.

High food prices were nearly always attributed to the NGGL Ahafo mine development either on account of “the population increase caused by the mine development and the increased demand for food that this created” or more generically due to “the presence of NGGL workers”. People were largely unaware of the national inflation level and spikes in staple food prices.

NGGL did not undertake any local food price monitoring so it was not possible to determine whether very local demand exacerbated the macro-economic forces of high inflation and rapidly rising food prices. Prior to any future mine-related resettlement, it is recommended that local price monitoring be undertaken (see **Section 8.10**)

In spite of perceived heightened unemployment, farmers noted that there was a shortage of farm labor and that the cost of such labor, when it was available, had significantly increased. Informants attributed this to two factors:

- Growing disinterest of youths in being involved in farming; and
- Competing demands for labor arising from the mine, mining contractors and wider economic opportunities that these generated.

During completion audit focus group discussions, it was apparent that there was a changing perception, particularly amongst youths, as to what constitutes 'unemployment'. Many youths noted that while they did farm work, they did not consider this employment. Employment meant having a job such as with NGGL or its contractors. Growing disaffection with farm employment amongst young males was clearly evident.

Box 1. Sustainable Livelihoods Framework; the Five Capitals (adapted from DFID)

Human Capital

The skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.

Physical Capital

The basic infrastructure and producer goods needed to support livelihoods. Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively. The following components of infrastructure are usually essential for sustainable livelihoods: affordable transport; secure shelter and buildings; adequate water supply and sanitation; clean, affordable energy; and access to information (communications).

Social Capital

The social resources upon which people draw in pursuit of their livelihood objectives. These are developed through networks and connectedness that increase people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies; membership of more formalized groups which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and, relationships of trust, reciprocity and exchanges that facilitate co-operation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

Natural Capital

The natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods such as the atmosphere and biodiversity to divisible assets used directly for production (trees, land, etc.)

Financial Capital

The financial resources that people use to achieve their livelihood objectives. There are two main sources of financial capital:

- Savings in forms such as cash, bank deposits or liquid assets such as livestock and jewelry; or alternatively access to credit-providing institutions.
- Regular inflows of money (excluding earned income) such as pensions, or other transfers from the state, and remittances.

3 Audit Findings

3.1 General

The completion audit adopted the five 'capitals' of the 'Sustainable Livelihood' Model as a framework for reporting its findings. These capitals were adopted by NGGL's Monitoring and Evaluation Unit as part of its resettlement monitoring program. Each capital is briefly described in **Box 1**. The audit assessed the extent to which NGGL's Ahafo South had contributed or not to strengthening of the five capitals.

3.2 Human Capital

3.2.1 Household Change

Completion audit survey results indicate a mean displaced household size of 6.7 (2010). This is generally consistent with the Kintampo study (2006) which found a mean household size in Asutifi district of 6.5 and the Amoma baseline study (RePlan, 2009) which covered a rural area closely analogous to the Ahafo South pre-mine environment. The Amoma study found the mean household size in Amoma to be 7.1 and for the overall study area (Amoma plus parts of rural Asutifi) of 6.1.

Table 8 Mean household sizes in Asutifi District as reported by various surveys

| Study | Census | CWIQ | DHS (Rural) | OICI | GLSS 5 | OICI | Kintampo | Amoma baseline | Completion Audit |
|---------------------|--------|------|----------------|------|-----------|------|----------|-------------------|---------------------|
| Year | 2000 | 2003 | 2003 | 2004 | 2005 | 2006 | 2006 | 2009 | 2010 |
| Mean household size | 5.3 | 4.3 | 5.45 | 8.8 | 4.1 | 9.3 | 6.5 | 6.1 (7.1) | 6.7 |

Sources: As indicated

The NGGL-commissioned OICI baseline surveys in 2004 and 2006 recorded household sizes very much larger than any of the other surveys. These may reflect a recording anomaly or household sizes swollen by the presence of extended family members seeking to position themselves for project employment or other economic opportunities.

Table 9 Changes in household size pre-mine to present (roughly 2003 – 2010)

| | Births (N) | Deaths (N) | Persons leaving household (N) | Persons joining household (N) |
|------------------------|---------------|---------------|--|--|
| Mean persons/household | 1.68 | 1.43 | 3.8 | 2.1 |

Source: RAP Completion Audit household questionnaire, 2010

Households surveyed as part of the audit were questioned about changes to their household from the pre-mine period up until the time of the survey (2010). Findings are summarized in **Table 9**. Births reported for this period (roughly 2003 -2010) slightly exceeded deaths. The number of persons leaving households was greater than those joining. The major change in household size was driven by household members leaving. The survey did not capture reasons for departures.

3.2.2 Household Health

A Health Impact Assessment (HIA) was undertaken by Newfields in 2006-2007. The HIA retrospectively analyzed the positive and negative impacts of the Ahafo South resettlement program. The HIA concluded that in terms of household and community level health impacts up until 2007, the findings were ‘overwhelmingly positive’. The HIA noted, however, that it was unknown whether these improvements would be sustainable over many years.

The completion audit did not include a post-resettlement health assessment. The audit did, however, note significant improvements in the following areas potentially contributory to improved household health:

- Access to improved water supply;
- Improved access to medical services;
- Improved housing and sanitary facilities; and
- Provision of National Health Insurance Scheme (NHIS) cover as part of the vulnerable program.

The completion audit found a dramatic change in household use of improved water sources. The positive change was experienced by both physically and economically displaced households. Prior to mine development (2004), about 44% of households used improved (nominally ‘safe’) water sources. Following mine development, 98% of physically resettled households (i.e. those living in Ola and Ntotroso) and 96% of the

economically displaced households were using improved sources. People have through the water committees slowly accepted the need to pay for this improved water in order for it to be sustainable. The majority of households (96%) now pay for water compared to about one-third (35%) prior to mine development. The average daily payment is 2.04 GHC. Improvements in water quality alone do not necessarily translate into health benefits, but with sanitation training, as provided by the resettlement program, positive health impacts should be apparent.

Changes in household access to improved toilet facilities post-resettlement have also been very positive. All physically resettled households received Ventilation Improved Pit Latrines (KVIP) and all but one household reported using these. 70% of surveyed economically displaced households also reported using VIP/KVIP type toilets. Prior to the mine, usage of improved toilets amongst displaced households was about 2% (OICI, 2004).

Provision of NHIS to households was generally highly valued by recipients and was probably an important driver in shifting households' reliance from self-medication to mainstream medical services. **Table 10** shows a shift away from reliance on self-medication to the use of medical clinic, hospitals and pharmacies. 95% of households that received NHIS support made use of the coverage to attend a medical clinic, hospital or health practitioner. About half of the households that received NHIS coverage considered that they would be able to afford payments from their own resources when NGGL support ceased.

Table 10 Persons usually sought for medical attention

| Category | Pre-Mine (OICI 2004) % | Completion Audit (2010) % |
|-----------------|---------------------------|---------------------------------|
| Self-medicate | 17 | 4 |
| Herbalist | 2 | 2 |
| Fetish priest | – | - |
| Spiritualist | 1 | 1 |
| Clinic/hospital | 79 | 87 |
| Pharmacist | – | 6 |
| Other | – | - |
| Total | 99 | 100 |

Sources: As indicated

3.2.3 Food Security and Nutrition

The ability of households to sustainably re-establish food production or otherwise meet their dietary needs is a fundamental requirement for a successful resettlement

program. The concept of 'food security' has been widely adopted as a measure of households' abilities to sustainably access sufficient food.

At the World Food Summit in 1996, food security was agreed to exist when:

"All people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life".

Even outside of a resettlement program, it is challenging to define the food security of a household or community. It is a dynamic condition. It depends on the complex interaction of agricultural, environmental, socio-economic and biological factors. For the purposes of the completion audit, reference was made to the simplified framework referred to in the *Ghana Comprehensive Food Security and Vulnerability Analysis* (2009). This identifies three distinct but inter-related dimensions:

Food availability: concerns the food that is physically present in the area through all forms of domestic production, commercial imports and food aid. This might be aggregated into regional, national, district or community levels.

Food access: concerns a household's ability to regularly acquire adequate amounts of food through a combination of its own home production and stocks, purchases, barter, gifts, borrowing or food aid.

Food utilization: refers to households' use of the food to which they have access, and individuals' ability to absorb and metabolize the nutrients, i.e. the conversion efficiency of the body.

The audit had no measure of 'food utilization', so its assessment was based on 'food availability' and 'food access'. To evaluate resettler households' progress with restoring food security, the completion audit drew on the following:

- Household's self-reported food sufficiency and perceptions of their food security;
- National, regional and district data on food crop production and food price inflation (see Chapter 2);
- Expert field assessment of selected households' land size, quality, agricultural techniques and progress with crop re-establishment (see Chapter 4);
- Households' income and expenditure data, particularly expenditure on food (see Chapter 3);
- The Newfield Health Impact Assessment (2007); and
- Household's five capitals – human, physical, natural, financial and social (this chapter)

Some 43% of surveyed households reported insufficient food over the past year. This is worse than the 12% reported pre-mine (OICI, 2004) but a significant improvement over the 65% of households reporting insufficient food in the dry season and 69% in wet season in 2007 (SDNL, 2008). Reasons given for insufficient food are summarized in **Table 11**. In addition, the agricultural field survey found that many households were focusing on cash crop establishment at the expense of their food crop production (see further discussion, **Section 4.2.3**).

Table 11 Reason given for household's inability to produce enough food

| Reason | N | % |
|--------------------------------|------------|-----------|
| Drought | 35 | 5 |
| Pest/rodents | 1 | - |
| Disease | 5 | 1 |
| Bushfire | 7 | 1 |
| Not enough land | 134 | 20 |
| Not enough labor | 16 | 2 |
| Financial constraints | 23 | 3 |
| Other (e.g. old age, sickness) | 67 | 10 |
| Total | 288 | 42 |

Source: RAP Completion Audit household questionnaire, 2010 (N=672)

Some summary observations on national, district/community level and household food availability and food accessibility are presented in **Table 12**. The table identifies factors that may have helped household access to food (e.g. increased food production through AILAP/LEEP, food baskets through NGGL's vulnerable peoples program) and other factors that may have hindered that access (e.g. insufficient land, high inflation, sharp increases in staple crop prices, reduced household cash income for buying food until cash crops mature). Some of these factors are project induced, some are not. In reality, all these factors are changing with time and most project households will have experienced changing ability to access food at various points during the resettlement period.

In focus group discussions, displaced households of all categories (physically displaced, economically displaced and vulnerable) identified the risk of 'insufficient food' or 'going hungry' as the primary risk faced by their households going forward. Based on findings of the *Ghana Comprehensive Food Security and Vulnerability Analysis* (2009), this kind of response would probably be typical for a majority of rural households living in the Northern and Brong Ahafo regions of Ghana where conditions affecting food availability and ability to access that food are dynamic.

3.2.4 Assessed Outcome

The assessment of changes in Human Capital was based on proxy indicators, rather than direct measurements of household or community health and nutrition.

The improvements in standard of housing, access to safe water, improved sanitation and access to mainstream health care experienced by both physically and economically displaced households have good potential to lead to improved household and community health. The Newfield's HIA (2007) observed early evidence of this.

NGGL food baskets provided reliable and balanced nutrition to 28% of the neediest displaced households for varying periods up to 4 years. AILAP contributed to increased local food production. While overall, households reported a lower level of food sufficiency than in the pre-mine survey, longitudinal surveys presented an improving trend. Those households with sufficient farm land have good prospects of fully restoring their food security to at least pre-project levels. Cash from mature cocoa, oil palm and coconut crops will further improve these households' ability to access sufficient food. Households with no farm land or insufficient farm land are likely to experience an ongoing struggle to achieve food security.

NGGL supported a range of educational initiatives that led to higher scholastic achievement, at least during the resettlement period.

Considered together, these measures have undoubtedly contributed to short term improvements in many displaced households' quality of life. While it remains to be seen how sustainable these measures will be, the auditors consider that the resettlement program has provided opportunities for strengthening of human capital, accessible to most households.

Table 12 Food security observations

| Dimension | Macro level | District/community level | Household level |
|--------------------|---|--|--|
| Food availability | <ul style="list-style-type: none"> - The Ghana CFSVA (2009) found that food availability at national level was adequate & did not contribute to food insecurity. - In 2008, Ghana's cereal production was more than enough for human consumption & production of roots & tubers was more than three times what was required. - Rice & wheat are the only staple commodities not produced in sufficient quantities to meet national needs. - 2007 was a poor agricultural season due to adverse weather – this led to a fall in cereal production & nation-wide price increases in maize, local rice & millet. | <ul style="list-style-type: none"> - Asutifi crop data shows food production increased significantly 2003- 2010. - AILAP & LEEP programs were a contributing factor. - Production of staple crops grew faster than district population. - Per capita food production at a district level improved over the 2003 – 2010 period. | <ul style="list-style-type: none"> - Short term loss of food production due to loss of farm land to NGGL – offset partially or wholly by: <ul style="list-style-type: none"> o Cash compensation that could be used for buying food o Food baskets supplied by the Vulnerable program o Preparation of replacement farm area with inputs from AILAP & LEEP (increased food production) - Other factors potentially affecting household food production: <ul style="list-style-type: none"> o Unproductive time – greater travel time from dwelling to/from fields & more time spent gathering fuel wood o Increased labor costs - need for more weed control, but higher labor costs/less available labor due to competing demands o Maturing cocoa overshadows food crops – less food production/ farmers focus on cocoa, less on growing food. |
| Food accessibility | <ul style="list-style-type: none"> - High inflation - CPI increasing at >10-25% throughout 2003-2010 period. - Declining household purchasing power – e.g. price of staple food crop, maize, increased 88% in July 2007 to July 2008 - Global financial crisis – income declines for farmers reliant on export crops (e.g. cocoa, shea nut, oil palm) - Reduced ODA spending curtails some of Government of Ghana's social safety net spending. | <ul style="list-style-type: none"> - NGGL did not monitor very-local food price changes – some mine induced inflationary effects were probable. | <ul style="list-style-type: none"> - LEEP & AILAP helped boost household food production & access over transitional period. - NGGL's Vulnerable People's Program provided food baskets to 482 households for varying periods, 2007-2010. - Resettler households were exposed to rapidly escalating food prices (like rest of Ghana). - 20% of displaced households reported having no farm land or insufficient farm land to meet household needs. - Many displaced households experienced loss of cash flow from cocoa during re-establishment period (reduced cash for food purchases), but received increased prices for other crops (e.g. plantain) - Displaced households have diversified income to non-farm activities – this has helped replace lost cash crops' income & will contribute to greater resilience to survive future agricultural lean periods. |
| Food utilization | Not addressed as part of the Ahafo South Resettlement Completion Audit | | |

3.3 Physical Capital

3.3.1 Strategy

The Ahafo South RAP was based on a strategy of relocating families from rural homesteads and hamlets scattered throughout the mine footprint into two peri-urban 'villages' in locations adjoining the towns of Ntotroso (Ntotroso resettlement village) and Kenyasi 2 (Ola resettlement village). Benefits of this approach included:

- More cost-effective to provide urban-type services – reticulated power, improved water supply, waste management;
- Improved access for resettlers to social services – schools, medical services, markets and public transport;
- Proximity to the NGGL mine so that resettlers had the potential to benefit from appreciating property prices, mine-related employment and business opportunities and mine-driven demand for rental accommodation.

Some of the trade-offs arising from this strategy are evident in the audit results reported below.

3.3.2 Housing

As with earlier post-resettlement surveys conducted by OICI, the audit revealed a high degree of satisfaction with the quality of replacement housing provided by NGGL at Ntotroso and Ola. Of respondents who received a replacement house, 89% considered that its quality was the same or better than their pre-resettlement dwelling. Whilst 63% of respondents considered that their replacement house was smaller than their pre-resettlement dwelling, this is consistent with the resettlers' shift from rural 'homesteads' that were typically occupied by more than one household to urban replacement houses that were allocated on a per household basis.

Table 13 Perceived quality of replacement housing

| | N | % |
|------------------------------------|-----------|------------|
| Quality worse than pre-mine house | 9 | 11 |
| About the same quality | 14 | 17 |
| Better quality than pre-mine house | 58 | 72 |
| Total | 81 | 100 |

Source: RAP Completion Audit household questionnaire, 2010

Positive characteristics of replacement housing mentioned by respondents included the following:

- House is well constructed;

- Good quality materials – concrete, good quality roofing;
- Pleased with toilet and bathroom;
- Sufficient room around the house for children to play; and
- Close to main road.

Characteristics that a small number of respondents suggested they would like to change included the following:

- Enlarged room sizes;
- Need a kitchen to cook in⁴;
- Would like a larger bathroom; and
- Change the paint color.

A growing number of households were observed to be modifying or extending their replacement dwellings. The auditors considered that this was a positive sign and evidence that households have taken emotional ‘ownership’ of their dwellings and are now customizing them to meet household-specific needs.

At time of writing, a one-bedroom house (250 square feet) with kitchen, bathroom and KVIP latrine was selling for around GHC 3,000.00. A three-bedroom house with kitchen, bathroom and KVIP latrine was selling for around GHC 8,000.00. Monthly rentals were in the range GHC 25.00-35.00 for a single bedroom house and GHC 50.00-70.00 for a double bedroom house.

Houses at the time of the audit were approaching 5-6 years of age. Some houses showed signs of needing basic maintenance to address leaks and minor cracking. It might be timely for NGGL to find a partner to deliver training in basic house maintenance so that value of this important asset is maintained.

3.3.3 House Plots

House plots were being used for a variety of purposes including outdoor cooking (30% of respondent households), raising chickens or ducks (20%), for house extension (15%), food storage (14%) and growing vegetables and fruit trees (4%).

Households received Certificates of Occupation for their house plots granted by the Lands Commission. The certificate has a duration of 99 years, the maximum period allowed under Ghanaian law for urban plots. Most survey respondents

⁴ Some resettlement houses offered as replacement for speculative structures were built without internal kitchens. As customarily the majority of cooking is undertaken outside of the dwelling, this is not necessarily a significant shortcoming.

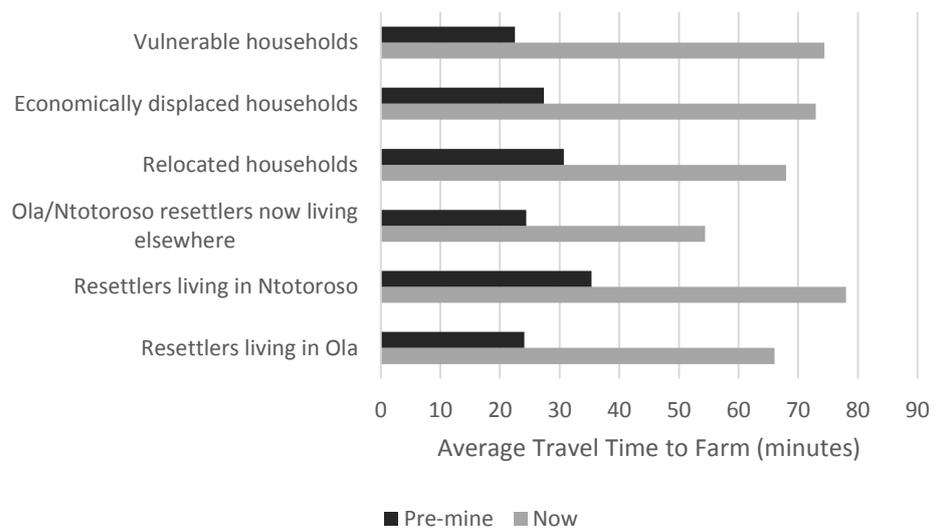
(61%) indicated the Certificate of Occupation was under the name of the household head. 13% indicated that certificates were jointly titled (i.e. in the names of both spouses).

In future, it would be consistent with international best practice to promote issue of replacement title in the names of both spouses.

3.3.4 Access to Farms

One of the trade-offs of consolidating replacement housing near towns was the greater distance and travel time taken for displaced families to reach their agricultural fields. Respondent estimates of their travel time before and after mine development are indicated in **Figure 7**. On average, most households have more than doubled time spent travelling to their farms. **Figure 6** shows that this issue was not unique to physically displaced households. All displaced groups were affected by the need to rent new land, potentially at greater distance from their dwelling, or by the need to travel greater distances to reach their existing land due to severance caused by the mine.

Figure 7 Pre-mine and post-mine average travel times from dwelling to farm (minutes)



Source: RAP Completion Audit household questionnaire, 2010 (N=672)

Focus groups identified a number of opportunity costs related to the greater distances between dwelling and farms. These included:

- Reduced working time in the fields (i.e. time lost due to additional travel time);
- Cost of travel when reliant on public transport;

- More effort required to carry tools and agricultural inputs to the fields and to carry produce for subsistence use home;
- Increased risk of theft, bird damage and the like while the farmer was away from his agricultural land.

The additional time spent travelling between dwelling and fields is a significant opportunity cost and loss of productive time for displaced farmers. Sustainable solutions to address the issue are not straightforward. Farms are at geographically dispersed locations and therefore may be difficult to cost-effectively service with public transport. Farmer's returns may, in many cases, limit their ability to pay for transport.

In the short term, NGGL might explore whether there are any potential local entrepreneurs, municipal or collective interests that are interested in supporting transport to and from selected farm locations. To facilitate this, NGGL may need to support a small market study (i.e. extent of resettler/other local interest; willingness and ability to pay; locations/ concentrations of farms that might be serviced). Alternatively, NGGL might investigate avenues for providing small loans to enable displaced households to invest in bicycles or motorcycles to reduce time spent in travel.

3.3.5 Access to Energy

Households in Ola and Ntotroso were making increased use of electricity for lighting compared to their pre-resettlement situation. 63% of households had connected to the reticulated electrical system in their replacement villages. Only 1% of households reported using electricity for lighting prior to resettlement (OICI, 2004). Access to electrical lighting can extend study periods for students and also the duration of household productive activities.

Table 14 Type of fuel used for lighting

| | Pre-mine (OICI, 2004) % | Post-resettlement (Completion Audit, 2010) % |
|--------------------|-------------------------------|--|
| Kerosene/ paraffin | 95 | 30 |
| Mains Electricity | 1 | 63 |
| Battery | 3 | 3 |
| Torch/flashlight | - | 4 |
| Other | 1 | - |
| Total | 100 | 100 |
| N | 284 | 672 |

Sources: as indicated

Post-resettlement, about half of households have shifted from using fuel wood for cooking to charcoal or gas (see Table 15). This probably reflects the greater

availability of alternative fuels and the greater effort required to gather wood when living in a town environment.

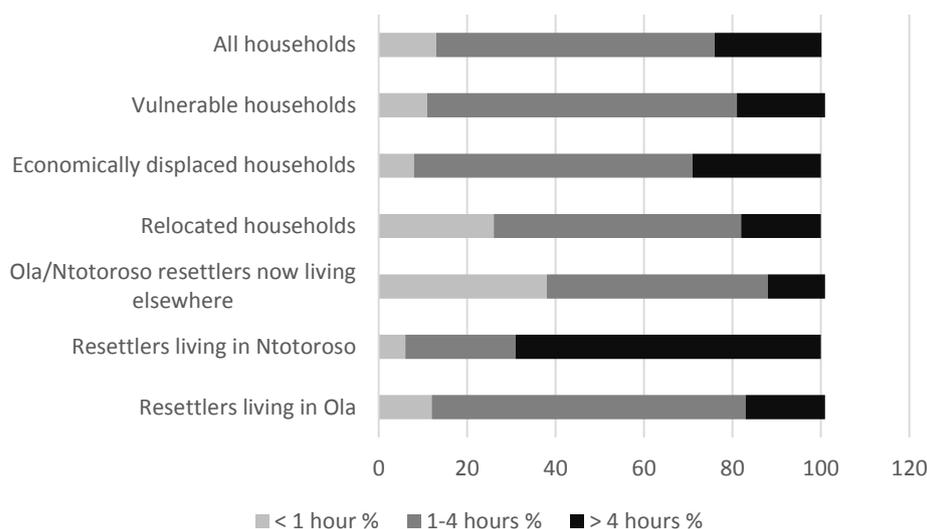
Table 15 Fuel used for cooking

| | Pre-mine (OICI, 2004) % | Post-resettlement (Completion Audit, 2010) % |
|----------------------------------|-------------------------------|--|
| Fuel wood | 99 | 50 |
| Charcoal | 1 | 43 |
| Bottled gas | - | 6 |
| Other (kerosene, electricity) | - | 1 |
| Total | 100 | 100 |
| N | 84 | 339 |

Sources: as indicated

About 50% of households are still reliant on gathering wood for cooking. A majority of these households (71%) spend 1-4 hours each day in firewood collection. A significant proportion (18%) spend more than 4 hours a day. This implies that a very significant amount of scarce household labor resources are tied up in firewood collection. Most households considered that firewood collection had become more difficult over the past year (88% of households still reliant on firewood).

Figure 8 Household time spent gathering firewood (each day)



Source: RAP Completion Audit household survey, 2010 (N=339)

NGGL might usefully look at options to reduce reliance on firewood and increase the time available for more productive activities. See **Section 8.1** for suggestions.

3.3.6 Access to Water and Sanitation

Advances in access to water and sanitation as a result of resettlement are described in Section 3.2.2.

3.3.7 Access to Social Services and Amenities

The average time taken for displaced families to reach selected social services and amenities is summarized in the following table. Both physically displaced and economically displaced households have experienced reduced travel times to reach key amenities. Considered in aggregate, all households enjoy greater convenience to key social services and amenities.

Table 16 Travel time (minutes) from dwelling to social services and amenities – pre- and post-mine

| Category | Supply of water | | Toilets | | Food market | | Public transport | | Primary school | | Secondary school | | Church/mosque | |
|--|-----------------|-----|----------|-----|-------------|-----|------------------|-----|----------------|-----|------------------|-----|---------------|-----|
| | Pre-mine | Now | Pre-mine | Now | Pre-mine | Now | Pre-mine | Now | Pre-mine | Now | Pre-mine | Now | Pre-mine | Now |
| Ola resettlers | 14 | 6 | 10 | 2 | 35 | 26 | 34 | 13 | 32 | 19 | 48 | 35 | 26 | 24 |
| Ntotroso resettlers | 35 | 7 | 21 | 4 | 44 | 40 | 30 | 19 | 29 | 23 | 36 | 27 | 25 | 32 |
| Ola/Ntotroso resettlers living elsewhere | 16 | 6 | 15 | 7 | 34 | 18 | 30 | 14 | 29 | 20 | 35 | 35 | 31 | 23 |
| Relocated households | 17 | 9 | 12 | 8 | 32 | 21 | 24 | 14 | 31 | 22 | 47 | 36 | 28 | 21 |
| Economically displaced households | 10 | 9 | 9 | 6 | 18 | 15 | 27 | 10 | 27 | 24 | 33 | 39 | 28 | 19 |
| Vulnerable households | 19 | 8 | 11 | 5 | 35 | 23 | 34 | 14 | 32 | 20 | 52 | 39 | 29 | 20 |

Source: RAP Completion Audit household survey, 2010

3.3.8 Perceptions of Resettlement Villages

Only a small number of survey respondents (n=81 out of 672 total respondents) expressed views about their replacement village compared to their original environment. Opinions were divided as to whether the resettlement village was a healthier place to live (21%), about the same as before (21%), or less healthy than their original dwelling (46%).

Most common reasons given for the villages being a healthier place to live were:

- Easy access to social services and amenities
- Our household's health has been more stable

Reasons given why the replacement village was considered a less healthy place to live are listed below. It is interesting to note that the benefits of improved water supply and sanitation are not necessarily recognized or taken into account.

- We have to buy almost everything which was not the case in our old village
- It is not a natural environment – less trees for shade and good air
- Rooms are too small without proper ventilation
- The environment is too dusty which is not good for our health
- It is a long distance to our farms
- Water supply is inconsistent

Ola and Ntotroso households who had chosen to move elsewhere (about 45% of surveyed physical relocates) were asked about their motivations for doing so. Verbatim responses included (in order of frequency):

- To be close to family and friends
- To be close to place of work
- To take advantage of additional income (rental of house) to support my household
- To have enough accommodation area to be able to support all my household members
- The place I live now is much healthier than my resettlement house

Nearly all those Ola and Ntotroso households living elsewhere (96%) planned to return to their Ola/Ntotroso house at some time in the future (RAP Completion Audit household questionnaire, 2010).

3.3.9 Assessed Outcome

By most measures of 'physical capital', resettled households are assessed as better off than prior to resettlement. Overall, they have secure long-term tenure over their house plots, improved housing, improved water supply and sanitation and improved access to social services such as schools, medical clinics, public transport and markets. Their replacement houses are well located to enable resettled households to take advantage of economic opportunities arising from their town location and proximity to the NGGL mine such as through employment, small or micro business opportunities or house rental. Economically displaced households have also been able to achieve significant improvements in their quality of housing and access to basic services and amenities using their compensation and their own resources. Houses are an appreciating asset.

The most significant trade-offs arising from the Ahafo South resettlement have been the greatly increased time households have had to spend travelling to and from their agricultural land and in collecting fuel wood. This lost time represents a significant opportunity cost in terms of household productivity. Measures to address this opportunity cost are recommended in **Section 8.3**.

3.4 Natural Capital

Natural capital refers to the natural resources from which resources and services useful for livelihoods are derived. Natural capital is sometimes divided into intangible public goods (e.g. the atmosphere, biodiversity, nutrient cycling, and erosion protection) and divisible assets used directly for production such as land, trees and water resources.

The Ahafo South resettlement strategy involved relocating project affected households from a rural setting with a matrix of perennial crops, subsistence production and bush land, to peri-urban, low density residential development.

The completion audit observed that many physically resettled households were operating in a transitional mode - while some aspects of their lifestyle were urban (e.g. living on 600 m² plots, increasing reliance on non-farm based incomes and a cash economy), most households exhibited at least some continuing reliance on farm production and foraging. Many households are likely to continue in this mode perhaps for a generation. Low educational attainment and lack of work skills will limit many peoples' ability to transition fully into urban employment and lifestyles.

3.4.1 RAP Strategy

The Ahafo South resettlement program was based on displaced households finding their own replacement farm land. Under the AILAP program, farmers were given incentives to secure and clear 2 acres of arable land. This was to provide assurance that every household had at least 2 acres to farm. More than 3,200 farmers received the AILAP incentives package, meaning that they successfully accessed replacement land, at least for an initial period. Some households secured two or more 2-acre parcels and the associated incentives packages. Some 522 vulnerable households received the AILAP package and 79 of these received a second package.

3.4.2 Access to Land

Access to suitable replacement land is a critical component for the restoration of livelihoods of households substantially reliant on agriculture.

The Ahafo South RAP (2005) indicates that 1,701 households lost in total 2,426 Ha (5,995 acres) of land to the NGGL mine. This corresponds to an average loss of 1.4 Ha (3.46 acres) per household. AILAP enabled 3,201 farmers (nearly 2 farmers per displaced household) to access some 2,591 Ha (6,402 acres) of replacement land, slightly more than the area acquired by NGGL.

During focus group discussions, it became apparent that in selecting replacement land area, households had to make a trade-off between the distance of land from Ola and Ntotroso and the quality of that land. Better quality agricultural land was generally located 5 kilometers or more from the resettlement villages. Focus group participants' observation was that those who selected land close to the village often encountered stony or poorly drained soils, not particularly suitable for cocoa cultivation or any of the other crops sponsored by AILAP.

Field studies of a sample of 20 farms undertaken as part of the audit found that farms ranged from 0.8 km to 19.2 km from the farmer's residence. The average distance between home and farm was 8.3 kilometers. Farmers reported using a combination of public transport and walking to reach their farms.

An important finding of the completion audit was that the size of most farmers' actively cultivated land was limited by available labor and not by availability of land. Based on field studies of 20 farms, the audit team agricultural specialists found that households were working fairly consistently about 3.5 acres of annual crops and 3.8 acres of perennial crops. As annual and perennial crops were interplanted, this means most farmers were actively cultivating about 3.5 - 3.8 acres. With this sized plot, at the time of the agricultural field assessment, about one third of farmers were struggling with weed management.

3.4.3 Households Without Land or With Insufficient Land

Prior to displacement, 95% of project affected households reported having farms (OICI, 2004). At the time of the completion audit survey, 31% of respondents reported that they had insufficient or no agricultural land. Of these, 6% indicated that they were either too busy with non-farm activities or were too old or sick to undertake farming. The remaining 25% reported being either landless or having insufficient land.

Landlessness is one of the known risks of involuntary resettlement, so any apparent reduction in land access as the result of a resettlement program is potentially a cause for concern. Reasons given for not accessing land are summarized in **Table 17**.

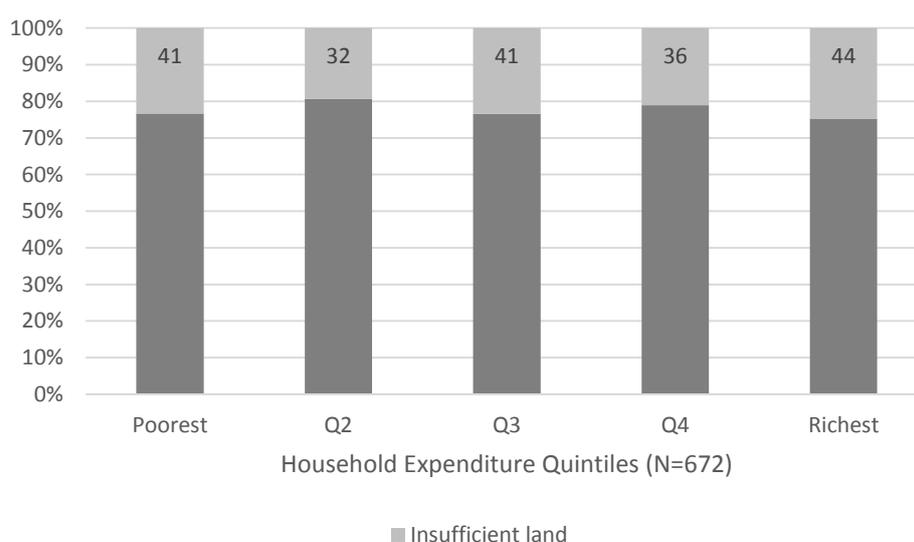
Table 17 Reasons why household does not have agricultural land (% of all 672 respondents)

| | % | N |
|--------------------------------------|-----------|------------|
| High land prices | 8.9 | 60 |
| Insufficient land | 9.1 | 61 |
| Long distance to available land | 2.1 | 14 |
| Difficulty in assessing land quality | 4.9 | 33 |
| Time devoted to non-farm activities | 3.7 | 25 |
| Other (old age, sickness, no funds) | 2.7 | 18 |
| Total | 31 | 211 |

Source: RAP Completion Audit household questionnaire, 2010 (N=672)

Landless households were not all doing badly. They are relatively evenly distributed across the household income range (see **Figure 9**), but such households were less likely to report year-round food sufficiency (49%) than households with sufficient land (59%).

Figure 9 Distribution of households with insufficient land (expenditure quintiles)



Source: RAP Completion Audit household socio-economic survey, 2010

It is recommended that NGGL investigate further the extent of households with no land or insufficient land, the reasons for this and possible corrective actions. It is possible that there were some households whom were unable to sustainably access land through the AILAP process and whom might need alternative support.

3.4.4 Adequacy of 2-Acre Plots for Household Food Sufficiency

The audit team's agricultural specialists were asked to review the adequacy of the minimum 2 acre plot supported by AILAP for providing sufficient food for an average household. The specialists calculated the area of land needed to produce the annual per capita consumption of staples: cassava, plantain, cocoyam and maize. The results are summarized in **Table 18**. Yields were conservatively based on a farmer achieving 80% of the average national yield for each crop.

Table 18 Estimated area of cultivated land necessary to meet an average adult's year round food needs (excluding fallow)

| Crop | Consumption (Kg/head/year) 2005 | 10% increase in consumption (Kg/head/year) 2010 | Average national yield (Mt/Ha) | Average national yield less 20% (Mt/Ha) | Expected farmer yield (Kg/Ha) | Area of production needed/head/year (Ha) |
|------------------|---------------------------------|---|--------------------------------|---|-------------------------------|--|
| Cassava | 152.9 | 168.2 | 12.8 | 10.24 | 10,240 | 0.0164 |
| Plantain | 84.8 | 93.3 | 10.6 | 8.48 | 8,480 | 0.011 |
| Cocoyam | 57.1 | 62.8 | 6.6 | 5.28 | 5,280 | 0.0119 |
| Maize | 43.8 | 48.2 | 1.5 | 1.2 | 1,200 | 0.0402 |
| Sub-total | | | | | | 0.0795 |
| Fallow | | | | | | 0.0500 |
| Total | | | | | | 0.1417 |

Source: Agricultural Innovation Consult estimate

Table 19 shows the land area required for different household sizes to meet their staple food requirements. The table is based on conservative assumptions. It shows that 2 acres is sufficient to support a 10-member household without fallow, or a 6-7 member household with reasonable provision for fallow. The agricultural specialist concluded that NGGL's assumption of 2 acres was reasonable for an average family to achieve food sufficiency.

Table 19 Indicative land area required to meet household food needs

| House hold size | Without Fallow | | | With Fallow | | |
|-----------------|---------------------------|--|---|------------------------|---|---|
| | Ha/ Person without fallow | Area required to meet house hold food needs (Ha) | Area required to meet house hold food needs (Acres) | Ha/ person with fallow | Area required to meet household food needs (Ha) | Area required to meet house hold food needs (Acres) |
| 1 | 0.0795 | 0.08 | 0.20 | 0.1417 | 0.14 | 0.35 |
| 2 | | 0.16 | 0.39 | | 0.28 | 0.70 |
| 3 | | 0.24 | 0.59 | | 0.43 | 1.05 |
| 4 | | 0.32 | 0.79 | | 0.57 | 1.40 |
| 5 | | 0.40 | 0.98 | | 0.71 | 1.75 |
| 6 | | 0.48 | 1.18 | | 0.85 | 2.10 |
| 7 | | 0.56 | 1.38 | | 0.99 | 2.45 |
| 8 | | 0.64 | 1.57 | | 1.13 | 2.80 |
| 9 | | 0.72 | 1.77 | | 1.28 | 3.15 |
| 10 | | 0.80 | 1.96 | | 1.42 | 3.50 |

Source: Derived from Agricultural Innovation Consult estimates

3.4.5 Land Tenure

Post-resettlement, the majority of project affected households with land either owned their replacement land (45%) or sharecropped it (*Abunu*-type, 42%). Pre-mine information is difficult to interpret. The RAP baseline survey (OICI, 2004) variously notes that 28% of households owned land or that 44% of survey respondents either owned land themselves (31%) or as a couple (13%). The AILAP report (July 2006) characterized more than half of affected landholders as sharecroppers.

The completion audit figures are broadly comparable to the Amoma social baseline study covering an area lying immediately to the north of Ntotroso that found 48% of respondents to be 'owners' and 47% 'sharecroppers'. The frequency of each tenurial arrangement amongst Ahafo South displaced households is summarized in Table 20. The pattern of post-resettlement land tenure is probably very similar to that pre-mine.

Table 20 Household rights to their farm (multiple responses possible)

| Rights to farm land | N | % |
|--|------------|-----------|
| Owner | 210 | 45 |
| Sharecropper (<i>Abunu</i>) ⁵ | 197 | 42 |
| Sharecropper (<i>Abusa</i>) ⁶ | 25 | 5 |
| Rented | 29 | 6 |
| Caretaker (<i>nhwesoo</i>) ⁷ | 6 | 1 |
| Total | 467 | 99 |

Source: RAP Completion Audit household questionnaire, 2010

3.4.6 Access to Common Property

Based on completion audit survey findings, about half (54%) of project affected households make use of forest or bush land. The most common uses are gathering firewood (80%), planting crops (7%), gathering herbs or medicinal plants (4%), gathering fruits or foods (2%) and artisanal mining (2%).

3.4.7 Assessed Outcome

Audit findings on access to Natural Capital were as follows:

- Project incentives to encourage displaced people to access replacement land were largely effective and led to clearing of an agriculture area greater than that acquired by the mine.
- The basic AILAP assumption of 2 acre lots per household was adequate for food sufficiency for the average household, although farmers have

⁵ An *abunu* tenancy arrangement is common for tree crops (e.g. cocoa, oil palm). The field is divided between landlord and the sharecropper at the end of an agreed period (typically 5 years) into 2 equal shares.

⁶ Terms vary by agreement, but typically the *abusa* system involves an annual arrangement whereby the harvest (e.g. maize, cassava) is divided equally between the landlord and sharecropper. Usually there is no division of land.

⁷ A caretaker is someone that has been employed by either a landlord or sharecropper to care for a particular field (e.g. a cocoa plantation). The caretaker receives a share of the proceeds from the sale of crops (typically one-third) for managing or cultivating the field.

subsequently focused on establishing cash crops (e.g. cocoa) at the expense of food production.

- Four to five years after the AILAP land access programs, the RAP completion audit found that a significant majority of households (about 69%) had ongoing access to sufficient agricultural land.
- A further 6% of households without land were occupied by non-farm activities or were too elderly or unwell to be capable of farming.
- A further 25% of households reported having no farm land or insufficient farmland and are consequently at risk of ongoing impoverishment.
- Focus group participants indicated that there is abundant vacant land suitable for agriculture in the vicinity of the mine, but that the rental cost of such land has increased significantly since the mine development – high farm land rentals may be beyond the reach of some households who, for whatever reason, have relinquished their AILAP land, or whom acquired unsuitable land or insufficient land or who were unable to participate in AILAP in the first place.
- Tenure types amongst those actively farming were similar to the pre mine situation with a split between ownership and sharecropping.
- About half of households continue to rely on common property goods for livelihood activities.

In accordance with World Bank OD 4.3, NGGL has given displaced households opportunities and resources to access replacement farmland. It appears that such initiatives were successful in facilitating sustainable land access for 69% of households. Audit findings indicate that perhaps 23% of households have no land or insufficient land and are experiencing difficulty in accessing additional land. The questions the auditors need to answer are as follows:

1. Has NGGL made reasonable endeavors to extend to displaced households opportunities and resources to access replacement farm land and restore their livelihoods?
2. Are there any potentially disadvantaged or vulnerable groups that may have not have been able to take full advantage of the AILAP, LEEP and Vulnerable Peoples' programs to sustainably secure replacement farm land?

The answer to the first question is clearly yes. 69% of households have been able to successfully access replacement land, and are making reasonable progress with utilizing that land to restore their cash crops. This group has successfully restored their access to natural capital.

The answer to the second question is very probably yes. There is a significant minority (around 25%) of households that report having no land or insufficient land and that are experiencing difficulty in accessing additional land. Not all of these households are income-poor, but some undoubtedly are. International experience would show that households which are landless or that have insufficient land are at risk of becoming increasingly impoverished. Further investigation is warranted.

3.5 Financial (Productive) Capital

The main sources of household financial capital are as follows:

- Savings in forms such as cash, bank deposits or liquid assets such as livestock, gold or jewelry, or access to credit
- Regular inflows of money such as pensions, transfers from the state or remittances.

Typically, wages are not considered as part of financial capital. However, for convenience of explanation, income, employment and unemployment are grouped in this section.

Theoretically, a comparison of pre-project and post-project household income and expenditure would provide a quantitative indication of the extent to which livelihoods had been restored. In reality, the picture is much more complex due to change and volatility of many factors such as the following:

- Macro level economic changes (e.g. inflation, changes in government fiscal settings and incentives for the agricultural sector, changes in agricultural commodity prices and market conditions)
- Project-induced structural changes to the local economy (e.g. increased money flows and monetization of markets, changed labor demand and costs, changed supply and demand for land and property, increased non-farm employment and business opportunities)
- Climatic factors (e.g. 2008 poor harvests affecting staples such as maize)
- External economic shocks (e.g. 2008, soaring global oil prices; 2009 global financial crisis.)
- Other factors (e.g. emergence of artisanal mining as a local economic activity)

Changes across so many variables make it very difficult to compare household livelihood circumstances in 2004 with those in 2010. In theory, changes could be modelled, but once one starts modelling and adjusting for multiple factors, the results become hypothetical and of little value for demonstrating whether households are better or worse off.

The closest comparison for Ahafo South RAP completion audit results proved to be the household socio-economic baseline survey of the Amoma area conducted by RePlan in 2009. The Amoma area is in Asutifi District and lies immediately to the north-east of Ntotroso. The RePlan 2009 survey covered 418 households, at that

time unaffected by resettlement. The Amoma survey effectively offers a 'control' for the completion audit survey in that it focuses on a population within the NGGL mine area of influence, substantially reliant on agriculture but largely unaffected by physical or economic displacement.⁸

3.5.1 Employment

The primary occupations of household members of economic age as captured by the completion audit survey are shown in **Figure 10**.

Figure 10 Primary occupations of household members of economic age



Source: RAP Completion Audit household questionnaire, 2010

While the table is not directly comparable with the baseline survey (OICI, 2004) which focused only on the occupation of household heads, it does reveal households participating in a much greater diversity of occupations than the 2004 survey. This is an adaptive response to (i) households' need to find alternative income while replacement cash crops mature; and, (ii) new business opportunities arising from households' town locations and mine-induced changes to the local economy. Greater diversity of income, including from non-farm sources, is a

⁸ A moratorium for Amoma Village as a Mining Area was declared at the end of 2008. A socio-economic baseline survey of Amoma inhabitants was carried out in early 2009. Due to timing of harvests, income and expenditure data captured in the 2009 baseline survey was assumed not to have been affected by the moratorium.

positive outcome that should improve household resilience to future economic and livelihood shocks.

3.5.2 Unemployment

About 21% of people of economic age described themselves as unemployed. This is consistent with the reported Asutifi District unemployment rate of 21% (Asutifi District website, undated) but considerably higher than the national figure for rural areas which is 1.6%. The Amoma survey (2009), effectively a control for the present study, found an unemployment rate of 2.0%. The latter figure is consistent with a farming-based community where nearly all adults make some contribution to farming and where under-employment is more widespread than unemployment. As noted in **Section 2.4**, focus group discussions revealed that displaced peoples' perceptions of 'employment' and 'unemployment' are changing. Increasingly, employment is associated with wage-based employment and not farm labor.

3.5.3 Household Income

Mean annual income of displaced households was measured in 2010 by the completion audit survey at GHc 2,814. This figure is not readily comparable to GLSS 5 data which was collected in 2005/6, or to the baseline survey (OICI, 2004), the results of which are difficult to interpret. The closest comparison for this completion audit was with the RePlan 2009 household socio-economic baseline survey of Amoma. In Amoma, an area analogous to Ahafo South without full displacement impacts, RePlan recorded mean annual household income at GHc 3,402.

By 2010, displaced Ahafo South households' income levels had been restored to within 83% of those of their "undisturbed" Amoma neighbors. This was achieved through a shift to non-farm income sources (see further discussion in the next section) and in spite of Ahafo South's cocoa production not being fully restored. This augurs well for the time when cocoa plantations mature in 1-2 years' time and provide a further income stream for displaced households.

3.5.4 Household Income Sources

Table 21 shows household income sources ranked by value. The aggregate income is the sum of income reported from that source by all 672 questionnaire respondents. The table reveals that at the time of the survey, farm-related income contributed less than 21% of aggregate household income (i.e. crops, fruit and vegetables, 13%; farm contracting, 6%; and, livestock and poultry, 2%). This compares to Amoma where income from agriculture makes up about 41% of household income (RePlan, 2009), and Rural Forest zone, 51% (GLSS 5).

The table shows that some 47% of households receive income from 'crops, fruits and vegetables' but that these contribute only about 13% of the aggregate income

of all households. Household participation in agriculture is high, but cash income earnings from this source are relatively low. The top five sources of household income were as follows:

- Small trading or small businesses (19% of household aggregate income)
- Wages and salaries (16%)
- Crops, fruit and vegetables (13%)
- Remittances (8%)
- Off-farm contracting (7%)

Table 21 Household income sources (ranked by value)

| Source | Aggregate income GHc | Aggregate Income % | Households with income from source N | Households with income from source % |
|----------------------------------|----------------------|--------------------|--------------------------------------|--------------------------------------|
| Small trading/business | 363,242 | 19 | 185 | 28 |
| Wages & salaries | 307,740 | 16 | 114 | 17 |
| Crops, fruits & vegetables | 252,305 | 13 | 316 | 47 |
| Remittances | 150,404 | 8 | 194 | 29 |
| Off- farm contracting | 141,356 | 7 | 145 | 22 |
| Farm contracting | 114,427 | 6 | 108 | 16 |
| Small - scale industry | 98,622 | 5 | 32 | 5 |
| Cooked food sales | 89,400 | 5 | 40 | 6 |
| Transport/ vehicle operation | 65,144 | 3 | 25 | 4 |
| Artisanal mining | 58,260 | 3 | 21 | 3 |
| Artisan (e.g. carpenter, joiner) | 45,349 | 2 | 40 | 6 |
| Livestock & poultry | 34,483 | 2 | 38 | 6 |
| Pensions/ gov't allowances | 27,522 | 1 | 33 | 5 |
| Tailoring sewing | 23,382 | 1 | 20 | 3 |
| Housing/land rental | 21,316 | 1 | 37 | 6 |
| Personal services | 19,996 | 1 | 27 | 4 |
| Others | 17,123 | 1 | 18 | 3 |
| Forestry/ forest products | 15,320 | 1 | 26 | 4 |
| Distilling | 11,259 | 1 | 11 | 2 |
| Fish | 11,216 | 1 | 7 | 1 |
| Dividends | 10,960 | 1 | 5 | 1 |
| Food processing & sales | 8,712 | 0 | 19 | 3 |
| Rental of equipment | 3,600 | 0 | 2 | 0 |

Source: RAP Completion Audit household questionnaire, 2010 (Multiple responses from 672 households)

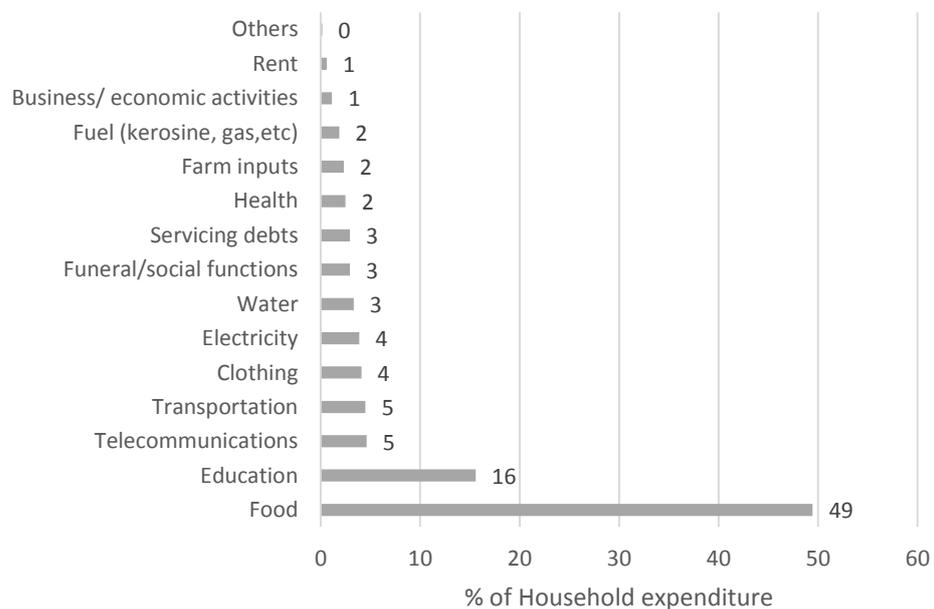
Artisanal mining commenced at Gyedu in 2006, about the same time as NGGL mine construction commenced. Some 3% of households (n=21) reported income from this source.

3.5.5 Household Expenditure

Mean household expenditures were calculated at GHc 257 per month or GHc 3,088 per year. The yearly household expenditure marginally exceeds reported mean household income. This is often the case for surveys of this kind as respondents generally have better recall of expenditures which tend to be predictable and recur monthly rather than income, which often comes in sporadically and, in a rural context, can be quite variable.

Household expenditure was calculated based on cash outgoings for food, clothes, education, utilities, entertainment, rent and the like. No attempt was made to impute values for self-consumed production (farm or non-farm), bartered or in kind payments or to derive imputed rentals where households owned the house they lived in. For this reason, audit expenditures cannot be directly correlated with national GLSS data. The Amoma baseline survey referred to as a control used the same assumptions as the RAP completion audit.

Figure 11 Household expenses (percentage of total household expenditure)



Source: RAP Completion Audit household questionnaire, 2010

On average, food accounted for about 49% of Ahafo South household expenditure (actual, not imputed for self-consumed production). This is higher than Amoma households (35%, not imputed) and Brong Ahafo Region (39%, not imputed). The

higher figure is consistent with the agricultural field study observation that Ahafo South households were focusing on their cash crops (e.g. cocoa) at the expense of growing food i.e. Ahafo South households would have lower self-consumed production and a greater requirement to purchase food to meet their needs.

Expenditure on education at 16% is high. Comparative data from earlier GLSS surveys typically shows education at around 7% of household total expenditure. In focus group discussions, displaced households identified *"Risk of unemployment faced by the youth because of low level of education and lack of employable skills"* as a significant household risk. Focus groups identified their response to this risk as: *"We intend to manage this by encouraging our children to pursue further education and skills training..."*⁹ Higher income households show quite high levels of educational spending. It is possible these households are sponsoring children's schooling in cities outside of the project area.

3.5.6 Household Savings and Indebtedness

About 23% of surveyed households reported having savings. This is closely equivalent to reported rural household savings at a national level of 22% (GLSS 5, 2008). Mean household savings were about GHc 337. Only 12% of vulnerable households had savings.

Around 26% of the households surveyed during the completion audit (N=672) had incurred debts to another person, institution or business. This was also very close to the national level of rural household indebtedness of 27% (GLSS 5, 2008). Mean household debt was about GHc 534.

Levels of household savings and indebtedness are usually a good indicator of household well-being. The fact that project affected households' level of savings and indebtedness deviate little from national norms is a positive indication of progress towards livelihood restoration.

3.5.7 Ownership of Assets

Household ownership of assets as an indicator of household socio-economic status needs to be treated with some caution in a post-resettlement context. There is a tendency for households that have received compensation payments to invest some of it immediately in household goods. In the case of resettlers, this does not necessarily correlate to household income level or overall socio-economic status.

⁹ Reference: RAP Completion Audit Qualitative Study and Research Support, (2010).

Households can be asset rich but, at various points in the resettlement process, income poor.

Completion audit findings relative to some previous studies are summarized in the table below. Ahafo South displaced households show relatively high ownership of some high value assets such as mobile phones, motor cycles, trucks and cars which are all potentially productive assets in a rural context.

Table 22 Displaced household ownership of assets (% of households reporting ownership of the asset)

| Asset | All Rural (GLSS 5) | Rural Forest (GLSS 5) | OICI (2004) | Kintampo (2006) | OICI (2006) | Amoma (2009) | RAP Completion Audit (2010) |
|----------------------|-----------------------|-----------------------------|----------------|--------------------|----------------|-----------------|-----------------------------------|
| House where you live | na | na | na | na | na | na | 91 |
| Radio | 56 | 60 | 86 | 77 | 82 | 38 | 73 |
| Mobile phone | 7 | 8 | <1 | 35 | 40 | 31 | 62 |
| Bicycle | 32 | 18 | 62 | 34 | 54 | 24 | 38 |
| Television | 16 | 20 | 18 | 36 | 49 | 7 | 37 |
| Motorcycle | 3 | 1 | na | 6 | 9 | 2 | 33 |
| Electric iron | 11 | 14 | 5 | na | na | 2 | 31 |
| Electric cooker | 4 | 5 | 4 | na | 17 | na | 11 |
| Car or truck | 1 | 2 | 1 | 2 | 15 | 4 | 8 |
| Sewing machine | 20 | 24 | 39 | na | na | 7 | 20 |

Sources: As indicated

3.5.8 Performance of Poorest Households

The auditors looked at some key indices for a number of sub-groups. The results are summarized in the table below.

The table shows that:

- Women-headed households are less likely to be amongst the poorest 20% than male-headed ones, but when women do fall into this group, they are amongst the poorest (using expenditure as a proxy for income)
- Households reporting themselves as landless or having insufficient land are relatively over-represented in the poorest 20% (using expenditure as a proxy for income)
- Sharecroppers (*abunu* and *abusa*) are also more likely to be in the poorest 20% than others

Table 23 Households in Poorest Expenditure Quintile by Sub-Group

| | N | Households in poorest expenditure quintile N | Households in poorest expenditure quintile % | Mean expenditure/ person/year of HHs in poorest quintile GHc |
|--|-----|--|--|---|
| Male headed households | 350 | 76 | 22 | 142 |
| Women headed households | 322 | 58 | 18 | 132 |
| Landless/insufficient land households | 194 | 41 | 31 | 145 |
| Sharecroppers | 222 | 58 | 26 | 141 |
| All | 672 | 134 | 20 | 136 |

Source: RAP Completion Audit household questionnaire, 2010

3.5.9 Assessed Outcome

Financial capital findings were generally positive. Household income levels were within 80-90% of the nominal 'control group' at Amoma. Once cocoa cash flows become positive in 1-2 years, Ahafo South income levels should easily match or exceed their Amoma neighbors. Household expenditure on food is comparable to regional averages. Other indicators such as household savings and indebtedness also demonstrate that displaced household economics are normalizing.

The positive results based on averages should not disguise the fact that many households remain very poor.

3.6 Social Capital

Social capital refers to the networks, groups, relationships and institutions that people draw on to pursue their livelihoods and that provide them with a social safety net during times of hardship or need.

The completion audit focused mainly on two external relationships that had been identified during social monitoring as presenting some challenges - relations with the Traditional Authorities and Asutifi South District Assembly.

3.6.1 Relations amongst Resettlers

The Ahafo South resettlement brought together households from dispersed rural settlements and homesteads and clustered them in peri-urban settlements at Ola and Ntotroso. Resettled families spoke of a period of 6 months or so after their relocation during which they had to get used to the noise, proximity of neighbors and respecting each other's property boundaries and 'personal space'. By the time of the audit, resettled households spoke warmly about their community spirit and

how they considered their neighbors as 'brothers and sisters'. The audit team was impressed by the general internal harmony and cohesiveness of the two newly formed communities. Communities were not concerned about their intra-community relations, but more with their relations with the District Assembly and Traditional Authorities.

3.6.2 Relations with Traditional Authorities

Separate interviews with traditional leaders and resettled households revealed that there are some ongoing misgivings between the two groups.

The land for the NGGL mine and replacement villages falls within the Ashanti Kingdom under the Ashanti King, Otumfuo Osei-Tutu II. The King recognizes Paramount Chiefs who have responsibility for stools within the Kingdom. Within Asutifi district, Kenyasi 1 and Kenyasi 2 are administered by two Paramount Chiefs.

Whilst most of the resettled population acknowledged the existence and influence of the traditional leaders, and understood that they were obliged to adhere to the rules and regulations that the traditional leaders establish, they often expressed the view that the traditional leaders were not interested in their welfare or livelihood. Resettlers complained that their children were overlooked during the award of Newmont Ahafo Development Foundation (NADEF) scholarships. The exclusion of their children from the scholarship scheme left resettlers feeling that the traditional leaders did not consider them part of the local community. Younger people strongly expressed the view that the traditional leaders were more interested in getting their share of mine royalties. They expressed disappointment and loss of confidence in the ability and commitment of the traditional leaders to help them find employment or restore their livelihoods. Representatives of economically displaced people accused the traditional leadership of selfishness and serving their own interests.

For their part, the traditional leaders felt that the influx of outsiders (not specifically referring to resettlers) had weakened local social cohesion and resulted in a loss of respect for the Traditional Authorities. The strong bond that existed between the citizenry and the Traditional Authorities had been diluted. Local occupants no longer showed reverence or respect for the Chief and his Council. Another concern was the lack of public response to the Traditional Authority's requests for communal labor or participation in public fora. The traditional leaders attributed this to the influx of 'outsiders of all shades' and the introduction of urban lifestyles and values to the original local population.

These polarized positions and mutual suspicions are not in the best interest of either group, particularly the resettlers and other displaced people who stand to miss out on the benefits of annual mine royalty payments (including eligibility for NADEF scholarships), 45% of which are administered by the Traditional Council.

The traditional leaders are also closely involved in defining who is local and who should receive priority for NGGL employment.

3.6.3 Relations with the Asutifi North District Assembly

Project affected people indicated that they were aware of the existence of the Asutifi North District Assembly and some of its agencies, but were quick to point out that they have not benefited in any way from the Assembly. Resettlers from Ola and Ntotroso complained that their District Assembly representative rarely visited the communities to discuss development issues with them. The resettlers' perception was that the District Assembly was doing very little to support them. This perception may reflect some community lack of understanding of the role of the District Assembly and its evolving responsibility for managing replacement village services and infrastructure.

District Assembly representatives and officers from its Health, Agriculture and Education agencies raised a number of historical issues that potentially qualified their level of support for the Ola and Ntotroso resettlers. These included the following:

- The District Assembly felt they had not been actively consulted during the planning, design, or implementation of the resettlement villages, or involved in the associated livelihood restoration initiatives. The Assembly considered that such activities impinged directly on its areas of statutory responsibility in managing development of the district and felt that they should at least have been consulted.
- While it was expected to assume the costs of administering and operating the resettlement villages, the District Assembly did not receive any revenue from NGGL as NGGL and its contractors were exempt from paying property tax and business license fees to the district.¹⁰ (Note: the interviewed representatives appeared to be unaware that NGGL had entered into a Memorandum of Understanding with the District Assembly whereby NGGL paid an amount of about GHC 50 million to the Assembly in 2011, 2012 and 2013 in lieu of Property Tax.)

¹⁰ NGGL responded to the issue of exemption from paying property taxes and business license fees as follows. NGGL noted that it had entered into a Memorandum of Understanding with the District Assembly whereby NGGL paid an amount of GHC 50 million to the Assembly in 2011, 2012 and 2013 in lieu of Property Tax. NGGL further noted that contractors were not exempted from paying taxes to the District Assembly. NGGL suggested that the District Assembly failed to implement a mechanism for identifying contractors for the purpose of collecting such fees and taxes.

3.6.4 Progress with Resettlement Villages' Integration with Government Systems

Since the RAP audit field surveys were undertaken in 2011, NGGL has made considerable progress in handing over the administration and management of Ola and Ntotroso to government authorities. The External Monitor for the NGGL project, Mr. Frederic Giovannetti, noted in his April 2013 report as follows:

"...the resettlement sites [Ola and Ntotroso] now "live" like normal communities, particularly the one at Ola. Solid waste skips are now in place and the District Assembly is emptying them on a regular basis, the water system is functional, and the number of houses connected to the power grid and the water network is steadily increasing..."

While challenges remain with the effective handover of the resettlement villages to the administration of the District Assembly, a revised approach has been adopted which is referred to as "integration". The April 2013 External Monitoring Report summarized the status of handover as follows:

- "Water systems have been transferred to water boards and WATSAN committees according to applicable Ghana policies and regulations.
- Electricity facilities (lines and transformers) were transferred to the VRA.
- The process of delivering titles to resettlers for their lots in resettlement sites is progressing normally under the auspices of the Lands Commission in Sunyani.
- Amongst the tasks identified in this action plan, the last remaining is the transfer of roads and associated drains to the District Assembly, which is anticipated to be complete by end 2013."

The RAP completion auditors are satisfied that good progress has been made with effecting 'integration' of Ola and Ntotroso into wider government administrative and management systems. NGGL has allocated adequate resources for closing out the last remaining issue (transfer of roads and drainage). Ongoing progress is subject to external monitoring. A satisfactory outcome is likely.

4 Progress with Agricultural Livelihood Restoration

A supplementary field assessment of progress with agricultural livelihood restoration was conducted for the RAP Completion Audit by Agricultural Innovation Consult, an independent consulting group. Agricultural Innovation Consult undertook field assessments of 10 farmers who had been randomly selected from amongst those reporting year-round food sufficiency in the RAP audit questionnaire and 10 households randomly selected from those reporting insufficient food. Although the sample was small (n=20), the field study proved invaluable for better understanding agricultural livelihood issues raised in the household socio-economic survey and focus group discussions.

4.1 Objectives of the Field Study

Objectives of the Supplementary Agricultural Assessment were as follows:

1. To verify whether or not project affected farmers had been able to achieve sustainable access to agricultural land comparable in area, quality and productivity to their pre-mine holdings.
2. To verify whether or not farmers had been able to achieve levels of subsistence production and food sufficiency on their replacement land that was comparable to their pre-project situations (or, to those of similar farmers not directly affected by mining land acquisition).
3. To assess whether farmers had sufficient land and technical knowledge, and whether they had made sufficient investments in labor, capital and inputs to re-establish perennial cash crops (cocoa, oil palm and the like) to have a good probability of reaching former income levels within a reasonable timeframe (say, a further 2-3 years).
4. To identify any additional types of assistance or other measures that might be needed to consolidate farmers' progress towards sustainable agricultural livelihood re-establishment

4.2 Key findings

Some key findings of Agricultural Innovation Consult's field assessment are described in the following sections.

4.2.1 Attitude and Farm Performance

A key insight from the agricultural field assessment was that the realization by farmers, that NGGL would not be assisting them indefinitely, had a major, positive

impact on their farming effort and results. This highlights the importance of clearly communicating to farmers about when NGGL agricultural assistance will end.

The survey found that most of those who declared themselves 'food insufficient' in 2010 were 'food sufficient' in 2011, apparently due to hard work and perseverance. A reason commonly given for this turnaround was that the household realized that NGGL would not support them much longer and that they had to rely on their own resources.

Conversely, nearly half of the 'food sufficient' farmers in 2010 reported food insufficiency in some months of 2011. This demonstrates that household food sufficiency is dynamic, can change over time and is at least partially reliant on household commitment and hard work.

Clear and repeated communication about the end date for NGGL agricultural support should be a feature of future agricultural livelihood programs.

4.2.2 Progress with Cash Crop Re-establishment

A positive internal rate of return on investment in cocoa is generally achieved in the seventh year after crop establishment. In the seventh year, returns of 20% are achievable. In the years prior to this, returns are negative.

Agricultural Innovation Consult assessed the growth and development of the perennial crops of the majority of farmers as normal with 60% of farmers (12/20) likely to have mature, sustainable cash crops within 2-3 years. The other 40% (8/20) would need an additional two or more years to achieve sustainable yields. The reason for this was that not all farmers planted their perennial crops at the same time and so those who planted later had plants that were much younger and that would reach maturity at a later stage.

Since AILAP began in 2006, the first batch of beneficiaries should reach mature cocoa production in 2013. Later recipients' crops should mature in 2014-2015.

4.2.3 Focus on Cash Crops to Detriment of Food Production

Agricultural Innovation Consult found that most of the sampled farmers had focused on their perennial crops to the detriment of food crop production, leading them to later complain about food insufficiency. They also found that as the vegetation canopy of maturing cash crops (e.g. cocoa, oil palm) closed over, it limited light penetration to food crops inter-planted underneath.

Agricultural Innovation Consult has suggested that in future it may be preferable to have some farm area (say 0.4 ha or 1 acre) set aside for food crops production only rather than mixed cash crop – food cropping. This would encourage farmers

to balance effort between food crop production and cash crop development and enable them to produce food throughout the year, even as cash crops matured.

4.2.4 Access to Land

Agricultural Innovation Consult found that current farm sizes for annual and perennial crops were statistically the same among food sufficient and food insufficient farmers. This was in spite of food sufficient farmers having greater resources of fallow land (average 3.8 acres) compared to food insufficient farmers (average 1.5 acres). Agricultural Innovation Consult concluded that the area actively cultivated by farmers represents an optimal size based on available labor/cost of inputs and was not limited by land availability.

Table 24 Household farm size

| Indicator | Food sufficient | Food Insufficient | All farmers | T-tests (P<0.05) |
|--|-----------------|-------------------|-------------|------------------|
| Mean household farm area - annual crops (ac) | 3.65 | 3.4 | 3.52 | Not significant |
| Mean household farm area - perennials (ac) | 3.8 | 3.7 | 3.79 | Not significant |
| Mean household area of fallow (ac) | 3.8 | 1.5 | 2.65 | Significant |
| Mean household total farm size (ac) | 12.45 | 6.08 | 9.27 | Significant |
| N | 10 | 10 | 20 | |

Source: Supplementary Agricultural Survey, Nov. 2011

4.2.5 Suitability of Land for Agriculture

For the 20 sampled farmers, a soil scientist assessed the suitability of each farmer's land for agriculture. Findings are summarized in the following table.

Table 25 Observed land suitability for agriculture

| Description | Suitability of land (% of farmers) |
|-------------------|------------------------------------|
| Very suitable | 40 |
| Suitable | 25 |
| Somewhat suitable | 35 |

Source: Agricultural Innovation Consult

Some of the farmers' fields were observed to be in waterlogged areas that could not support cocoa.

Agricultural Innovation Consult found that some areas in the Tano basin could be used for high value vegetable production if the land was developed. Groups of project affected farmers who have interest in vegetable cultivation could be encouraged to develop those areas into block farms to be shared amongst the farmers. This would provide easy access to extension services and income for farmers. Tano basin soils could support vegetable production.

4.2.6 Weed Control and Shortage of Labor

Table 26 shows the percentage of farmers whose fields were clean, slightly weedy and very weedy at the time of field assessment.

Table 26 Observed weed management

| Weed pressure | % of farmers' fields with weed pressure |
|----------------|---|
| Clean field | 32 |
| Slightly weedy | 26 |
| Very weedy | 42 |
| | 100 |

Source: Supplementary Agricultural Assessment, 2011 (N=19)

Most of the farmers reported lack of labor as a reason for the poor level of weed management of their fields. Farmers reported that they were prepared to pay for labor services which were said to cost GHC 8 per laborer per day but labor was difficult to attract.

Since proper farm management contributes to crop growth and subsequently yield, it is important that farmers are able to get labor services as and when required. NGGL might examine the possibility of liaising with and encouraging the District Assembly to form "farm gangs" similar to the cocoa spraying gangs that could offer labor services to farmers.

In the longer term, weed growth and the associated need for labor will diminish as the cocoa canopy becomes denser and shades out understory weeds. This will occur progressively over the next few years.

5 Status of Vulnerable Households

Attention to the needs of vulnerable people is a key aspect of World Bank OD 4.30 and IFC Performance Standards. The Ahafo South Project committed to meeting this requirement and created a specific program to support vulnerable families post-relocation. The Vulnerable Peoples Program was rigorous in its approach to both identifying vulnerable people and also in creating programs to meet their needs. Steps in identifying eligibility to the Vulnerable Peoples Program included a review of the socio-economic and vulnerability situation of displaced families with the preparation of a detailed report for discussion at a Vulnerable Working Group. This group was made up of representatives from OICI, NGGL, Planning Alliance and NGO, Guards of the Earth, as well as vulnerable households themselves. All people included in the Vulnerable Peoples Program were given food baskets, medical attention and fast-tracked access to land under the AILAP. In addition, depending on the nature of their vulnerable status, they could obtain access to counseling services, training, and other support to improve their economic status. The Vulnerable Working Group not only reviewed eligibility but also considered what would be the best combination of support to give to each family to lift them out of their vulnerable condition.

As of September 2009, the registration of vulnerable people was complete with a total of 522 households declared vulnerable. Of this total, 131 vulnerable households were from Ola or Ntotroso (i.e. physically displaced) and the remainder were households that had been relocated (i.e. had self-relocated) or economically displaced.

Discussions with vulnerable program participants conducted during the completion audit confirmed that the Vulnerable Peoples Program had helped them to meet their immediate food needs in the period before their crops had matured and provided yield. It is also evident that in many cases it had prevented families from falling into very critical circumstances, particularly in the early stages of resettlement. There was a reluctance by some families to be taken out of the program but generally they had come to accept that the program was a temporary measure to provide food for their household as they waited for the harvest from their farms. The findings of the qualitative survey also suggested that some people had been weaned off the program on the assumption that their farms had reached a stage at which food could be obtained, but in actual fact some farms did not flourish (for reasons including bad weather, lack of finance to maintain the farm or low nutrient status of farmland) so the people remained in or fell back into a vulnerable situation. It was also argued by some that even although the rationale for AILAP was good, it had not always helped farmers increase food production because they still needed financial support to maintain the farms after the first season.

A number of key lessons were learned from this program:

- Those who are included within the Vulnerable Peoples Program are often the most fragile and marginal within the community and it is inevitable that they are also prone to falling back into desperate circumstances i.e. vulnerability is a dynamic condition. The RAP commitment is to give displaced people the opportunity and resources to ensure that they are not worse off than before the resettlement and if possible to improve their situation. The timescale required for sustainable achievement of this objective can easily be underestimated.
- Farming is a balance of a number of different factors and there is always a high propensity for vulnerable people to be negatively affected by one or other factor at any point in time. In particular, they have very little margin for error.
- Even for programs that attempt to diversify their economic base, vulnerable people are often faced with issues or characteristics that make it more difficult for them to take advantage of certain programs.
- The inevitable challenge with any such program is dependence i.e. people are reluctant to be taken off it and therefore even if they understand that it is a temporary measure there is a tendency to complain once the program has ended.
- In a context where poverty is high and widespread, there is always a need to manage disappointment of those who did not benefit from the program.

The Ahafo South Project is one of the few examples where the situation of vulnerable people was addressed directly with a specifically designed program and tailored measures of assistance. The rigorous approach to selection of those who should benefit and the working group method of identifying appropriate solutions is a best practice solution that should be widely adopted on projects of this type. The auditors are pleased to learn that NGGL has further developed the Vulnerable Peoples Program for subsequent resettlement stages taking on board experience from Ahafo South.

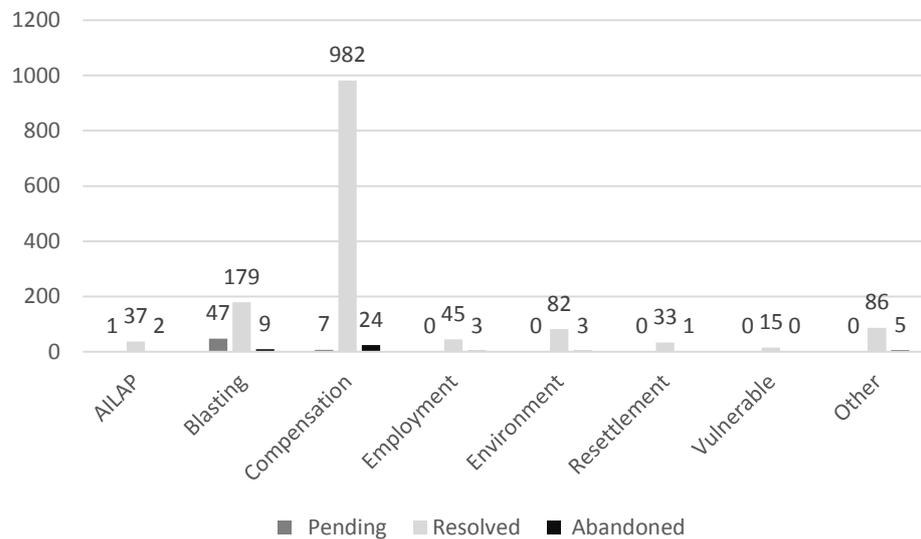
6 Complaints

The status of complaints received by NGGL related to the Ahafo South component of the mine is summarized in **Figure 12**.

At the time of the completion audit, there had been a number of complaints from communities living adjacent to the pit related to blasting. NGGL was undertaking monitoring and had commenced engagement with some households located close to the pit with a view to their possible relocation.

There were no outstanding Ahafo South-related court actions.

Figure 12 Status of Ahafo South Complaints



Source: NGGL Monitoring Unit

The auditors were satisfied that the bulk of resettlement-related grievances have been satisfactorily addressed and that there was a robust complaints redress mechanism in place and functioning effectively.

7 Status of Monitoring

Continuous monitoring and evaluation has formed a key component of the NGGL's Environmental and Social Management System. Resettlement-related monitoring activities included the following:

- NEAMU - (NGGL External Affairs Monitoring Unit) has a team dedicated to monitoring resettlement implementation and livelihood restoration. NEAMU in consultation with other units in NGGL developed a list of 20 "domains" or features that need to be monitored such as 'water', 'sanitation' and 'gender'. Performance in each domain is measured through a series of indicators.
- A number of livelihood restoration surveys were initiated by NEAMU as a part of its monitoring commitment.
- Mid-term reviews of the Vulnerable Peoples' Program, the AILAP and the LEEP were undertaken.
- A proprietary information management system (IMS) was implemented to manage monitoring data and findings.
- A monitoring and evaluation capacity building/training curriculum was designed and implemented for staff of both the M&E Unit and other staff of the External Affairs Department. This was aimed at strengthening the effective monitoring of interventions that fall under project RAPs.

NGGL's internal monitoring, whilst very comprehensive and ambitious in its reach, has been characterized by two key challenges: (i) gaps in data collection; and, (ii) lack of effective utilization of monitoring findings to inform forward planning and management. For this reason, one of the key areas of support for the IMS has been to develop strategies for more effective reporting of findings and presentation to NGGL's senior management.

Finally, there has been regular monitoring by external monitoring experts, culminating in this completion audit. Initially the external monitoring only looked at resettlement and compensation but the role of the external monitors was expanded to include looking at host communities including those experiencing social impacts other than resettlement.

8 Suggestions for Future Resettlement

This chapter summarizes some observations and suggestions arising from the audit. These should be considered in designing any future resettlement programs in the Asutifi Area.

8.1 Sharecropping

The audit agricultural specialist undertook a regression analysis to determine which factors were most critical to a household's food sufficiency. The only significant factor was land tenure. Households that owned their land were very much more likely to be food sufficient, and those in sharecropping arrangements, very much less so. While there is a long tradition of sharecropping particularly for migrant farmers from other regions, for whom it may be the only way to access land, the practice is detrimental to effective livelihood restoration.

- a) ***Suggestion: For future resettlement, carefully examine options for moving away from sharecropping arrangements that can be detrimental to achieving household food security.***

8.2 Avoiding dependence

Displaced people need to understand that NGGL resettlement assistance is time-bound and will come to a definite end. This is critical for households to realize so that they resume responsibility for their own livelihood and welfare. To some extent, NGGL's ongoing flow of programs to displaced communities has blurred the end of resettlement and led to strident demands for ever-more assistance. For future resettlement, NGGL should disclose clearer information at all stages of its process about when resettlement assistance will end, and be firm about making this happen. This should accelerate the weaning process.

- b) ***Suggestion: For future resettlement, disclose and reiterate clear information about when NGGL's livelihood restoration programs will commence and when they will be completed. Displaced people need to understand that they cannot rely on NGGL assistance indefinitely.***

8.3 Opportunity cost of firewood collection

While there were many benefits arising from the relocation of families from rural settings to a peri-urban location, many Ahafo South resettlers were observed to be

spending more than 4 hours a day collecting firewood. This represents a very significant opportunity cost in terms of the productive use of adult family member's time.

- c) *Suggestion: Consider providing access to more efficient charcoal, wood-burning or briquette-type stoves as part of resettlement packages in order to reduce time spent in gathering wood (with socialization to communicate the benefits of alternatives). Consider partnering with an NGO to develop a local supply chain.*
- d) *Suggestion: Consider looking at small business potential for producing briquettes from local combustible wastes.*

8.4 Opportunity cost: time used for travel to/from farms

Another trade-off implicit in the decision to locate replacement housing adjacent to an existing town was the extra time household members had to spend moving to and from their farm land. Economically displaced households whose access to farm land was cut off by mine lands also experienced a need for more extended travel. This is not an easy issue to address.

Going forward, as mine expansion incrementally alienates more farm land, it is probable that resettlers will have to travel ever increasing distances from Ola and Ntotroso to access suitable agricultural land.

- e) *Suggestion: Consider supporting a small market study to examine potential for local public transport providers to offer routes that more efficiently service farmers (i.e. extent of resettler/other local interest; willingness and ability to pay; locations/ concentrations of farms that might be serviced; and, potential for farmers to cooperate in planning to/from farm travel).*
- f) *Suggestion: For future resettlement, consider encouraging the development of block or clustered farms at suitable locations such as in the Tano basin. Beneficiaries of AILAP to be encouraged to select farmland for the program within a clustered area – clustering may contribute to sufficient critical mass to support public transport services to farm clusters.*

8.5 Livelihood Replacement

8.5.1 Self-selection of replacement farmland

The strategy of incentivizing households to secure their own replacement land worked reasonably satisfactorily for the Ahafo South resettlement program. This depended on a number of favorable circumstances that may not continue indefinitely:

- Reasonably abundant vacant land suitable for farm development
- Customary land mechanism that facilitated transactions and where all displaced people had reasonable prospects of buying or renting land
- Affordable land prices and rentals
- Quality land within reasonable proximity to the resettlement villages
- Access to a committee or other body with expertise to assess the viability of land use agreements and the suitability of land for farming
- Traditional Authorities willing to allocate farmland to customary inhabitants and on a reasonably equitable basis

Going forward, the supply and pricing of accessible agricultural land will change. There is already evidence that family and customary land exchange mechanisms have become monetized. The audit received numerous complaints about the increasing rental costs for agricultural land. This is already an impediment for some households in seeking access to replacement or additional agricultural land. NGGL will need to carefully evaluate (i) agricultural land availability; and, (2) agricultural land accessibility ahead of each future resettlement stage.

Incremental mine expansion may quite soon lead to a point where self-selection of replacement land is no longer feasible, or where it may prove necessary to establish a new resettlement village that is closer to available agricultural land resources. These points should be achieved through developing a holistic understanding of agricultural land supply, demand and pricing. Any future mine expansion and resettlement village site selection should be informed by forward planning, not by finding future displaced families are unable to access land.

- g) Suggestion: Consider mapping and developing an inventory of suitable, vacant agricultural land within walking and wider distance of Ola and Ntotroso. Ahead of each future mine expansion and resettlement stage, carefully evaluate suitable agricultural land availability and accessibility as part of early resettlement scoping.*
- h) Suggestion: Consider developing a staged master plan of the fully developed mine to identify the farm land that will be lost and that will need to be replaced for each stage of mine expansion. Using the agricultural land inventory from suggestion (g), develop a land supply and demand model to guide resettlement planning associated with future mine expansion.*

8.5.2 Farm planning

AILAP and LEEP promoted inter-cropping of cash and food crops. While it is desirable to have a cover crop (e.g. plantain) to protect cocoa during early establishment, once the cocoa starts to establish its own canopy, it shades out food crops grown underneath. In the later stages of cocoa development, farmers were observed to be focusing on their cash crop at the expense of food crops, but complaining about their lack of food sufficiency.

- i) Suggestion: For future AILAPs, on each farm, consider establishing a separate field (say 1 acre or 0.4 ha) solely for food production, separate from the cash cropping area. This may help farmers to maintain a better balance between their food production and cash crop development.*

8.5.3 Use of improved varieties

Other than maize, farmers were observed to be making limited use of improved varieties of food crops. The yields from improved varieties could more than double farmers' current production. NGGL's Agricultural Officer noted that while the AILAP extension program had exposed farmers to improved varieties with demonstrably improved yields, many farmers had reverted to using traditional varieties. Changing traditional habits is a long term objective. Where possible, NGGL should continue efforts to promote improved plant materials and cultivation methods.

- j) Suggestion: For future AILAPs, consider working with the Crops Research Institute and extension services of the Ministry of Food and Agriculture for the supply of improved varieties of food crops such as maize, plantain and cassava.*
- k) Suggestion: Continue to use soft approaches like field days, open days, demonstration fields and cuttings distribution to educate farmers on the benefits of improved varieties to help them change their traditional ways of farming.*

8.6 House Maintenance Training

The auditors observed some basic maintenance issues needing attention on several resettlement houses. Given that houses at Ola and Ntotroso are now 6 or 7 years old, it would be timely to offer some home maintenance courses for residents.

- l) Suggestion: Run some basic house maintenance courses for Ola and Ntotroso residents.*

8.7 Compensation

Tree compensation rates for Ahafo South did not fully account for lost income over the period it would take for a replacement tree to reach mature production (potentially 6 years for cocoa and 7 years for oil palm).

A simple formula, such as the following, might be considered to compensate farmers for lost income for perennial crops during the gestation period:

$$\text{TrC} = \{(\text{RP} \times \text{Yd}) - \text{CC}\} \times \text{YRT} + (\text{SPr} + \text{ACC})$$

Where:

| | |
|-----|--|
| TrC | Compensation per tree/shrub lost to the project |
| RP | Retail price of product (GHc/kg) |
| Yd | Yield of tree lost (kg/tree) |
| CC | Input costs (e.g. labour, transport fertilizer, pesticides, etc.) (GHc/tree) |
| YRT | Period taken for a new seedling to achieve the yields of the tree/shrub lost |
| SPr | Cost of replacement seedling (GHc/seedling) |
| ACC | Input costs to grow seedling (e.g. labour, transport fertilizer, pesticides, etc.) |

The formula could be applicable to all perennial crops such as cocoa, citrus and oil palm.

It is also recommended that the compensation rate be estimated on a per tree basis rather than a per hectare basis. To avoid the situation where a farmer deliberately puts more trees per hectare than expected, the recommended plant population from the Ministry of Agriculture could be used as a ceiling per hectare. For example, in cocoa, planting at a recommended distance of 10' x10' gives about 1,100 cocoa trees per hectare. For oil palm, planting at recommended distance of 29' triangular, gives about 150 trees per hectare.

NGGL advises that the formula for calculating compensation for perennial crops was refined for subsequent resettlement stages beginning with Amoma in 2009.

m) Suggestion: Review the basis used for calculating tree and perennial crop compensation to account for the value of foregone production to cover the period until a replacement tree is producing to an equivalent level to that lost.

8.8 Health Impact Assessment

Some of the most tangible benefits of the Ahafo resettlement program are likely to be in the area of household and community health. The auditors found that they did not have access to any quantitative measures of health outcomes. In addition, baseline and periodic monitoring of anthropometric measurements of children could help provide a more definitive indication of household food sufficiency and nutrition.

n) Suggestion: Consider incorporating a well thought-out health component in RAP baseline studies including anthropometric measures of children. Repeat measurements periodically as part of monitoring.

8.9 Monitoring and Completion Audits

Both internal and external monitoring added value to the Ahafo South resettlement process. Going forward, the focus should be on streamlining monitoring activities and reporting so that they provide senior management and lenders with regular, concise and timely feedback on resettlement progress, risks, issues and complaints.

Where possible align data collected with national/regional census and statistical survey formats (e.g. GLSS) so that findings can be straight forwardly benchmarked against national and regional survey findings (e.g. poverty incidence, household income and expenditure, food sufficiency).

- o) Suggestion: The Monitoring and Evaluation Unit should work with its resettlement planners and external monitor to develop:***
- Clear set of input, output and outcome indicators for each resettlement and livelihood program
 - Clear internal monitoring procedures that result in succinct, regular reports against input and output indicators
 - A streamlined, longitudinal survey instrument that is administered to displaced people without change, annually or mid-term, at the same time each year by a consistently trained team of enumerators
 - Clear reporting dashboards for senior management, lenders and the external auditor that summarize progress, risks, issues and complaints associated with resettlement and livelihood execution
 - A database that effectively stores reports from the above that can be effectively audited upon resettlement program completion.
- p) Suggestion: For future resettlement stages, consider using GIS to map/survey replacement farms as selected and negotiated by displaced households. Use the GIS database as a framework for monitoring each household's access to replacement farm area, for planning agricultural extension activities and for planning field checks of agricultural restoration progress.***

8.10 Monitoring of local living costs

Large projects inevitably have some inflationary effect on local prices for food, housing, farm land and labor. The auditors heard numerous complaints about the adverse effect of NGGL on local prices, but had no basis to confirm or refute such claims. For future resettlement programs, it is recommended that baseline information be gathered on local prices for items such as the following:

- A basket of household staples, perhaps representing the recommended weekly calorific intake of an average family

- House sale and rental prices
- Farm land sale and rental prices
- Farm labor prices
- Basic building materials costs (e.g. bag of cement, cinder blocks, roofing iron)

Prices could be monitored semi-annually or annually. Monitoring should capture prices at local and regional markets in the Project area of influence, and also at a control location away from the project. A manageable set of commodities should be monitored. It is better to monitor a small set of variables consistently over an extended period, than become over extended trying to measure too much.

So far as possible equivalent measures to those used for monitoring national and regional CPI indices might be used so that local changes can be directly related to national and regional trends.

Beyond attention to local procurement practices, a Project may be relatively powerless to influence local price changes. Knowledge of local price changes could, however, help the project team to understand and respond to:

- Impacts of price changes on the purchasing power of compensation
 - Displaced persons' ability to access replacement farmland
 - Impacts on vulnerable inhabitants or those on fixed incomes who may be unable to afford higher food prices or housing rentals.
- q) ***Suggestion: Prior to any future resettlement, consider gathering baseline information and regularly monitoring local price changes for food staples, land, housing, labor and building materials.***

9 Conclusion and Recommendations

The NGGL Ahafo project has a reputation as perhaps the best resettlement program yet undertaken in Africa. The auditors found much to support this view. While external monitoring reports indicate that there were significant challenges during resettlement implementation, NGGL had in place a strong resettlement management team (in-house and consultant) with robust external monitoring that was able to adapt resettlement and livelihood restoration measures to evolving circumstances. In the view of the auditors, this was a critical success factor for the Ahafo resettlement program.

With respect to the heads of consideration outlined in the RAP completion audit Terms of Reference, the auditors find as follows.

9.1 Fulfillment of SAP and RAP Commitments

The auditor's detailed assessment of NGGL's progress in restoring living standards and livelihood is summarized in Chapter 3. Based on the activities described herein, the auditors consider that NGGL has met its Ahafo South resettlement and livelihood commitments as described in the RAP and SAP. These include the following:

- Payment of compensation
- Delivery of appropriate replacement housing with improved accesses to services and security of tenure
- Delivery of support to vulnerable families tailored to their specific needs
- Facilitated access to replacement agricultural land – with minimum areas generally adequate to support a household
- Delivered the AILAP and LEEP programs to give people the opportunity to restore their livelihoods
- Provided training and assistance with non-land based livelihood opportunities
- Provided opportunities for employment, training and education of displaced people
- Fostered organizations (or transition to responsible government agencies) to sustainably manage the resettlement village infrastructure
- Generated robust and ongoing consultation and engagement activities
- Addressed and closed out grievances as they have occurred and in a timely manner
- Completed regular monitoring and evaluation of resettlement and livelihood restoration progress and outcomes with public disclosure of findings

The one area that requires ongoing monitoring is progress towards the maturation and sustainable management of perennial crops, especially cocoa and oil palm. Requirements for this are described in the following section.

NGGL delivered a 3-year best-practice vulnerable peoples support program that provided targeted support to families during periods of need. Inevitably, through no fault of NGGL, there will be families or individuals that continue to struggle. Wherever possible, NGGL CLOs should seek to connect such families to government social welfare resources or to other appropriate non-governmental organizations that can help to meet their needs.

Some niggling challenges remain. These include:

- Handover of maintenance responsibility for replacement village roads and drains to the District Assembly
- Strengthening relations between resettlers, traditional leaders, and the District Assembly

In some of these cases, the expectation of ongoing intervention by NGGL may be enough to prevent normal engagement of the parties and normalization of relations. Without NGGL, the solutions may not be perfect, but functioning accommodations will eventually be reached.

There remains significant expectation amongst the project affected communities and their hosts that NGGL will do more. At some point, closure needs to be brought to these expectations. NGGL needs to consider how it communicates the end of Ahafo South RAP program and the end of its preferential support to the resettled communities. This is complicated by the fact that NGGL has ongoing resettlement that involves ongoing expansion of Ola and Ntotroso.

9.2 Progress towards Sustainable Livelihood Restoration

The auditors found that the majority of displaced households (nearly 70-75%) have made solid progress towards livelihood restoration in spite of a challenging inflationary environment and the fact that their perennial crops, traditionally the primary source of cash income, have yet to reach full maturity. Household incomes post-mine show less reliance on farming, greater diversification of income sources and an increase in cash-based activities rather than self-consumption. These are healthy developments that will strengthen the resilience of household livelihoods against future shocks.

By international resettlement standards, 70-75% of households well positioned for livelihood restoration is a good outcome.

A significant minority of displaced households (about 25%) report having no farm land or insufficient land. This is a higher figure than pre-mine. These are households that were unmotivated, or were unable to avail of AILAP due to illness or old age, or that made poor choices in terms of their replacement farms, or had

poor luck. They are now faced with much higher land rentals and need to look much further afield from their dwellings to access reasonable farm land. This group is certainly at risk of being left worse off by the resettlement process.

For those physically resettled, their replacement house also forms a potential source of income through rental and nearly 45% of those physically resettled have availed of this opportunity. Income from the rented house gives families the flexibility to pursue living conditions best suited to their needs. 96% of those renting their resettlement house at Ola or Ntotroso plan to return and live in it at some time in the future.

Many affected households (47%) remain significantly reliant on agriculture. Once perennial crops (e.g. cocoa, oil palm) reach maturity and produce reliable cash flows, most households should fully restore their incomes and have a broader-based and more resilient income than prior to their displacement. First batch cocoa plantings should be mature (6 years) in 2013 and second batch plantings in 2014. Weed management was identified as one area of risk for farmers in achieving full production, but this risk will diminish as tree canopies become denser and shade out weeds.

The Resettlement Completion Audit Terms of Reference asked the auditors to assess whether the 'weaning point' has been reached i.e. have resettler households received sufficient support and assistance to ensure that they have every chance of restoring their production? The answer is about 70-75% of farmers have seized the opportunities offered to them through NGGL's programs and have a good chance of restoring their livelihoods. With the same opportunities, the other 25 percent of households may not yet have reached this point, with inability to access sufficient replacement land being the significant underlying factor.

An important finding of the completion audit's agricultural field assessment was that those farmers who made the realization that NGGL was not going to support them indefinitely, and that they must work hard to support themselves, had made most progress towards effectively managing their farmland. Ongoing offers of Project assistance send the wrong signals to farmers and foster dependence.

9.3 Further Action Required

The following actions are recommended:

1. NGGL to commission a follow-up field assessment of a small sample of project affected farmers such as that undertaken by Agricultural Innovation Consult for this completion audit. The survey should be undertaken during 2015, by which time all perennial crops planted under the LEEP/AILAP programs should have reached or be very close to full maturity. The purpose of the field assessment

will be to verify that a majority of farmers have in fact achieved full perennial cash crop replacement. The field assessment should focus on the following:

- Condition of perennial crops
 - Effectiveness and sustainability of crop management
 - Likelihood of reliable income stream for the farmer
 - Identify any actions or programs desirable to help any struggling farmers to achieve sustainable production
2. Without creating expectations, NGGL to analyze why some households remain landless or with insufficient land and, if warranted, to examine options for assisting them to access additional farm land – RAP auditors and NGGL to agree a reasonable timeframe for completion.
 3. Publicize a summary of the RAP Completion Audit findings on the NGGL website and in project affected communities to mark closure of the Ahafo South resettlement program – within a reasonable timeframe to be agreed with the RAP completion auditors.
 4. Update stakeholder engagement plans to reflect post-RAP community communication and engagement activities – RAP auditors and NGGL to agree a reasonable timeframe for completion.