Infrastructure for Project Affected People In Ghana

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Abstract:

Man has been settling in different places either because of his own volition,the threat of famine or natural disaster such as flooding or earthquake or compelled by state policy to relocate. In the event that he moves on his own volition, he takes care to choose the place which suits him best having in mind all the location factors. However, if it is as a result of national policy, itbecomes a complex issue. Normally, it is usually expected that these projects would benefit the society as a whole. Governments in this attempt provide attractive infrastructure that is expected to act a push factor for resettlement.

Ghana has undertaken many resettlement schemes as a result of development projects; for example Weija, Asuofuah, TemaManhean, Akosombo and Kpong resettlement schemes. The Akosombo resettlement was built in 1962 by the VRA as a result of the Akosombo dam construction which displaced about 80,000 people living along the river. The same VRA had the opportunity to build the Kpong Dam and to resettle the displaced people around the Dam catchment area. These past resettlement experiences of the country were characterized by repeated failures and it is expected that the Bui Dam resettlement will be successful and sustainable. The study therefore seeks to find the role infrastructure provision play in the lives of project affected peopleto resettlement sustainability.

The research design used in the study is survey of household in the Bui Resettlement communities. Secondary data was collected on the historical events of Dam resettlement in Ghana and primary Data was collected in Bui.

The result from the study revealed that the implementation of resettlement plans in Ghana has never been complete due to institutional and administrative challenges. It was also realised that the

provision of infrastructure alone was not enough to keep people whose livelihood have been lost in the resettled community. In addition, with the three attempts in Dam resettlement, it appears the project implementers were much interested in development of projects rather than development planning. It is therefore recommended that livelihood restoration be done first before actual movement of affected people takes place.

Introduction

Large-scale infrastructure is one of the main causes of forced displacement globally. World Bank estimates that roughly ten million people are displaced each year due to dam construction, urban development, and transportation and infrastructure programmes (World Bank, 1996). This number is shockingly high, but it still fails to account for large numbers of the displaced. McCartney et al. (2005) state that ill-planned resettlement of people from the area flooded by the reservoir is usually the cause of the impacts which have the most significant adverse social impacts of a dam construction. For example, the Tonga people displaced by the construction of the Kariba dam on the Zambezi River in the 1950s are still seeking adequate compensation for loss of livelihoods (Tremmel, 1994)

In recent times, there has been growing focus on the development of infrastructure to assist in meeting future human needs, particularly in Africa. It is estimated that 64% of the total population of Africa relies on water resources that are limited and highly variable and 75% of the continent's cropland is located in arid and semi-arid areas, where irrigation can greatly improve productivity and reduce poverty (Vorosartyet al., 2005; Smith, 2004). Additionally, only 4.8% of the continent's potential hydropower is currently exploited (Gopalkrishnan, 2004). Of the 45,000 large dams worldwide only 1,039 are located in sub-Saharan Africa (WCD, 2000).This growing trend has left over 400,000 people displaced as a direct result of dam construction in Africa (Chris de Wet), and have caused projected affected people to lose their homes. In the case of Africa, many depend on the land or on access to natural resources for their living, displacement literally means losing their ability to support their families, grow crops, fish and continue their cultural and social practices. To mitigate the effect of large scale infrastructure development, governments have attempted to provide infrastructure at various level of community development.

In the case of Ghana, various resettlement infrastructures have been provided by the project implementers at a number of resettled sites. Some of these infrastructure provided for this resettled

communities range from classrooms, clinics, CHIPS, road network, electricity, boreholes to waste management facilities. Resettlement in Ghana is normally done by both private companies such as the mining companies and state agencies on behalf of the Government. State resettlement programmes in Ghana from the colonial regime to date include, the Frafra Resettlement Programme at Damongo, in the Gonja District in 1956, theTema Port Resettlement Scheme in 1959 (Chambers, 1970), the Akosombo Resettlement Project in 1966, the Bui Resettlement Programme completed in 2013.

The responsibility of providing infrastructure for the project affected people lie at the doorstep of project implementers. From all this discussion it is important to note that affected people have rights that need to be respected. They have a right to adequately replace land and structures (social and economic). To be considered adequate, the replacement land and structures should satisfy the following criteria:

(a) accessibility, without excessive time being spent or financial burden being incurred in commuting to the place of work or income generating resources;
(b) habitability i.e. adequate space, protection against weather and ensuring health and safety; (c) security of tenure;
(d) equivalent productive potential where cultivable land was acquired;
(e) proximity to cultural property such as temples and other places of ritual significance; and
(f) access to civic infrastructure and essential services such as health and education (Advocates for International Development, 2012).

Literature review

Infrastructure is defined as the productive capital structures that underpin the economy and society and contribute over time to the achievement of its economic and social goals (Johnson et al., 1995). In this regard, economic infrastructure and social infrastructure have consequently emerged over the years. Although, both economic and social infrastructures have significant social impacts on individuals, communities, and the general public at large in terms of practicality, a distinction between both infrastructures based on their social impact is ambiguous and difficult to establish (Gilmour et al., 2010). This means that the definition of infrastructure can be grouped into two forms thus social infrastructure and economic infrastructure. Economic infrastructure is also at a given point in time, part of an economy's capital stock used to facilitate economic production, or

serve as inputs to production (e.g. electricity, roads, and ports) (UN Habitat,2011). This helps to produce items that are consumed by households (e.g. water, sanitation and electricity). Economic infrastructure can further be subdivided into three categories: utilities (power, piped gas, telecommunications, water and sanitation, sewerage and solid waste disposal), public works (roads and water catchments in dams, irrigation and drainage) and other transport sub-sectors (railways, waterways and seaports, airports and urban transport systems) (UN Habitat,2011).

Social infrastructure, on the other hand, encompasses services such as health, education and recreation. It has both a direct and indirect impact on the quality of life. Directly, it enhances the level of productivity in economic activities, indirectly, it streamlines activities and outcomes such as recreation, education, health and safety (UN Habitat, 2011).

The role of infrastructure to community development cannot be overemphased. The World Bank (1994) landmark study on infrastructure highlights the critical role of infrastructure in the development process of countries.

The development of some of these infrastructures comes with the displacement of people who are likely to be beneficiaries or losers of the infrastructure. In developing countries, one of the most heavily invested projects is the construction of dams for the generation of energy for national development. These acts by governments displace the people living and depending on the reservoir. Displacement tallies almost always refer only to persons physically ousted from legally acquired land in order to make way for the planned project, ignoring those living in the vicinity, or downstream from, projects, whose livelihoods and socio-cultural milieu might be adversely affected by the project (Scudder, 1996).

In the wake of displacement, resettlements appear to be the only alternative for both government and project affected people. It also presents an opportunity for government to enhance the people standard of living on a sustainable basis.

Methodology

Research design

The research design adopted in the conduct of this study is cast within the general framework of a survey because the study is descriptive and it helps to make causal inferences as to whether the

absences or presences of infrastructure has any effect on the lives of the people. The aim is also generally to describe infrastructure and the services provided to the resettled communities.

Sampling

A random sampling was used to select household heads in the resettled communities for interview whiles key stakeholders in the communities, official of the Bui Power Authority and the stakeholders in resettled and host community where purposively selected based on their knowledge on the resettlement scheme.

Data collection and analysis

Data was collected from both primary and secondary sources. Primary data collection methods such as observation (direct), administering survey questionnaire and organsing group discussions were used. Secondary data was collected from literature and that helped to understand the various types of infrastructure that were provided during the Akosombo Resettlement and the Kpong Resettlement scheme.

The primary data was analyzed with the help of SPSS and secondary data was analyzed by reviewing relevant documents.These were done bearing in mind the processes leading to the resettlement, the infrastructure that was provided and the extent to which the infrastructure could ensure successful resettlement or otherwise.

Discussion and results

Akosombo resettlement infrastructure experience

The Akosombo resettlement became necessary because of the construction of the Akosombo Dam in 1964. The plan to construct the VRP begun in 1915 and construction started in 1961 by Impresit-Circola- Lodigiani of Milan and E. Recchi of Turin, an Italian consortium. A loan of about £35 million was obtained from the World Bank, the United States and the United Kingdom Governments, for the VRP estimated to be paid between 20 and 25 years (Funds for Volta, 1961). The construction of such national infrastructure required the resettlement of about 740 towns and village who were to be flooded, an estimated number of 15,000 houses were to be destroyed and close to about 80,000 people were to be displaced(Chambers 1970). The government of Ghana was responsible for the resettlement financing of the people. The Government declared as its aim

that no one should, as a result of the project, be worse off than before and that the new conditions should be as good as the old, if not better (New homes, 1963).

The planning of resettlement included a socio economic survey of properties to be inundated. Such properties included buildings, crops and economic trees. In addition sociological data including composition of households, numbers and types of houses was also collected. The University of Ghana undertook all the necessary research works for the preservation of the natural, social and cultural artefacts and heritage of the people to be displaced (Volta basin research project, 1963). The cost of the entire resettlement was estimated to be about £61, 152,000. The resettlement infrastructure included the construction of public roads,schools,local councils, health centers, markets and private individual houses, crop lands for each of the 52 resettlement communities to be resettled (Chambers, 1970). As part of the services:

1. One septic tank toilet was to be build with twenty holes for at least every 80 plot developed.
2. A public stand pipe within an accessible radius
3. Six classroom each calculated on the basis of one school bloc per 1000 population
4. Middle school to be constructed where one existed in the previous settlement.
5. Market stall of 12 bays per settlement
6. Central commercial area with a lorry station
7. Playing ground
8. Civic building such post office, police station.

Source :Nkrumah (1984)

The implementation of these infrastructure involved heavy financial investment. See Table 1

Table 1: Estimated cost of the Volta resettlement programme to June 30 1981

Items	**Cost N¢**
Housing	13,000,000.00
Schools	444,000.00
Streets	545,000.00
Market	38,000.00
Latrines	423000.00
Water supply	386,000.00
Roads	3,094,000.00
400 Tractors and Ancillary machinery	2,000,000

Machinery and equipment	967,000
Broiler houses	13,000
Pig houses	27,000
Tobacco Barns	9,000
Total	**20,946,000.00**

Source: Chambers, 1970.

This heavy investment resulted in the construction of 12,671 core houses, 81 school blocks containing 404 classrooms and 46 markets, installation of 63 water supplies; the contractionof 512 miles of laterite road and 95 miles of street; and the evacuation of 12,479 families. These infrastructure investments played a very important role in the lives of the Project affected people who saw many children for the first time close to a primary school and less difficult than before to access health services(Chambers, 1970).

The provision of these infrastructures though good has not yielded the expected results of achieving successful resettlement.Perhaps, the only aspect of the resettlement that would have consolidated the provision of social infrastructure is the agriculture, land and World Food Program that failed to restore the livelihood of the project affected people.In fact, as at 1965, after the resettlementonly 16 of the 52 communities had their lands cleared.The project affected people had major problems that choked the pipe of resettlement sustainability despite noticeable benefit it brought to the PA;despite the provision of some level of these infrastructure in the resettled communities, most people left the resettlement site to restore their various livelihood. By 1968, out of 26,711 farmers resettled, only 9630 were actually living at the site (Chamber, 1970). Some reasons assigned to this monumental drift of people are the poor project design, inadequate water supply, and slow clearance of farmland, poor soil and inadequacy of coverage and of pricing of properties for the resettlers. Chambers(1970), reports that a number of people were thrown together into standardized housing in the resettlements site much larger and more compact than their original villages. The resettlers among other things did not confer with the self-help housing scheme that was been implemented by the Volta River Authority.

Some of the reasons that can be attributed to these challengesare; low participation and consultation in decision making of the project affected people due to less time, insufficient funds, political pressure on project implementers and low administrative resources. The resultant effect of these challengessaw the displacement of resettlers or project affected people. Many moved out

of their communities despite the provisions of infrastructure (Chambers, 1970). The Akosombo resettlement experience provided enough ground for lessons to be learned for further resettlement such as the Kpong resettlement. From this experience, it is important to recognize that the mare provision of infrastructure cannot be enough for sustainability.

Kpong Resettlement infrastructure

The Kpong Hydroelectric infrastructure project was constructed in 1977 with the support of a World Bank loan (with a US$39 million) to the government of Ghana (World Bank 1993). The project involved the construction of a headpond at Kpong, 24 kilometers downstream from Akosombo, with four generating units and related resettlement infrastructure. About 4,597 people living in 55 small villages situated along the east and west banks of the river and on the islands were affected, together with about 1,100 people living in the township of Lower Kpong (World Bank, 1993). In all about 7000 people were resettled. The agency that was responsible for the implementation of the resettlement package which included social amenities such as health centers, schools, road network and markets.As seen in table according to the six host communities.

Table 2: Resettled communities and the number of infrastructure provided

Resettlement	Commercial buildings	Chief Gusest House	School block	Latrines	Electric poles	Stand pipe	Road length (m)	Office houses	No. of settles houses
Torgome	1	1	2	7	79	11	1895	4	107
Natriku	1	1	1	5	83	13	1561	3	94
West Kpong	1	1	1	10	213	33	3716	7	251
South senchi	1	1	1	11	214	24	3856	4	282
Old Akradi	1	1	1	7	93	9	1210	3	78
Fodjoku	1	1	2	12	249	20	4533	11	273

Source: Nkrumah (1984)

The provision of this infrastructure became a failure because according to Girmay (2006), at the time of its construction impact assessment was not a planning and management tool available in Ghana. Apparently, a number of environmental and socio-economic issues concomitant to the dam's construction were not considered under mitigation measures as should have been done to

ensure the achievement of sustainable development. It became obvious that VRA and Government did not learn their lesson from the events before and after the resettlement. The level of failure was such that even the people affected by the construction of the Kpong hydropower project were not connected to the national grid system until recently (Girmay, 2006). It would seem that the authority neglected the majority of the people affected in favour of the urban dwellers. In summary, the implementation of the resettlement package placed too much emphasis on relocation and infrastructure, and too little emphasis on development planning. The actual relocation was carried out fairly successfully. People participated in its preparation, and were allowed to move as communities, houses in a number of cases were ready before they moved. One encouraging side is that the resettlement had developed infrastructure ready to receive resettlers unlike the Akosombo resettlement where fields where not even cleared at the time resettlers arrived in the new areas (Chambers, 1970).

The World Bank assessment of the Kpong resettlement presents a mix reaction on the effects of the infrastructure provided to the resettlers. It was found out that the Kpong resettlement outcome was unsatisfactory because incomes have not been restored to the levels which prevailed prior to moving. This was due to several factors which centered on land and agricultural development policy (World Bank,1993). Households were greatly satisfied with the social infrastructure.Forexample, about 60 percent of households were better off in terms of the public services, particularly health and education. The health component was well prepared in terms of the potential health effects and the approach used was comprehensive and appropriate but little was done by project implementers to control the influx of people into the five project communities. Transportation network and water supply however fell short of expectation and about 80% of the people were worse off with respect to incomes and employment opportunities.

On the encouraging side, however, the authority has embarked on various programmes to manage the lake and the surrounding lake side villages (Agbemabiese, 2002)

Bui resettlement

Demographic Characteristics of respondents

There were a total of 472 people recorded in the entire household (79) surveyed. There were variations in the population size according to communities (see Table 4.1), because of the

proportionate distribution of household selected for the survey. Females (253) are generally outnumbering males (219) and this is not surprising because it reflects the national phenomena.

Table 3:Sex distribution by communities

Name of community	Female	Male	Total
Agbegikuro	32	27	59
Bator	63	56	119
Brewohodi	22	19	41
Bui	47	38	85
Dam Site	17	15	32
Dokokyina	59	48	107
Lucene	13	16	29
Total	**253**	**219**	**472**

Source: Field Survey, 2014

The seven communities are a youthful population with ages (16-65). The youthful nature of the population has reduced dependency ratio to 60 people depending on 100 every adult in the working class. The lower dependency ratio implies that infrastructure provision for the community therefore must aim at satisfying the needs of this youthful population in job creation and skills development.

Sociologically, Christianity is the dominant religion (92%) whiles the remaining religion constitute 8 percent. This implies that the inability for BPA to construct the place of worship that existed in their previous settlement has a great effect on promoting good interpersonal relationship among resettlers and workers of BPA.

Access to health care

Access to health care represents one of the significant infrastructural changes that have occurred in the lives of the project affected people in Bui. BPA have constructed a new chips compound for resettlement site B and have renovated and improved the health center in Gyama. These facilities serves the health needs of the resettlers.

The study revealed that before resettlement, none of the project affected communities had a health facility located in their settlement. However, their major source of orthodox health service during that period was

the clinic and health centre located at Bungase and Gyama (Host communities). Each health facility in the two resettlement sites have a Maternity Ward, Dispensary, and a freezer for storing vaccine, outpatients department, an antenatal unit, a family planning unit (see Plate 1). This development is a complete improvement in the affected people lives as compared to the old settlement.

In their old settlement, some of the challenges faced in accessing the facility included the poor means of transport and long distances covered. The distances travelled to these facilities were on the average of 1-2 hours as compared to the current average of 30 minutes walking distance(See Tables 4 and 5). The people commitment toward accessing health facilities despite the difficulty faced in their previous settlement showed the importance attached to health facilities irrespective of their distance travelled.

Table 4: Accessible health Facility and the time used to cover to get to such facility (before resettlement)

Health Service Patronised before Resettlement	Travelling Minutes to the Facility before Resettlement			Total	Percentage
	0-30mins	1-2hrs	3-4hrs		
Health Centre	0	5	9	14	19
Clinics	0	33	3	36	48
Chemical /pharmaceutical Shop	0	2	0	2	3
CHIPS	0	2	0	2	3
Traditional healers	5	12	4	21	28
Total	**5**	**54**	**16**	**75**	**100**

Source: Field Survey, 2014.

Table 5:Accessible health facility (after resettlement)

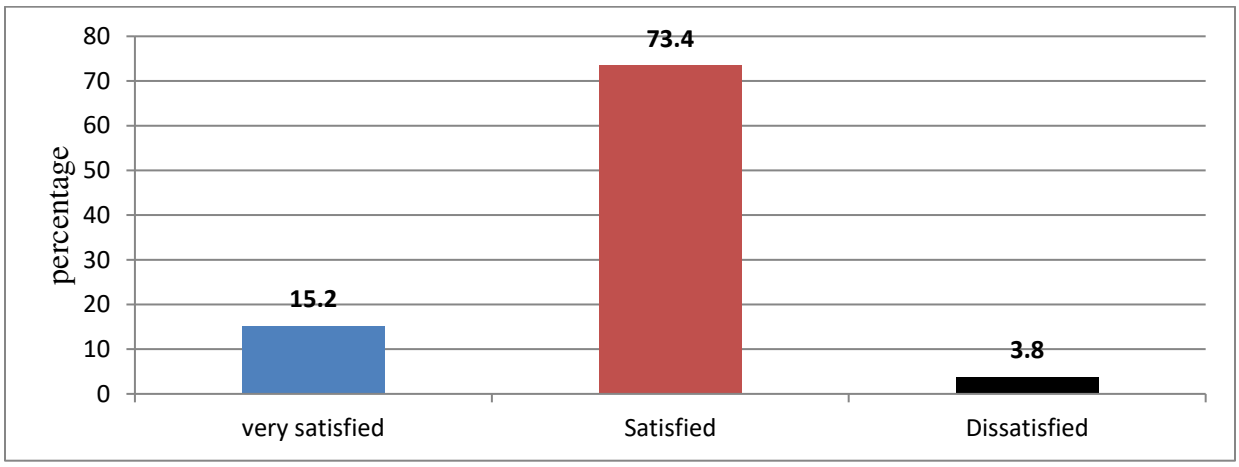
Health Service Patronised after resettlement	Travelling Minutes to the facility after resettlement			Total	Percentage
	0-30mins	1-2hrs	3-4hrs		
Health Centre	0	0	0	0	0
Clinics	22	0	0	22	16
Chemical /Pharmacuetical Shop	0	0	0	0	0
CHIPS	60	0	0	60	80
Traditional healers	3	0	0	3	4
Total	75	0	0	75	100

Source: Field Survey, 2014.

From the two Tables 4 and 5, it can be seen that the situation after resettlement has improved especially with distance travelled by resident to the nearest health centre.

It was however not surprising that 73 percent of the affected people express satisfaction on the availability of ready health for them in their new settlement (see in Figure 1).

Figure 1:Level of satisfaction of health facility



Source: Field Survey, 2014.

Plate 1: Resettlement CHIPS Compound

Source: Field Survey, 2014.

For resettlement site B can now boast of a Midwife, three Community Health Nurses who did not exist at their old settlement site.

Access to education

Education in every sense is one of the fundamental factors of sustainable resettlement development. This suggests that education is plays a great role in the sustainable development of resettled communities and it can be seen as central to their economic growth and social transformation. This role is explained in how education helps nations to have enhanced quality of life. For this reason it was important to conduct a survey of the resettled community.

Comparatively, access to education has been improved with the construction of schools in both Gyama and Bui. Before resettlement, with the exception of Bator and Dokoyina who had only primary schools,

Agbegikuro and Bui could only boast of a kingdagati (KG). The rest which are Brewohodi, Dam site and Lucene had no educational facilities and their pupils traveled to neighboring communities.

Table 6:Educational facilities before resettlement

Community	Educational facility
Agbegikuro:	1 preschool, no primary school. Pupils continue at Gyama.
Bator:	1 primary school, established 1951, Pupils continued at Bui Camp.
Brewohodi:	No schools, pupils go to Bui Camp or Gyama
Bui:	1 preschool, Pupils continued at Bui Camp.
Dam Site:	No schools, pupils go to Agbegikuro and Bui Camp.
Dokokyina:	1 primary school, established 1996. Pupils continued at Gyama or Bui Camp.
Lucene:	No school, pupils continued at Gyama Pupils travel to Gyama or Bui Camp to attend primary/junior school.

Source: Field Survey, 2014.

After the resettlement all the communities have access to educational facilities from the pre-school to junior high school level. Bui(Resettlement site B) has a primary school and a junior high school as seen in the plate below.

Plate 2: Educational facilities at resettlement site

Source: Field Survey, 2014

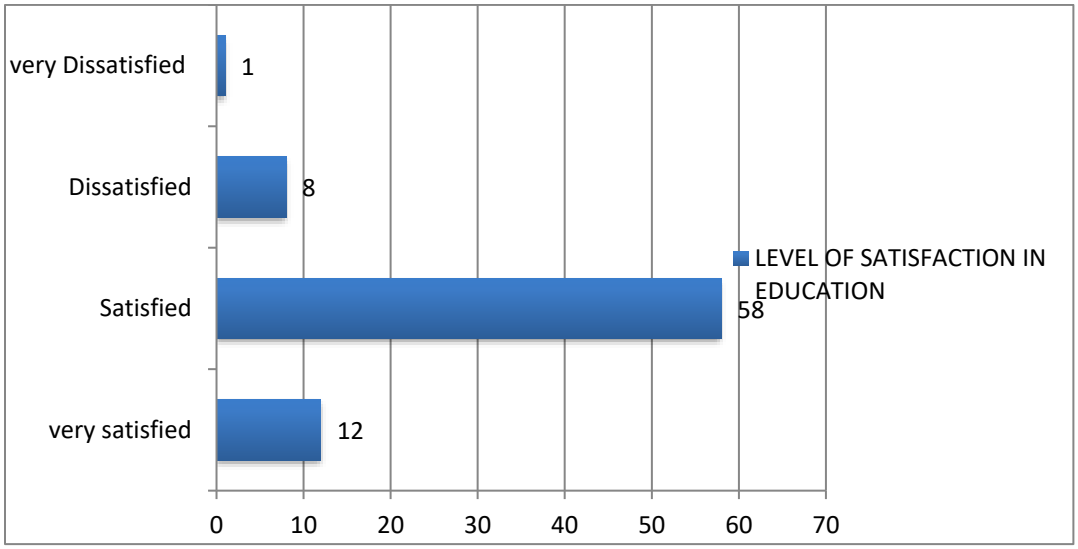
The communities express satisfaction to the easy access they have for their wards (see Figure 2); they however indicated that the school is faced with inadequate teachers, computer laboratory and Text books as well as teaching and learning materials (see Table 7). A visit to the schools in the resettlement site revealed similar problems. Resettlement site A had four qualified trained teachers in the primary school and three qualified trained teachers in the JHS. While resettlement site B could only boast of two trained teachers at the primary school and two trained teacher at the JHS.

Table 7: Major Educational Challenges experienced before and after resettlement

Difficulties experienced before resettlement with Schooling			Difficulties experienced after resettlement with schooling		
	Frequency	Percent		Frequency	Percent
Poor Teaching	18	22.8	Poor Teaching	6	7.6
Facilities in bad condition	11	13.9	Facilities in bad condition	12	15.2
Inadequate teachers	24	30.4	Inadequate teachers	24	30.4
Inadequate furniture	4	5.1	Inadequate furniture	19	24.1
Overcrowding	3	3.8	Inadequate Books/Supplies	13	16.5
Long Distance travelled	14	17.7		0	0
Others	5	6.3	Others	5	6.3
Total	**79**	**100**	**Total**	**79**	**100**

Source: Field Survey, 2014.

Figure 2:Level of satisfaction in education



Source: Field Survey, 2014.

Housing

The provision of secure shelter is one of the most important components of physical infrastructure development of the Bui resettlement area and it is contained in the letter given to the Akayankrom community on the 8 of November 2009(See Plate 3).

Housing conditions have improved when compared to their old site of resettlement as shown in Plate 3. All the opinion leaders and interviewed household heads expressed satisfaction at the housing facility given them by BPA as a result of the resettlement. Many of them explained that their rooms in the old communities were inadequate and the conditions were usually very poor. Since resettlement, for many of the households, improved housing is regarded as the primary infrastructure necessary for them to rebuild their lives and livelihood. However, many respondents could not express their strong sense of control and ownership of their new homes, this was confirmed by the resettlement officer when he indicated that they are yet to present the documents to the houses to the community leaders. Though they were involved in the site selection they were not involved in the construction process and this to some extend has deflated their sense of ownership. It was however not surprising that most of the household heads did not maintain the house since resettling.

Plate 3: Housing before and after resettlement

Source: Field Survey, 2014.

Physically, the are no visible signs of cracks in all the houses constructed after three years of resettlement. Each housing structure hasbathroom, toilet, kitchen, electricity and a compound. These facilities were not present in their old settlement sites. The sustainability of these housing facilities and structure depends on the effectiveness of their maintenance. However, when asked about the maintenance culture of household heads since resettling, about 70 percent of respondents indicated that they have never maintained the house since resettling while 30 percent responded to the affirmative. Some of the reasons why they were not maintaining the houses are the lack of regular funds for household upkeep, unemployment and the deflated sense of ownership for the houses. Landlords did not have ownership documents to prove their ownership

of the houses and they believed that if they decide to leave the community they cannot sell the house. They, therefore, did not see the need to maintain the houses that officially did not belong to them.

Housing structures provided to these communities after resettlement have been very satisfactory, however the ability of the communities to maintain these house for a long period cannot be guaranteed considering the fact that they do not have any source of finances for maintenance. The sustainability of these houses provided is therefore questionable.

Road and communication networks

Other form of Physical asserts such as road and communication networks are also considered important for the development of sustainable resettlement. McDonald (2006) suggests that the length of road in each area is an indication of whether resettlers have access to markets to sell produce or find work. The resettler's use of roads and specifically transport vehicles along routes can also reveal their capacity to access markets (McDonald, 2006).

In the case of resettlements at Bui, the availability and accessibility of roads prior to the resettlement project appeared to be very minimal. The baseline data indicated that the communities were historically remote. Most of them had no access to roads, and some were accessible only by boat. During the wet season, the roads were virtually inaccessible, which made it difficult for communities to access market or other public facilities such as a school.

However, this has changed after the resettlement since the two resettlement sites now have easy access to neighboring communities to trade. Roads have been constructed to link the resettled and the Dam project site as shown in Plate 4 and other district capitals. In resettlement site B, there is ongoing road construction to link the district capital Banda Nkwanta. In the case of resettlement site A, the roads are tarred both to Bamboiand Bole. This has provided a unique opportunity for the development of trade with other surrounding communities.

Plate 4: Road network

Source: Field Survey, 2014.

In terms of communication networks, the two sites have access to the various networks. These are MTN, Vodafone, airtel and tigo.

Despite the high level of satisfaction of the various infrastructure services provided about 70% of household heads indicated that if they were given the opportunity somewhere else they would abandon the resettled site and explore better opportunity. The main reason for such an idea is the

failed promise by BPA (see Table 8) to restore their livelihood. This raises questions about the planning process that was engaged in the resettlement of the affected people.

Table 8:State of summarized livelihood support system expected to be provided at resettlement sites

Fishing	Status
Establishment of fishing association	Non existent
Business planning	Non existent
Micro-credit	Non existent
Transport and processing refrigeration facilities	Non existent
Storage	Non existent
Development of small service enterprises	Non existent
Artisanal workshops and appropriate skills training	Non existent
Farming	
Business planning,	Non existent
Land preparation	Provided but insufficient at market price (50 GH¢)
Extension services	Not provided
Micro-credit,	Non –existent
Crop packages	Was not provided
Land access assistance.	Non existent
Trading	
Access to markets,	Existing
Six month support to help traders identify new customers and suppliers	Was not provided
Business planning	Non existent
Micro-credit facility	Non existent
The construction of market stalls	Existing but not utilized in resettlement B.

Source: Field Survey, 2014

The livelihood of the project affected people was to be restored through a Livelihood Enhancement Programme (LEP). LEP is to provide a "safety net" for those households for whom the disruption of economic and social networks may heighten the risk of vulnerability and increase the incidence of poverty, with all its negative consequences. This was expected to be done through an NGO overseen by the LEP Committee, which will comprise Traditional Authority, representative of the organization responsible for implementing the Resettlement Action Plan (RAP), the Resettlement Coordinator, and a representative of the Livelihoods NGO (ERM, 2007, p.96). The LEP targets include farming, fishing, trading, grazing, hunting and collection of forest products. From the

survey nothing of such a sought has been done at the time of the survey and no there was no indication that there are no plans in place for such a facility. Financial constraints apparently the main reason for the delay in the start of the LEP. The effects of the loss of livelihood of the people can be safely seen in three categories;

1. Spring up of settlement along the river
2. The upsurge of youth into illegal mining activities at the national reserves.
3. Changing occupational trends

About 66% of the sampled respondents indicated that the realities they encountered at the resettlement sites on their resettling were below their expectations and different from what they heard before leaving their original place. About 19% of the respondents confirmed that the realities at the resettlement during their arrival were similar to what they heard before their departure. The remaining 15% of respondents indicated that existing realities at the resettlement sites were much better than what they had heard.

The mismatch between what the resettles heard before they left their origin and what they are witnessing on their arrival is severe to restore their livelihood. In a discussion with resettlement officer he explained that there is a concept of Bui city project which remain a concept and that is what the resetllers are confusing with the resettlement package which according to him has been delivered. This development has raised issues of returnees and the development of new settlement towns in the near future.

With respect to returnees, few of the sampled respondents (25%) indicated their willingness to go to their old site or even abandoning their resettled site but that if they were given the alternative they would have preferred going back to their *home town*. What is significant here is that there exists the development of new settlement site called the GyamaNsuoano as shown in Plate 9 which is point of departure and arrival from Dokoyina and Galamsy site in the national reserve. The settlement also serves as a point of departure for the few fishermen.

Plate 5: New settlement Development (GyamaNsuoano)

4.
Source: Filed Survey, 2014

Data gathered in the survey showed that illegal mining started just after the resettlement was completed. In a discussion with some opinion leaders and informants, it was observed that most of the youth in the resettled community started the mining because they were unemployed. They believe resettlement has caused this evolving activity of illegal mining site in plate 5.

Plate 6: Illegal mining site developed after resettlement

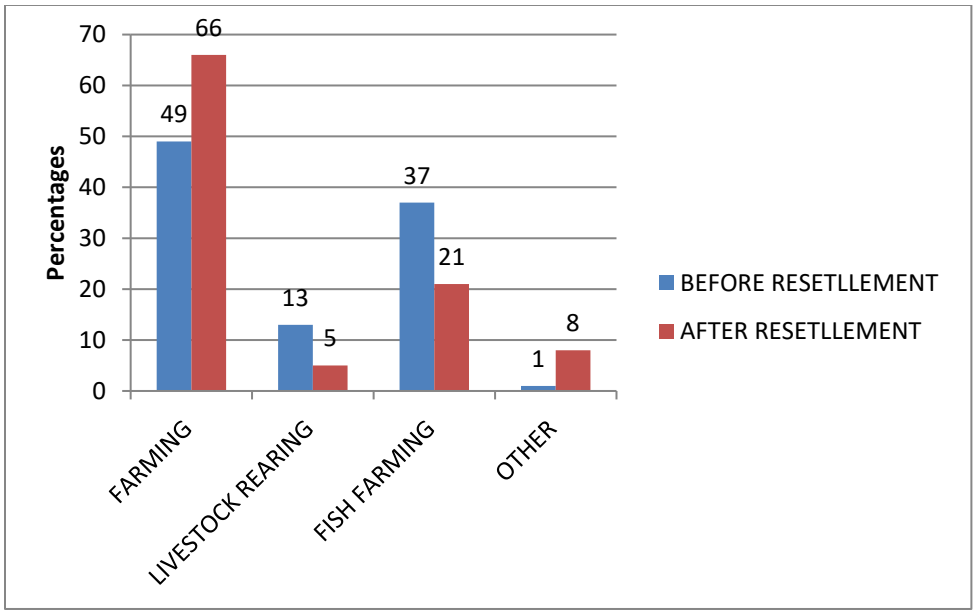
Source: Field Survey, 2014.

The Game and Wildlife Authority expresses worry about the turn of events at the national reserve after the resettlement but indicated that they did not have the logistics and weapons to go to the mining site. Currently as at the time of the research it was estimated that about three thousand (3000) people (Assemblyman and Game and wild officer) are in the reserve and the possibility of developing a secondary settlement in the reserve is possible since part of Dokoyina refused to be

resettled. The situation poses a threat on the "renewable" resources (land, water and air) on which the peoples livelihood depends and a challenge on environmental sustainability.

The trend in local economic activities is changing among the resettlers.(see Figure 3) . Most of them who were fishermen before resettlement are gradually shifting into farming because they argue that the construction of the dam has increase the cost of fishing and reduce the quantity of fish as well as the species of fish.

Figure 3: Major economic activity of households heads before and after resettlement



Source: Field Survey,2014

Fish farming has reduced by 16% while farming has increased by 17% since resettlement. These changes have occurred because challenges faced in fishing as compared to farming since resettlement cannot be over emphasized. Some of these challenges include among others the long distance travelled to get to demarcated fishing site, cost of premix fuel, low yield and disappearance of certain fish species.

Summarily, the study reveals that large scale infrastructure development such as Dams will affect the people negatively and positively. Positive effects are the improved access to health infrastructure, education, and housing conditions of the resettlers. This improvement is as a result of the provision and rehabilitation of infrastructure by BPA such as schools to improve literacy

and skills training as well as educational levels of the people, clinics to improve health care delivery system, boreholes which give reliable domestic water, waste disposal containers to improve community sanitation. This confirms what Olawepo (1997) writes about the benefits of resettlement. According to Olawepo(1977) resettlement can make the resettles better off than where they were originally located through the provision of social infrastructures, settlement growth and socialization of the resettlers.

However the loss of livelihood by the resettlers raises concern about how they can maintain and sustain the community infrastructure provided. This also confirms WCD (2000) accession that, large dams can aggravate "social inequities" and contributed to "environment destruction, leaving the rich better off and the poor more marginalized and resentful." Moreover, most resettlement programs had focused "on physical relocation rather than economic and social development of the displaced," thus failing to realize the promises of modernization. These are Bui and Gyama resettlement sites. BPA appear more interested in the provision of infrastructure rather than livelihood restoration.

Cernea (1996) also claims that resettlement normally results in the loss of people livelihood and income sources such as arable land, common property resources such as forests, grazing land, ground and surface water, fisheries and changed access to and control of productive resources such as land. Cernea (1996) further argues that the loss of economic power with the breakdown of complex livelihood systems results in temporary or permanent, often irreversible, decline in living standards of the people leading to marginalization. The above assertion was confirmed during the study. The results from the study also revealed that the loss of livelihood is the major negative effect that threatens the sustainability of the Bui resettlement projects.

The livelihood of the people from the study is greatly influenced by the constraints on agricultural production (in terms of soil quality, fertilizer availability,); lack of access to credit; absence of storage and/or processing facilities; and the absences of off-farm income generation. Lack of credit schemes has prevented the development of sustainable businesses or income generating activities in the communities. This lack of monetary income has consequences in terms of resettlers' access to food security, health and education in the future. In addition, given the farmers report of poor soil quality and bad weather condition coupled with the lack of agricultural inputs can lead to low productivity, further degradation of soil due to over cropping and an overall critical loss of

productive capacity. Other constraints to increased agricultural productivity include: lack of access to credit to buy fertilizers and seeds; distance to markets; and lack of technical assistance. Overall, these conditions have compromised the villagers' abilities to produce sufficient food. The presence of market stall but the lack of market players especially at Bui acts as a disincentive to the commercialization of agricultural products. Moreover, long distances travelled to reach the river results in a serious loss to fisherman's time, and discourage fishing. Coupled with this is the loss of some species of fish. The absence of livelihood support system for the resettlers has also environmentally resulted in the development of illegal mining sites at the National forest reserve. The illegal miners pouch at the forest and the wildlife is under threat. The developing trend is worrying because the destruction of the forest reserve in the long run will affect the water level of the Dam for the generation of electricity.The above assertion raises questions about the implementation of the resettlement Action Plan which is the base document for sustainable resettlement.

Summary of findings and recommendation

It has been realised that the provision of infrastructure to project affected people such as school, clinics in the resettled communities had improved the people access to basic infrastructure that was hitherto not available in their old settlement. However, this infrastructure was not enough to ensure resettlement sustainability.

Also it was established that resettlement in Ghana always come with both implicit and explicit challenges that need to be managed. In the case of Akosombo, Kpong and the Bui resettlement there are repeated failure by the government to restore the livelihood of the project affected people. The Akosombo resettlement saw little success with the Agriculture projects and asimilar account was recorded for the Kpong resettlement. The Bui Dam did not present anything new on the implementation of the Livelihood Enhancement Project.

Another observation that needs to be made is the weak implementation of the Resettlement Action Plan and the weak consultation and participation of Project Affected People in decision making about their further. The involvement of the people in the implementation of the Resettlement Action Plan is very critical in the resettlement planning process and needs to be taken serious when implementing plans such as these.

At this instance the following recommendations are made:

1. Project implementersneed to implement the resettlement Action Plan over a period of time long enough for project affected people to restore their livelihood.
2. Livelihood restoration programs should precede all activities after project affected people agree to be resettled. The activities should be such that PAP are consulted and involved not only the planning process but active members in implemtation.
3. Effective consultation should be made and in the process migrant resettlers should be given the opportunity to relocate to places of their choice, because some PAP are migrants who have traveled to in search of good farm lands and proper fishing grown.
4. Community groups should be involved in the building of sites for community services and activities. The infrastructure, and the involvement of the community in its development, will make the survival of communal activities and networks more feasible. This involvement of community groups could be extended to involvement in building individual houses.
5. Finally, a single management body from high to local level is an important factor to gain the success. That is a good way to manage effectively investment sources and bear full responsibility of a project's quality. This body could also receive quickly the feedback from local people and solve flexibly and sensibly problems originating from practice.

Conclusion

In order to guarantee that resettlement development takes more account of environmental impacts and is performed on sustainable basis, the state and organizations as well as affected people have to do many things. In the field as complicated as resettlement, if not carefully studied and sufficiently prepared, the negative consequence will be quite heavy and long lasting. Therefore, high-level policies on this issue should be revised towards sustainability and the implementation should follow a strict but flexible procedure with full participation of both the affected people and the host people.

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