

**Issue Paper on**

**“STRATEGIES FOR COMMUNITY  
PARTICIPATION IN DAM  
DEVELOPMENT”**

Submitted to

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## EXECUTIVE SUMMARY

*The World Commission on Dams has observed that there has been little or no meaningful participation of would-be dam affected people in the planning, implementation and maintenance of dam projects. As a result the full benefits of such projects are not realized. The United Nations Environment Programme (UNEP) has therefore, under the Dams and Development Project (DDP), stressed the need for an informed and all inclusive stakeholder dialogue as a new approach in planning and management of dams. Against this background, the Ghana Dams Forum was constituted in 2007 as a multistakeholder organisation to promote national dialogue on dam-related issues including community participation. This paper examines how communities have been involved in dams development in Ghana.*

*Since her independence in 1957, Ghana has constructed large and small scale dams to generate electricity, supply water for domestic and industrial uses and to irrigate agricultural lands to boost food production. However, as in other parts of the world, the benefits of these projects have not gone without considerable social, economic and environmental costs.*

*The paper notes that there is no formal institutional framework for ensuring community involvement in dam projects and that community participation has taken varied forms with respect to the scale of the project. As a result community concerns have not been adequately addressed resulting in lack of confidence in institutional structures and implementing agencies. Many people including displaced populations, host communities and downstream riverine communities have been adversely affected by these dams. Resettlement programmes have fallen short of expectations, payment of compensations have either not been effected or unduly delayed and reparations in general have been poorly managed.*

*The paper stresses the need to deepen stakeholder consultations and greater community involvement during initiation, planning, design, implementation and maintenance of dams in order to realise the full benefits of dam construction and effectively mitigate the adverse social, economic and ecological impacts. The paper recommends that:*

- *Would-be dam-affected communities should be adequately informed, sensitised and educated about the scope, benefits and implications of the project.*

- *Local communities should be regarded as equal partners and must be given adequate time to offer their consent to dam projects before their implementation.*
- *Would be dam-affected populations and all potential resettlers should be given the chance to be active players in decision-making with regards to where they would want to be relocated and who should serve as their host communities.*
- *There should be consensus with respect to the nature and amount of compensation for loss of properties during dam construction and development. Good record keeping on compensations paid is also essential in avoiding future disputes.*
- *Lands acquired to resettle displaced populations should be properly documented and agreed compensation involved duly paid to the host communities in order to guarantee the livelihoods of the resettlers and avoid conflicts.*
- *There is the need for project managers to demonstrate serious commitment to the adaptive mechanisms and coping strategies of displaced and resettled communities in order to promote their total welfare and sustained livelihood.*
- *It is important to sustain and protect community interest in dam projects through regular consultations between project managers and representatives of affected communities. Community-based activities should also be designed as part of overall project maintenance scheme in order to generate and sustain community interest in the programme.*

*Finally, the paper emphasises the need for the establishment of institutional and legal framework for promoting community participation in dam development.*

## **List of Acronyms**

DDP - Dams and Development Project  
ESIA – Environmental and Social Impact Assessment  
GIDA – Ghana Irrigation Development Authority  
IAP2 – International Association for Public Participation  
ISC – Irrigation Service Charge  
JISM – Joint Irrigation Scheme Management  
MOFA – Ministry of Food and Agriculture  
OIP – Okyereko Irrigation Project  
UNEP – United Nations Environment Programme  
VBRP – Volta Basin Research Project  
VRA – Volta River Authority  
WCD – World Commission on Dams

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# **1. Introduction**

## ***1.1 Background***

Through out human development history both large and small scale dams have been built across river channels to impound water and regulate water flow primarily for irrigation, water supply for domestic and industrial use and electricity generation. However, man-made lakes turn out to be of multiple use including fish production, navigation and recreation. Dam construction increased after the 1950s particularly in developing countries and by the end of the 20<sup>th</sup> century, there were over 45,000 dams in over 150 countries (WCD, 2000). According to the World Commission on Dams (WCD) the contribution of hydropower to global electricity supply is 19%. Twenty four (24) out of the 150 countries with hydropower dams depend on it for 90% of their power supply. About half the world's large dams were constructed primarily for irrigation and it is estimated that dams contribute 12-16% of global food production. Again about 12% of large dams are classified as water supply dams (WCD, 2000).

An inventory of major dams in Ghana undertaken by Gordon (2007) indicates that there are 7 dams being operated by the Ghana Water Company Ltd. which supply water to mainly urban communities. The largest is the Weija Dam [volume ( $10^6 \text{ m}^3$ ): 116.04] on the Densu River which serves the city of Accra. There are 22 irrigation schemes some of which have their own dams and managed by the Ghana Irrigation Development Authority of the Ministry of Food and Agriculture (GIDA-MOFA). The Volta River Authority operates the hydropower dams of Akosombo (1020 MW) and Kpong (160 MW) on the Volta River. On August 24, 2007, the President of the Republic of Ghana, Mr. John Agyekum Kufuor, cut the sword for the construction of a third hydropower dam on the Volta River System, specifically at Bui on the Black Volta in the Brong Ahafo Region. The Bui hydropower project which is being executed by the Chinese firm Sino Hydro is estimated to cost \$600m and will have generation capacity of 400MW (Daily Graphic, Aug. 24 2007).

Dam construction has profound and long lasting impact on the environment and the total social, economic and environmental cost of dam building is enormous. Many people including displaced populations, host communities and downstream riverine communities have been adversely affected by large dams. The construction of large dams has led to the displacement of some 40 to 80 million people worldwide some of whom have not been resettled or adequately

compensated (WCD, 2000). In Ghana 80,000 people had to be resettled in 52 communities as a result of the construction of the Akosombo dam on the Volta River in 1964 (Kalitsi, 1970; Diaw and Schimdt-Kallert, 1990; Yeboah, 1999). Dam construction also dramatically transforms aquatic and terrestrial ecosystems.

In view of the problems and challenges associated with dam construction, particularly large ones, opposition to dams grew and became more widespread as dam building accelerated after the 1950s (WCD, 2000). Such protests and resistance have been organized by dam-affected communities, conservationists, NGOs and civil society in general.

The WCD has noted that “little or no meaningful participation of affected people in the planning and implementation of dam projects - including resettlement and rehabilitation - has taken place” (WCD, 2000: 106). Dam-affected people are faced with the greatest risk of dam construction because they are not included in decision making with respect to resettlement, needs assessment and available options (WCD, 2000). But there is increasing recognition that effective stakeholder participation in dam development is essential in ensuring that the full benefits of such projects are realized and the costs and risks are also reasonably minimized. The United Nations Environment Programme (UNEP) has therefore, under the Dams and Development Project (DDP), stressed the need for informed and inclusive stakeholder dialogue as a new approach in planning and management of dams ( [www.unep-dams.org](http://www.unep-dams.org) ).

Against this background the Ghana Dams Forum was constituted in 2007 as a multistakeholder organisation to promote national dialogue on dam-related issues. During the “First Ghana Dams Forum” held on September 4, 2007, issues that emerged were captured under the following broad themes:

Research and Development;  
Institutional Collaboration;  
Compensation; and,  
Community Involvement.

This issue paper focuses on community involvement in dam development. It examines how communities have been involved in dam development in Ghana and provides guidelines for enhancing community participation. The paper also makes recommendations for fostering greater consultation, collaboration and partnership among stakeholders in future programmes.

## ***1.2 Terms of Reference (TOR)***

The overall goal of constructing dams is to stimulate development and promote social welfare. However traditional development efforts have led to the marginalisation of traditional societies and cultures culminating in widening poverty gaps because there has been little local community involvement in the development process. The new development paradigm emphasizes local community involvement and participation in decision-making at all sectors as a means of ensuring sustainable development.

The TOR as stated in the contract document, “Strategies for Community Participation in Dam Development”, of the Ghana Dams Forum is as follows:

1. analyse how community involvement has been addressed to date in Ghana, in relation to dams development, citing examples where relevant;
2. evaluate the lessons learned and the good and bad practices from these experiences;
3. establish a set criteria for determining or defining dam-affected communities;
4. specify the stage at which communities should be involved in dam development;
5. determine how communities should be involved in dam development;
6. specify key or major issues that should constitute the subject of interest to stakeholders; and,
7. establish modalities for fostering understanding between dam-affected communities and other stakeholders.

This report embodies relevant information relating to the TOR stated above.

## ***1.3 Methodology***

The methodology for the study involved review of relevant literature from a variety of sources including the GIDA, VRA, GWCL and Bui Secretariat. Internet search was also conducted to capture relevant information on the subject.

Face-to-face discussions were held with opinion leaders in some selected dam-affected communities including Adjena for Akosombo Hydro Power Project, Okyereko for Okyereko Irrigation Project (OIP) and Kwanyaku and Fawomanye for Kwanyako Water Supply Headworks. In view of time limitation discussions were restricted to opinion leaders (assemblymen/women). It was expected that these people would be abreast with general issues affecting their communities. The discussions centred on community experiences with dam

projects. Officials of the GIDA, GWC, VRA and Bui Secretariat were also interviewed. The list of individuals contacted is provided in Appendix 1.

## **2. Conceptual Definitions**

The term community is understood as a group of people with common needs or sharing common interests and living within a geographically defined area. Thus, the term community has both social and geographical dimensions. These two elements are important in defining a group of people that constitute a community.

Participation connotes the act of being involved in something. Habraken (1998) has given two meanings of participation. According to him, participation could mean assigning decisive roles to people who share in decision-making. The other meaning of participation is the situation where the opinions of other people are considered during decision-making but who do not get the chance to be active participants. Hamdi (1995) also defines community participation as “.....the process which professionals, families, community groups, government officials, and others get together to work something out, preferably in a formal or informal partnership” ([www.mcgill.ca/files/mchg/chapter2.pdf](http://www.mcgill.ca/files/mchg/chapter2.pdf)).

Community participation therefore means some form of involvement of people, with similar needs and goals, in decisions affecting their lives. But true and meaningful community participation goes beyond seeking opinions of people. It emphasises assigning decisive and specific roles to people, thus making them active participants in the entire project development process. In the context of dam development therefore, the first connotation of participation by Habraken (1998) is much stronger and more meaningful as it emphasises performance of specific tasks by participants who also take part in decision-making.

## **3. Models of community participation**

Two main models of community participation have been developed – top-down approach and bottom-up initiative. These two approaches differ on the basis of whether the implementing authority or the communities have the overall control over the programme.

The top-down approach segregates “experts” from the “ordinary citizens”. Decisions are made by government authorities and/or other agencies without seeking the consent of the people. In other words programmes are imposed on people and the expectations are that the people achieve

material benefits from the project. But this approach usually leads to dependency and lethargy among people.

The bottom-up initiative is essentially community-based. In this approach governments and communities work together in planning and decision-making with long lasting results. Projects are self-chosen by the people or they have an important role to play in project initiation. Bottom-up strategies emphasise that development and change should not be concentrated at each higher level of the settlement and social systems, but should focus on the needs of the lower echelons of these orders (Potter et al 1999). The approach is based on the use of indigenous resources, self-reliant and appropriate technology. Development from below needs to be closely related to specific sociocultural, historical and institutional conditions (Potter et al 1999). Thus the bottom-up approach is seen as a way of mobilising community resources, both human and material, to get things done.

#### **4. Defining Dam-affected communities**

It is well known that dam construction alters aquatic ecology and river hydrology upstream and downstream, affecting water quality, quantity and riverine ecosystems in general. Dam-affected people or communities can broadly be categorized into two; those directly affected by the damming and those who serve as host for displaced populations. The directly affected people comprise upstream populations and downstream riverine communities.

##### ***4.1 Directly Affected Communities***

###### ***4.1.1 Upstream Communities***

Upstream dam-affected groups are those who are compelled to vacate their homes and abandon their lands for the flood waters and the lake. Such lands are determined during technical design of the project and the affected people are expected to be relocated in resettlement communities constructed purposely to house them. They are also expected to be compensated for loss of land and property. But there have been several cases where resettlement structures and compensations have fallen short of expectations as noted by Diaw and Schimdt-Kallert (1990) in the case of the Volta River Project or never addressed as in the case of the Chixoy Dam in Guatemala (<http://www.uusc.org/news>).

#### *4.1.2 Downstream Communities*

Downstream dam-affected people are community groups below the dam wall and whose culture and way of live have greatly been influenced by floodplain riverine ecosystem. Their livelihoods depend on the resources of their natural surroundings but alteration of river hydrology as a result of damming disrupts their ways of life and creates problems for their livelihoods. According to Adams downstream impact of dams is complex, daunting and often remote from the dam site and usually not perceived by project planners (Adams, 2000). These adverse effects can be categorized as material losses, changes in water quality and damages to riverine ecology (CRES, 2001) in the form of reduction in fish populations, proliferation of aquatic plants and incidence of water borne diseases (VBRP, 1997). There are also intangible socio-cultural impact including culture, political identity, freedom, mobility and impacts of mobility (Adams, 2000).

There can be no rigid way of defining dam-affected downstream communities since the extent to which people depend on riverine conditions taper off with distance from the river channel. However, in order not to make the definition arbitrary the guiding principle for defining downstream communities could be the extent to which they depend on and are influenced by the riverine conditions. This could be achieved through intensive field survey and observations with the assistance of local community members.

#### **4.2 Indirectly Affected communities/Host communities**

The second category of dam-affected communities is those who play host to the dam displaced communities. Thus, they are not directly affected by the dam construction and river impoundment. Governments and project implementing agencies are compelled to acquire lands in the host communities in order to resettle displaced communities. The expectations are that these groups of people co-exist and for this reason there is the need to consider certain critical issues in the selection of host communities. Two major considerations for selecting host communities for displaced populations are:

- compatibility of the communities in terms of tradition, culture and livelihood styles;
- history of communal/ethnic rivalries ;

These issues are necessary for ensuring a smooth integration process, harmonious co-existence and minimizing potential conflicts between host communities and resettlers. It is also absolutely important for potential host communities to consent to the programme and discuss

dispassionately their expectations from the settlers. Once these conditions are satisfied, the negotiation processes for land acquisition and other conditions relating the resettlement could proceed. It is also important that adequate land parcels are secured for the resettlers to enable them support their livelihoods.

In dam development therefore, would-be dam-affected upstream and downstream communities as well as communities expected to host displaced populations constitute important stakeholders in dam development and should be active participants in the decision-making process.

## **5. Stages of participation**

Local community involvement and participation at all sectors of decision-making are necessary ingredients for ensuring sustainable development [AIESEC ( [www.aisec.org](http://www.aisec.org) )]. These issues are particularly relevant in making sure that traditional societies and cultures are not marginalised but rather made integral part of the development process and beneficiaries of development projects as well. The critical issue is how to achieve an acceptable framework and guidelines for defining various levels of community participation and ensuring true and effective community involvement.

Hamdi (1995) has come out with 5 stages of community participation in project implementation which include initiation, planning, design, implementation and maintenance. These can be represented by the model below (Fig. 1). Actors in the decision making process are the project implementing agency which is made up of technical experts, the government which is represented by its agencies and other recognised organisations, and the local communities. It is expected that all parties contribute to the decision-making process and collaborate to ensure that the project is successfully carried out or executed and effectively maintained. Project development begins with initiation which is represented at the base of the triangle, it goes through the planning, design and implementation stages before completion. Once this is achieved, the project has to be maintained in order to achieve the desired benefits.

The degree to which communities are involved in the stages of project development determine their level of participation in the project. Total participation therefore means that local people must be given the chance to participate at all levels of project development. True and meaningful community participation also involves partnership, delegation of power and citizen

control. This means that community members must have the chance to be active participants or play specific roles in project development and they should be empowered to help maintain the project.

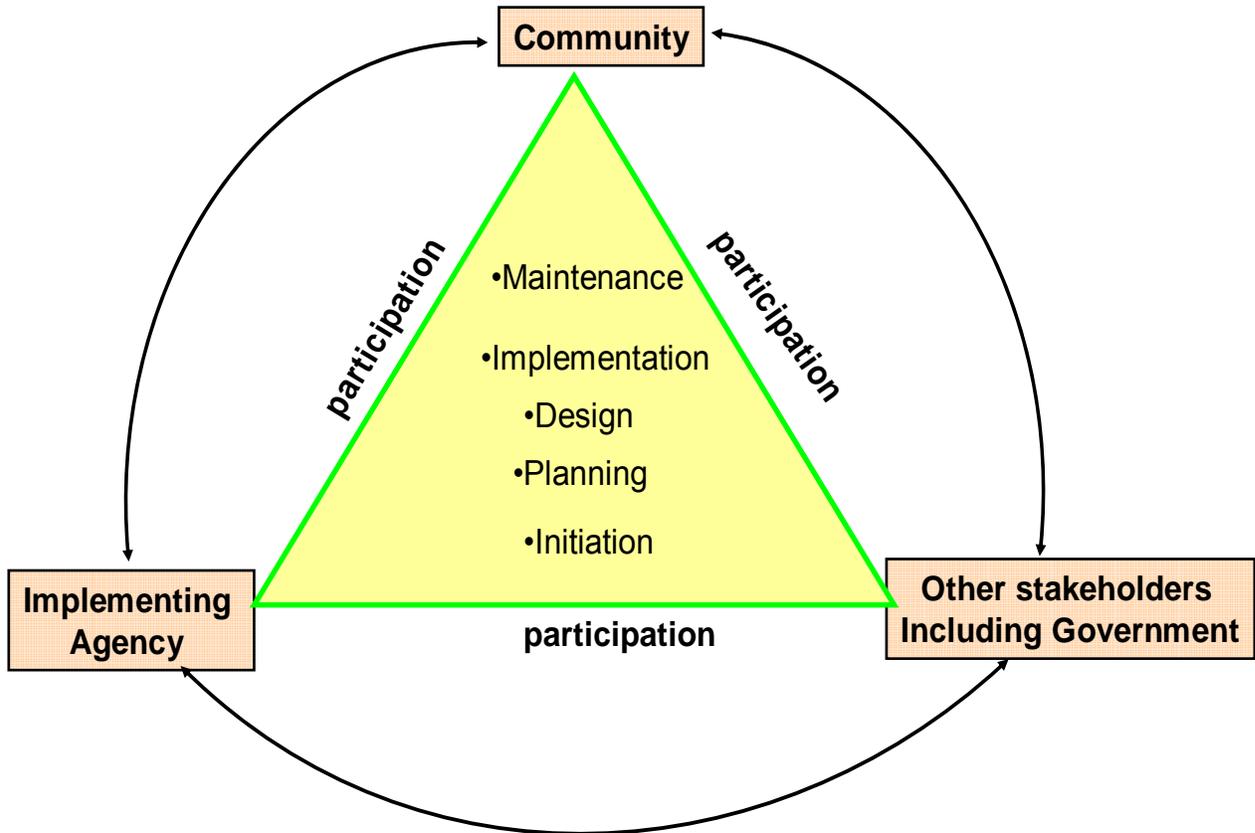


Fig. 1: Model of interactive processes of participation in project development

An important aspect of project initiation is effective sensitisation and education of local communities about the scope of the project and its implications for them. Information could yield very positive outcomes especially if it is undertaken through open fora involving the entire community members rather than being restricted to opinion leaders. Experts should appreciate that the informed consent of communities could pave the way for fruitful discussions on issues relating to resettlement, compensation and reparations in general.

Though project planning and design are technical, inputs from local community members could be very useful. Traditional and local knowledge have the capacity to enrich certain aspects of project design. “Local experts” could therefore be co-opted to serve on planning committees,

join some working groups and perform specific tasks relating to project design. Local experts could be described as individual community members who have exceptionally good knowledge about their own environment and in the management of local resources. Expert farmers and fishermen could certainly be of considerable help to environmental and social impact assessment (ESIA). For example, they are able to contribute detailed information on plant and animal species and management of local resources (UNEP, 2007).

Project implementation involves various tasks and experience shows that, at least, local populations are recruited to work as labourers on projects that affect them. But they need to be empowered, trained and provided with incentives to help manage projects.

## **6. Historical Experiences**

This section examines how communities have been involved in dam development in Ghana. Three case studies have been presented: the Akosombo hydropower dam, Okyereko Irrigation Project and Kwanyako Water Supply Scheme. The Bui Hydro-Power Dam project has also been examined. Summary of the case studies is represented in Appendix 2.

### **6.1. Case 1: Hydro Power Dam –The Akosombo dam**

The Akosombo hydropower dam (Volta River Project) provides a classic example of a large scale dam. The completion of the dam wall in 1964, resulted in the formation of the Volta lake which is reputed to be one of the biggest man-made lakes in the world. From the dam wall at Akosombo in the south, the lake stretches for a distance of about 450km to Yapei in the North. It covers a total area of about 8,500km<sup>2</sup>, about 3.5% of Ghana's territory. Its shoreline is 4,800km and it has a storage capacity of 152 billion m<sup>3</sup> at full supply level (Schimdt-Kallert, 1990; Kalitsi, 1999).

By the Volta River Development Act, 1961 (Act 46), the Government of Ghana established the Volta River Authority which was charged with the responsibility of generating and transmitting power from the dam and generating station at Akosombo for industrial and domestic uses in the country. The VRA was also expected to ensure the development of the lake as a route for the transportation of goods and passengers, and the planning of the Akosombo Township and the

lakeside area, that is, lands extending 1.6km (1 mile) off the lake shores at its maximum fill (Republic of Ghana, Volta River Development Act, 1961).

The impoundment of the river flooded and submerged the homes of about 80,000 people in 756 villages in the Volta Basin. As enshrined in Act 46 and expected of the VRA, this population was resettled in 52 newly created settlements along the newly formed lake ranging in size from 807 to 17 housing units (Kalitsi, 1970; Diaw and Schimdt-Kallert, 1990). These settlements were provided with access roads, markets and other social amenities including schools and water supply systems (Yeboah, 1999).

Diaw and Schimdt-Kallert, (1990) have indicated that “the entire Volta River Project – the damming of the river as well as resettlement of the lake basin population – was a grand exercise in ‘planning from above’”. They provide a dossier of individual experiences of indigenous community members who were resettled. Though the accounts and experiences varied in terms of contact with officialdom and officers of the Department of Social Welfare who undertook the social survey, evacuation and loss of property, there was general disappointment with the ‘core’ houses allocated to them irrespective of what one owned in his/her original home. Diaw and Schimdt-Kallert, (1990) also reported that many of the government promises never materialised especially adequate lands for farming. Yeboah (1999) has noted that the core house system has been one of the major criticism of the whole resettlement scheme and this was avoided under the Kpong Project.

Planners of the Volta River Project also hoped to promote inter-ethnic relations by bringing people of different ethnic stock together thereby promoting nation building. But ethnic conflict became more pronounced in some of the resettlement towns than when the groups lived in different locations (Diaw and Schimdt-Kallert, 1990).

The experiences raised in the preceding paragraphs were re-echoed by Mr. Michael Tsuiatorfe (immediate past assemblyman) and Francis Attipoe at New Adjena during field interview. According to them some indigenous community members even failed to present themselves during the social survey because they understood the exercise to be related to poll tax and as a result lost everything they owned. They also highlighted cases where family groups/units were separated and factions found themselves in different resettlement communities. Mr. Tsuiatorfe

explained that in an effort to reunite with their kins some family swapped their housing units without going through proper documentation. He further stated that the community members are not enthusiastic about contributing to the maintenance of the dam under the Adjena Gorge Afforestation Project by the VRA. This is in spite of the fact that the VRA is willing to support farmers to grow tree crops along the lake facing slopes which is regarded as a protected area (VBRP, 1998).

Though the adverse effects of the damming of the Volta River on downstream riverine communities were anticipated VRP [Volta River Project] (1956), the plight of the inhabitants are yet to be addressed after persistent agitations and official complaints at various fora (Geker, 1999; VBRP, 1996; Tsikata, 2005). In 1996 the VRA commissioned the Volta Basin Research Project (VBRP) of the University of Ghana to investigate the ecological and socio-economic impacts of the damming on the Lower Volta Basin (VBRP, 1996). VBRP recommended a number of mitigative action-oriented proposals (VBRP, 2002) most of which are yet to be addressed. Additionally VBRP proposed the establishment of Lower Volta Development Fund (VBRP, 2000) along the lines of the VRA Resettlement Trust Fund (Yeboah, 1999) in order to implement these programmes and for overall development of the Lower Volta Basin. Thus the demands of the affected communities have not been met.

The observations made in the preceding paragraphs indicate that though the general public and would-be affected communities were informed about the project, little effort was made to involve them in the decision-making process. There was little or no opportunity for the public to express their views on the project both at the national and local levels. Thus, planning was done at the top and there was minimal consultation between the government and implementation agencies on one hand and would-be affected communities on the other hand. Public consultations were not given serious attention.

With particular reference to resettlement the experiences indicate that information, education and communication (IEC) programmes did not achieve the desired results. The consent of the displaced were not sought as to where they would want to be resettled and which group of people the host communities would want to co-exist with. The overall situation is that the dam-affected communities had very little to do with the development of the project in terms of participation and this has partly contributed to the difficult conditions in the resettlement communities. In an attempt to address the plight of the resettlers, the VRA has set up the VRA

Resettlement Trust Fund to assist the communities (Yeboah, 1999). This action by the VRA satisfies the view expressed by one of the past VRA Chief Executive, Mr. E. L. Quartey, about “the need for the resettled communities to be further assisted to reorganise their occupations and indeed their livelihoods” (Quartey, 1969). There is however the need to examine the role of the resettlement communities in the management of the Fund and how it has been able to address the plight of the people and restore their hope.

A number of reasons could be assigned to the apparent lack or low level of participation by the affected communities in the Akosombo Hydro Power Project. The single most important reason is that, the political interest to get the project completed within a reasonable time frame overrode local community concerns. The government was desirous of completing the project to serve as a positive signal of its commitment to accelerated national industrialisation programme. Also, the level of political awareness, individual and community rights, and general development thinking at the time were such that people felt government programmes could not be easily subjected to serious scrutiny.

## **6.2. Case 2: Irrigation Dam –The Okyereko Irrigation Project**

The Okyereko Irrigation Project (OIP) began in August 1973 as part of Government’s policy of achieving food self- sufficiency under the grand programme of “operation feed yourself” (OFY). The dam is built on a tributary of the Ayensu River in the Central Region of Ghana, near Winneba. The project began by mobilising a local work force of volunteers. Land preparation for cultivation delayed until 1983 when the Japanese Government offered support. Actual field cultivation started in 1988 in the form of demonstration farms involving 68 farmers majority of whom worked as volunteers during the inception of the project (GIDA, 1983). A baseline survey was conducted in 1997 and three main problems of inadequate water supply, lack of agric machinery and lack of credit or capital were identified which had to be addressed. In 1999 a Japanese grant enabled the dam to be rehabilitated and more land prepared for cultivation. As a result an additional 63 farmers were added to the existing number.

Discussions with Mr. Albert Ntim and Mr. Stephen Asigbetse (Appendix 1), both GIDA officers at the project site, indicated that the scheme is essentially community-based. According to them, the community was only informed of the decision by government to establish the dam which was heartily embraced in view of low rainfall in the area. The officers lamented on the instrumental role and dynamism of the chief of the community during the initial phase of the project. They

indicated that though there has been no public acquisition of the project area nor any form of compensation paid to the people of the community, there is that sense of community ownership since they are the main beneficiaries of the project.

Over the period, management of the scheme has undergone series of modifications to ensure greater community/farmer involvement. Today the project is managed under the Joint Irrigation System Management (JISM) set up by GIDA and made up of representatives and executives of the Okyereko Rice and Vegetable Cooperative Society and GIDA Officers. The executives and sub-committee members of the cooperative bear the collective responsibility of ensuring the efficient operation and maintenance of the project. The cooperative organizes frequent meetings and it is mandatory for the project manager of the scheme to be present at those meetings. Farmers pay a rent which is determined by the price of rice on the market. This rent goes back to the land owners. Farmers also pay an irrigation service charge of one GHC100 per hectare which goes into an account managed by a joint committee. This is used in the operation and maintenance of the scheme. Government does not give any money to the scheme to cover running cost. The running cost of the entire project is from local resources.

Though OIP did not originate from within or initiated by the local community it enjoys a great deal of community interest. The project is a community-based problem solving initiative and there are incentives for greater community participation. The local community members who are the ultimate beneficiaries were part of the implementation process. The relatively small scale nature of the project, its essential characteristics and focus necessarily demanded greater community involvement. But it must be emphasised that the arrangements that have been put in place, JISM, and other training programmes have enhanced the capacity of the people to manage the project. These arrangements could serve as a model for not only achieving a sense of community ownership but also empowering local people to manage relatively small scale dam projects.

### **6.3. Case 3: Water Supply – The Kwanyako Water Supply System**

The Kwanyako Water Supply System (Kwanyanko Headworks Project) in the Central Region was started in 1964 to supply treated water for the surrounding communities of Kwanyako. The dam wall is at Kwanyako on the Ayensu River. The first rehabilitation works of the water treatment facility was undertaken in 1998. In 2005 the second rehabilitation works was initiated which is expected to increase the total water supply capacity of the system from 12,440m<sup>3</sup>/day to

35,000m<sup>3</sup>/day (GWCL, 2007). Currently the system serves 13 towns and 160 surrounding communities in 5 Districts in the Central Region.

In separate discussions with Mr. Baffour Ofofu Addei, District Manager of Ghana Water Company (GWCL) at Swedru and Mr. Ayirebi Acquah at the Kwanyako Headworks, they indicated that no group of people had to be relocated since the impoundment did not destroy any settlement. However farmlands were lost and arrangements were made with the Lands Valuation Board to assess damages and appropriate compensation to be paid. According to the Assembly member for Kwanyako, Madam Gladys Yamoah, the Chief of Kwanyako was very instrumental in convincing members of the royal family, the land owners, to give their consent to the project. Md. Yamoah intimated that compensation was paid to the land owners in 2007. The GWCL officers also indicated that the on-going rehabilitation works have affected some people and arrangements have been made to effect compensations. This was corroborated by Md. Yamoah and the immediate past Assemblyman for Gomoa Fawomanye, Mr. Ata Ninsin. According to Mr. Baffour, “land owners were involved in the decision-making process” with respect to the compensation packages. He said that complaints about compensation are referred to the company’s Head Office.

The discussions also revealed that local community members were actively involved during the construction of the dam, in terms of supply of unskilled labour. According to GWCL officer Addei, 70% of the workforce for the construction of the dam were from Kwanyako, the dam site. Community opinion leaders also nominated people to offer their labour during the rehabilitation works. Mad. Yamoah however expressed concern about the non-retention of community members by GWCL.

The GWCL officers and the community opinion leaders lamented on the corroborative efforts of all stakeholders in the maintenance of the dam. GWCL is directly in-charge of policing the dam and the headpond and they receive assistance from the entire community members. According to the chiefs and elders of the local communities they have sensitised their people on the importance of the dam in their lives. Mr. Baffour said that the chiefs and opinion leaders have given their blessings to legally deal with any member of the community who encroaches on the dam. He also indicated that an NGO based in Swedru undertakes annual tree-planting exercises along the banks of the headpond as its contribution to the maintenance of the dam.

As in the case of OIP the Kwanyako Water Supply System and the expansion programmes that have so far been undertaken are meant to address the felt needs of many communities. The project provides potable water to communities and this serves as adequate incentive for the people to collaborate with the operators of the system in policing the head waters of the dam.

#### **6.4. Case 4: The Bui Dam Development Project**

Construction of the Bui Hydro-Power Dam has started as part of government's long term plan to meet the energy requirements of the country. In an interview with the Project Director, Mr. G. D. Boateng, he indicated that construction is expected to begin in February 2008. Mr. Boateng stated that with respect to the initiation, design and planning of the project, there was no form of community participation since that is essentially technical. He however stated that the surrounding communities will be involved in the implementation stage through the provision of labour. He was however quick to add that no special priority will be given to the communities during recruitment for the construction work.

Mr. Boateng stated that because of the need to resettle some communities and the general environmental consequences of the damming, public fora have been held in various would-be affected communities. Again, as part of stakeholder consultations a National Public Forum was held in Accra for public comments on and contributions to the project. Mr. Boateng emphasized that the consultations culminated in a Resettlement Planning Framework (RPF) and Resettlement Action Plan as required by the World Bank standards and Ghana Government legal framework, and are expected to contribute to successful resettlement programme.

Specifically, the RPF seeks "to ensure that the Bui Dam Project improves people's economic opportunities and living conditions and minimizes adverse impacts while also providing remedial measures for those adverse impacts that are unavoidable, particularly among communities most directly affected by resettlement either through physical displacement or loss of economic resources" (ERM, 2007). A total population of 859 (168 households) in all seven villages will be inundated and have to be resettled (ERM, 2007). The RPF specifies stakeholders to include villagers in the project area, the media, environmental NGOs, social development NGOs, women's NGOs, Government departments and agencies and international donors. It sets out guidelines for selecting host sites for resettled communities, housing standards and infrastructure for resettlers, organisations to be involved in resettlement and compensation programmes, among

others. The RPF also emphasises community participation as fundamental to the successful implementation of the resettlement programme. In this respect Mr. Boateng noted that discussions are still going on in the communities and stakeholder consultations will continue after the construction of the dam and actual resettlement has been completed.

It is however important that the RPF takes into consideration concrete measures to empower would-be affected communities and build their capacities to adapt to their post-resettlement circumstances. There is also the need for the Bui Project to reflect in the development plans of the Wenchi and Bole Administrative Districts which are going to be directly affected by the project. This should fill the gap in the institutional planning process noted by Fink (2005).

## **7. Building Framework for Community Participation**

Stakeholder participation is key to improving decision-making and governance in the planning and management of dams and their alternatives (WCD, 2000). According to UNEP, “.....stakeholder participation is a process or series of actions, impacts and outcomes and not one single activity” (UNEP, 2007: 34). The ultimate aim of participation is to achieve better decisions, that is, decisions that are better informed, more sustainable, owned by stakeholders and implementable. The first step in participation is engaging in stakeholder analysis, which is, identifying key stakeholders (UNEP, 2007). In the case of dam development the stakeholders are more than those directly affected by the dam. They include government agencies, river basin management authorities, conservationists, NGOs, and many more.

The International Association for Public Participation (IAP2) has developed a model of “Spectrum of Public Participation” which describes how participation can be effective at five different levels (Fig. 2). With respect to community participation in dam development the first two levels on the spectrum, information and consultation, are essential in the pre-dam stage. The next two levels of involvement and collaboration could be associated with activities of actual dam construction or project implementation, whereas the final level on the spectrum, that is, empowerment relates to the post-damming stage which involves maintenance and management. These stages of community participation should however not be seen as discrete. They exist in continuum and constitute a series of interactive processes.

# IAP2 Spectrum of Public Participation



International Association  
for Public Participation

Increasing Level of Public Impact

	<b>Inform</b>	<b>Consult</b>	<b>Involve</b>	<b>Collaborate</b>	<b>Empower</b>
<b>Public participation goal</b>	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
<b>Promise to the public</b>	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
<b>Example techniques</b>	<ul style="list-style-type: none"> <li>▪ Fact sheets</li> <li>▪ Web sites</li> <li>▪ Open houses</li> </ul>	<ul style="list-style-type: none"> <li>▪ Public comment</li> <li>▪ Focus groups</li> <li>▪ Surveys</li> <li>▪ Public meetings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Workshops</li> <li>▪ Deliberative polling</li> </ul>	<ul style="list-style-type: none"> <li>▪ Citizen advisory committees</li> <li>▪ Consensus-building</li> <li>▪ Participatory decision-making</li> </ul>	<ul style="list-style-type: none"> <li>▪ Citizen juries</li> <li>▪ Ballots</li> <li>▪ Delegated decision</li> </ul>

Fig. 2: Spectrum for Public Participation (Source: [www.iap2.org](http://www.iap2.org))

### **7.1 *Pre-Damming Stage (Initiation, Planning & Design)***

The most critical stage of community participation is the pre-damming stage since this has the potential of shaping the direction of communities' involvement in the other stages of project development. The nature and purpose of the dam should influence the form, when and how communities should be involved in dam development. The scale of the dam and the primary purpose for which it is being constructed has varied ecological impacts as well as social and economic implications for would-be affected communities.

Community participation in initiation, planning and design of the project enables the community members to:

- understand the scope of the project;
- assess the implications of the project on their livelihoods;
- minimise risks and mitigate adverse impacts;
- provide alternative scenarios that address their felt needs; and,
- offer their consent to the project and make useful inputs to its implementation and maintenance.

Approaches that could be adopted to achieve the above objectives include sensitization, education, consultation and discussions at open-fora, seminars and workshops among others. Views of all community members including women should actively be sought and they should form part of the process of deciding the direction of the project.

A possible strategy for seeking community involvement is the creation of a platform for promoting and facilitating stakeholder discussions. UNEP (2007) suggests the establishment of a bi-partisan body to aid in the development of an effective framework for community participation in dam development. Would-be dam affected communities should be made members of this body and should constitute an integral part of the decision-making process. Avenues of communication channels should be created for addressing issues of interest. IAP2 mentions some of the options as public meetings, surveys, workshops and deliberate polling.

### **7.2 *Damming Stage (implementation/execution)***

Would-be affected communities constitute a labour pool for recruiting unskilled labour for the development of dam projects. This should not only help create employment and wealth for local communities but also create a sense of partnership between local communities and technical

experts as well as government agencies. This is particularly important in the case of irrigation dams where local community members are direct beneficiaries of the project. Under such projects the employed receive training, build their capacity and are empowered to manage the project.

UNEP (2007) recommends the setting up of a recruitment agency which should have the responsibility of finding people to meet the unskilled labour requirements of the implementing agency. UNEP further recommends that the core of the unskilled labour should be from the local people in whose community the project will be developed. Non-local unskilled labour should only be contracted to meet any excess demand for labour that cannot be provided by the local people. Where would-be affected community members possess such skilled labour as may be required by the implementing agency, they should be given preferential treatment in the recruitment process.

### **7.3 *Post Damming Stage (Maintenance/management)***

Good maintenance and effective management of dams are essential prerequisite for sustaining benefits from the project. Sustainability is better seen as a measure of relationship between the community and the project rather than an externally designed goal to be achieved (Sriskandarajah, 1991). The level of community involvement in the maintenance of dam project will necessarily vary in accordance with the nature and purpose of the dam. For example, community-based small scale irrigation dam would necessarily require greater community involvement in its maintenance and management compared to large scale hydro-power dam which require high level technical expertise.

Monitoring is an essential activity under maintenance which permits detection of problems so that remedial measures could be undertaken. Monitoring involves the conduct of investigations and this requires all stakeholders actively working together in some form of partnership and under some form of established institutional and legal framework. An independent body of technical experts should have the mandate to constantly conduct environmental studies on dam impacts especially in the case of large-scale dams. Studies should be designed to include direct community interaction with the grass-roots to get very fair and balanced findings. Thus, partnership and networking are essential at this level and should form the cornerstone of successful community development.

Table 1 summarises the framework for building community participation.

**OVERALL GOAL: Promoting community participation, building partnership and fostering long-term harmonious relationship to achieve maximum benefits and minimize risks from dams**

ISSUES TO CONSIDER	STAGE OF DAM DEVELOPMENT		
	PRE-DAM	DAM CONSTRUCTION	POST-DAM
Who are the Stakeholders?	<ul style="list-style-type: none"> <li>•Local community (chiefs, opinion leaders, land owners, farmers, fishermen, women etc.)</li> <li>•Government agencies</li> <li>•Implementing agency (technical experts)</li> <li>•NGOs   ▪CBOs   ▪Advocacy groups etc.</li> </ul>	<ul style="list-style-type: none"> <li>•Implementing agency (technical experts)</li> <li>•Govt. agencies</li> <li>•Local labourers</li> </ul>	<ul style="list-style-type: none"> <li>•Implementing agency</li> <li>•Govt. agencies</li> <li>•Local communities</li> <li>•Research institutions</li> </ul>
What Specific Objectives have to be achieved?	<ul style="list-style-type: none"> <li>•Promote understanding of scope of project</li> <li>•Assess impact of project on local livelihoods</li> <li>•Minimize risks &amp; provide alternative scenarios</li> <li>•Eliminate potential conflicts</li> </ul>	<ul style="list-style-type: none"> <li>•Create jobs</li> <li>•Generate wealth</li> <li>•Build capacity</li> <li>•Provide training</li> </ul>	<ul style="list-style-type: none"> <li>•Maximize benefits</li> <li>•Monitor conditions</li> <li>•Mitigate adverse impact</li> <li>•Manage resources</li> </ul>
What activities are to be undertaken?	<ul style="list-style-type: none"> <li>•Sensitization &amp; education of communities,</li> <li>•Discussions with stakeholders</li> <li>•Coordination of all activities</li> </ul>	<ul style="list-style-type: none"> <li>•Screening</li> <li>•Recruitment</li> <li>•Training</li> </ul>	<ul style="list-style-type: none"> <li>•conduct research</li> <li>•Implement specific strategies, projects &amp; programmes</li> </ul>
What Strategies can be adopted?	<ul style="list-style-type: none"> <li>•Create platform for discussions</li> <li>•Establish channels of communication</li> <li>•Organize public meetings, open fora, seminars</li> <li>•Establish bi-partisan coordinating body</li> </ul>	<ul style="list-style-type: none"> <li>•Establishment of recruitment agency</li> </ul>	<ul style="list-style-type: none"> <li>•Establish institutional &amp; legal framework</li> <li>•Body of technical experts</li> <li>•Community association</li> </ul>

Table 1: Framework for promoting Community Participation (Source: by Author)

## **8. Conclusion and Recommendations**

On the basis of the findings from the documents reviewed and observations made during field investigations it can be stated that community participation in dam development has, on the whole, not been clearly defined. The approach in the case of specific projects has largely been informal. Institutional framework for involving communities in dam development is rather diffused in the country. There are no set guidelines to define the scope of public participation in the Environmental Assessment and Regulation Legislation, LI 1652, 1999. As a result community concerns have not been adequately addressed resulting in lack of confidence in institutional structures. This is particularly the case with the Akosombo hydro-power dam under which most of the promises made to the affected communities have not been fulfilled.

Community participation has also taken varied forms with respect to the scale of the project. The case of the Akosombo dam does not depart from the observation made by WCD that “once a proposed dam project passed preliminary technical and economic feasibility tests and attracted interest from government or external financing agencies and political interests, the momentum behind the project often prevailed over further assessments” (WCD, 2002). By their very nature, small scale dams involving irrigation and water supply dams have, in a large measure, encouraged community participation and have made positive contribution to addressing the needs of the local populations and community groups.

However it is important that stakeholder consultations are deepened to ensure greater community involvement during initiation, planning, design, implementation and maintenance of dams in order to realise the full benefits of dam construction and effectively mitigate the adverse social, economic and ecological impacts. In this regard the following specific recommendations are made:

1. Members of communities to be affected by dam development should be adequately informed, sensitised and educated about the scope, benefits and implications of the project. Such discussions should be pursued through open community fora to enable ordinary community

members including women to freely express their views rather than restricting the exercise to opinion leaders.

2. Local communities should be regarded as equal partners and must be given adequate time to offer their consent to dam projects before their implementation.
3. Would be dam-affected populations and all potential resettlers should be given the chance to be active players in decision-making with regards to where they are to be relocated and who should serve as their host communities. A common platform should be created for potential resettlers, intended host communities, government agencies, project implementing agency and other interest groups to discuss, negotiate and agree on critical issues relating to construction of resettlement structures, land for farming, compensation, cultural norms and traditional loyalty. This should be initiated and facilitated by government. Cases where two or more separate communities have been brought together in one community as in the case of New Adjena and Amankwakrom under the Volta river Project should be avoided as this only results in conflicts and problems of diffused traditional allegiance.
4. There is the need for individuals and families to be satisfied with various forms and amount of compensation for loss of properties during dam construction and development. This can be achieved through properly negotiated agreements among property owners, project implementing agency and government representatives. All parties must strive to achieve consensus and agree on the nature and amount of compensation. An important prerequisite in this regard is absolute understanding of property ownership system or nature of property relationships among local community members. It is also recommended that there should be appropriate record keeping during social surveys on all issues relating to property and compensations paid so as to avoid disputes in the future.
5. Lands acquired to resettle displaced populations should be properly documented and agreed compensation involved duly paid to the host communities in order to guarantee the livelihoods of the resettlers and avoid conflicts in the future.
6. There is the need for project managers to demonstrate serious commitment to the adaptive mechanisms and coping strategies of displaced and resettled communities in order to promote their total welfare and sustained livelihood. In this regard some strategic support programmes as in of the case of the VRA Resettlement Trust Fund (Yeboah, 1999), could be instituted to address the needs of resettlers.

7. It is important to sustain and protect community interest in projects through regular consultations between project managers and representatives of affected communities or community associations. This could be achieved through the institution of open-door policy by project implementing agencies and managers of dam projects. It is also recommended that community-based activities could be designed as part of overall project maintenance scheme in order to generate and sustain community interest in the programme. There should also be established framework for communities to make inputs into assessment of post-dam conditions on continuous basis.
8. Finally, there is the need for the Environmental Protection Agency (EPA) in consultation with District Assemblies, to develop guidelines and standards that would define the scope and extent of community participation in dams development in accordance with the Environmental Assessment and Regulation Legislation (1999), LI 1652, and the Local Government Act 462.

## 9 Appendices

### Appendix 1: List of people interviewed

<b>N0.</b>	<b>Name</b>	<b>Designation</b>
1	Mr. Albert Ntim	GIDA Officer, OIP
2	Mr. Stephen Asigbetse	GIDA Officer, OIP
3	Mr. Ayirebi Acquah	Site Engineer, GWCL, Kwanyako Headworks
4	Mr. Baffour Ofosu Addei	District Manager, GWCL, Swedru
5	Micheal Botse-Baidoo	Planning Engineer, GWCL, Accra
6	Mad. Gladys Yamoah	Assemblymember , Kwanyako,
7	Mr. Ata Ninsin	Former Assemblyman, Gomoa Fawomanye,
8	Mr. Michael Tsuiatorfia	Former Assemblyman, New Ajena
9	Francis Attipoe	Resident, New Ajena
10	Mr. G. D. Boateng,	Project Director, Bui Dam Development Projec

**Appendix 2: Summary of level of community participation in four dam projects in Ghana**

Project name & profile	Nature of community participation at various stages of project development			Key Observations	Major Lessons
	Pre-dam	Construction	Post-dam		
<ul style="list-style-type: none"> <li>• AKOSOMBO HYDRO-POWER DAM (Volta River Project)</li> <li>- Completed in 1964</li> <li>- Size of Volta lake: 8,500km<sup>2</sup></li> <li>- 80,000 people in 756 villages resettled</li> <li>- in 52 resettlement communities</li> </ul>	<ul style="list-style-type: none"> <li>- Political and government interest overrode local community concerns</li> <li>- Communities were simply informed about the project and given promises</li> <li>- Minimal input from local community</li> </ul>	<ul style="list-style-type: none"> <li>- Local community members recruited as labourers</li> </ul>	<ul style="list-style-type: none"> <li>- Minimal community input in project maintenance</li> </ul>	<ul style="list-style-type: none"> <li>- Conditions of resettled population not encouraging</li> <li>- Downstream affected communities feel badly treated and short-changed</li> <li>- Issues of compensations and reparations are raised at the least opportunity</li> </ul>	<ul style="list-style-type: none"> <li>- Relocation and resettlement of would-be affected communities are delicate issues that necessarily require serious consultations involving the displaced, host communities, implementing agency, government &amp; other interest groups.</li> <li>- Community-based activities could be designed as part of overall project maintenance scheme in order to generate community interest in the programme</li> </ul>
<ul style="list-style-type: none"> <li>• OKYEREKO IRRIGATION PROJECT</li> <li>- Project started in 1973</li> <li>- Dam on a tributary of the Ayensu River at Okyereko</li> <li>- Preparation of land for cultivation began in 1988 with 68 farmers</li> <li>- Rehabilitation was undertaken in 1999 with a Japanese Grant</li> <li>- Total number of farmers with farming plots is 131</li> <li>- Major crops cultivated are rice and vegetables</li> </ul>	<ul style="list-style-type: none"> <li>- Community participation was intensive but largely informal</li> <li>- Local Chief played a crucial role in this respect</li> <li>- Community readily embraced the project idea due to low rainfall in the area</li> </ul>	<ul style="list-style-type: none"> <li>- Community provided the requisite labour for the dam construction</li> <li>- Community members worked on the project under the concept of food for work</li> <li>- Technical support was provided by the IDA</li> <li>- Community views were sort on the nature of canals and laterals that were being constructed.</li> </ul>	<ul style="list-style-type: none"> <li>- Total cost of running the project is borne by the community through the Irrigation Service Charge</li> <li>- The project is managed through the Joint Irrigation System Management (JISM) Farmers Cooperative and IDA officers</li> </ul>	<ul style="list-style-type: none"> <li>- Problem solving initiative, though did not originate from within</li> <li>- Project is community based and community members benefit directly from it</li> <li>- Community members have been trained and empowered to contribute to the operation and management of the project</li> </ul>	<ul style="list-style-type: none"> <li>- Training of local communities, capacity building and engendering a sense of community ownership are essential ingredients for empowering local people to operate and maintain projects.</li> </ul>

<ul style="list-style-type: none"> <li>• KWANYAKO WATER SUPPLY SYSTEM</li> <li>- Work began in 1964</li> <li>- Dam wall on Ayensu River at Kwanyako</li> <li>- Second rehabilitation started in 2005 to increase water supply capacity from 12440 cm<sup>3</sup> per day to 35,000cm<sup>3</sup> per day</li> </ul>	<ul style="list-style-type: none"> <li>- Consultations between GWCL and Community leaders was intensive</li> <li>- Chiefs and elders convinced landowners about the importance of the project</li> </ul>	<ul style="list-style-type: none"> <li>- Community members were contracted to work as labourers</li> <li>- 70% of work force during rehabilitation was from the local community</li> </ul>	<ul style="list-style-type: none"> <li>- Community members collaborate with GWCL to avoid encroachment on the dam and its catchment area</li> </ul>	<ul style="list-style-type: none"> <li>- Local Community benefit directly from project</li> </ul>	<p>Project operators enjoy the cooperation of local communities if projects are designed to address their felt needs.</p>
<ul style="list-style-type: none"> <li>• BUI HYDRO-POWER DAM</li> <li>Sod-cutting done by the President on 24<sup>th</sup> August, 2007</li> <li>Detailed Design Investigations still going on</li> <li>Actual construction expected to started in February</li> </ul>	<ul style="list-style-type: none"> <li>- Local level consultations &amp; discussions still ongoing</li> <li>- National Public Forum held for comments on and other inputs to the project</li> </ul>	<ul style="list-style-type: none"> <li>- Plans to recruit local people into the work force</li> </ul>	<ul style="list-style-type: none"> <li>- Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>- Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>- Not Applicable</li> </ul>

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