

# SUSTAINING THE MULTI-STAKEHOLDER DIALOGUE PROCESS FOR DAMS AND DEVELOPMENT

## FINAL REPORT - PHASE TWO (2)

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### **Attachments:**

- Attachment 1:           Proceedings-1st Ghana Dams Forum
- Attachment 2:           Proceedings-2nd Ghana Dams Forum

## List of Abbreviations

BDC	Bui Development Committee
BDS	Bui Development Secretariat
CAW	Centre for African Wetlands
CI	Conservation International
CO <sub>2</sub>	Carbon Dioxide
CSIR	Centre for Scientific and Industrial Research.
DDP	Dams and Development Project
E.G.G	Electricity Corporation of Ghana
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
GIDA	Ghana Irrigation Development Authority
GNCC	Ghana National Commission of Children
GTZ	German Technical Cooperation
GVP	GLOWA Volta Project
IFPRI	International Food Policy Research Institute
IPCC	Intergovernmental Panel on Climate Change
ISODEC	Integrated Social Development Center
ISSER	Institute of Statistical Social and Economic Research
IWMI	International Water Management Research Institute
KNUST	Kwame Nkrumah University of Science and Technology
MDA's	Ministries, Departments and Agencies
MOFA	Ministry of Food and Agriculture
NAVRART 52	National Association of the 52 VRA Resettlement Townships NCC
NCM	National Consultative Meeting
NGOs	Non-Governmental Organizations
SEA	Social and Environmental Assessment
UNEP	United Nations Environment Programme
VBRP	Volta Basin Research Project
VBRP	Volta Basin Research Project, University of Ghana
VRA	Volta River Authority
WRI	Water Research Institute
ZEF	Centre for Development Research, University of Bonn

# Chapter One

## 1.1 General Introduction and Background

Having embraced the core values and strategic priorities of the World Commission on Dams report, Ghana became a member of the Dams and Development Forum. This forum was one of the outcomes of Dams the UNEP-DDP (Dams and Development Project) a follow-on activity of the World Commission on Dams, Forum members are encouraged to “promote improved decision making planning and management of dams’ though promoting inclusive multi-stakeholder dialogue and sharing and exchanging knowledge on lessons learned from past experiences globally on dam related issues.

Ghana is one of the countries, rich in water resources, where construction of dams for hydropower, water supply and irrigation is a reality. The well know multipurpose Akosombo dam on the Volta river is much cited for its benefits as well as socio-economic and environmental trade-offs, because at the time EIA or SEA were not mandatory.

The lack of institutional structures and processes to holistically discuss and assess the need for dams, the different options possible to respond to energy water supply and irrigation needs and to address upstream and downstream negative impacts was clearly sensed after Akosombo. The fact that the new Bui dam construction is in the pipeline, makes it all the more urgent to set such a process in motion, especially in a developing country context where stakeholder information and participation through media is not as easy as elsewhere. Ghana’s recently published National Water policy supports stakeholder involvement in water resources development.

It was in this context that in the previous phase of the current project, the Volta Basin Development Foundation initiated in Ghana a national Dams and Development Dialogue via a National Consultative Meeting (NCM) of stakeholders and the setting up of a multi-stakeholder National Coordinating Committee (NCC). The committee comprises a 15 member team with its secretariat being assumed by the Volta Basin Development Foundation in close collaboration with the International Water Management Institute, who plays the role of facilitator and advisor to the process.

In phase 2 of the project the GTZ provided funding to achieve the goals and objectives in Box 1

**Goal**

To contribute towards well-informed decision-making and sustainable planning and management of dams in Ghana, and to provide consensual recommendations for integration into national planning and legislation through a multi-stakeholder dialogue process.

**Objectives**

- To set up a platform (the Ghana Forum for Dams and Development) with representation of all groups with a stake in dam development
- To support transparent information exchange and an active dialogue on important issues related to existing and planned dams
- To analyse issues and review and adapt guidelines and strategies developed by the UNEP-DDP relevant to these, for inclusion as needed into to the relevant decision making processes in Ghana

Box 1: Goals and Objectives of the 2<sup>nd</sup> Phase of the Project

## Chapter Two

### 2.1 Activities

#### 2.1.1 Setting up the process

The International Water Management Institute (IWMI) acting as a co-secretariat with the Volta Basin Development Foundation, for the National Dialogue on Dams and Development in Ghana; has facilitated a multi-stakeholder dialogue process in Ghana. The process has a secretariat, National Coordinating Committee ([Annex I](#)) and a sixty-member Forum. The Forum comprises representatives of Government Ministries, Decentralised Government Departments, Research Institutions, Opinion Leaders of Dam-affected Communities, Traditional Leaders, the Private Sectors and other stakeholders to discuss priority issues relating to dam construction and development in Ghana.

The Forum activities are coordinated by the National Coordinating Committee (NCC) comprising

- Volta River Authority
- Volta Basin Development Foundation
- Ministry of Energy
- Ministry of Water Resources, Works and Housing, Conservation International
- Water Resources Commission
- Water Research Institute
- Association of Ghana Industries
- Representative from the Proposed Bui Hydropower Area
- Representative from the Lower Volta Basin
- Volta Basin Research Project
- Ghana Journalists Association
- International Water Management Institute
- Manya Krobo District Assembly
- National Association of the 52 VRA Resettlement Townships

Preliminary activities led to the First Ghana Dams Forum held in September 2007 which was patronized by over ninety (90) stakeholders. At this Forum, working group sessions were held which gave the opportunity for stakeholders to discuss four key issues in detail. The issues were captured under the following broad themes:

- Research and Development;
- Institutional Collaboration,
- Compensation; and,
- Community involvement

and Terms of Reference ([Annex II](#)) for detailed studies were outlined at this meeting. These were then further refined and well known national experts were selected as Consultants by the NCC to conduct studies on these critical issues. The detailed issue papers were presented at the second Ghana Dams Forum.

In addition, during the first forum it was realized that the ‘Environmental and Social Impact Assessment’ (ESIA) of the ongoing Bui Hydropower project for which the final designs are being prepared; should be reviewed to identify potential impact indicators which could be taken up for further study. Accordingly a review was undertaken leading to identification of indicators and formulation of recommendations on future relevant studies. Additionally an immediate clearly felt limitation was the lack of scientific information on the potential impact of global climate changes on the Bui dam. An immediate study was therefore commissioned under the ZEF funded GLOWA Volta project. The project has been able to model future discharge scenarios that take climate change into account. These scenarios should be considered for the design and management of reservoirs within the basin and the outcomes of this study, were presented at the Forum, in a format understandable both to technical and non technical stakeholders.

### **2.1.2 National Coordination Committee (NCC) Meetings**

A series of coordinating committee meetings were held to steer the process and move it forward. The outcomes of these meetings are briefly presented below.

#### **First National Coordination Committee (NCC) Meeting**

The first NCC meeting was held on the 24<sup>th</sup> April, 2007 at the Novotel Hotel, Accra. The



meeting which was attended by 12 members was a familiarisation meeting, to introduce members of the NCC which was set up by the end of the first phase of the project.

The following objectives were achieved:

- Selection of a chairperson in the person of Mrs. Cecilia Amoah
- Confirmation of the International Water Management Institute (IWMI) as the host institution to act as the secretariat.
- Definition of the roles and responsibilities of the NCC and the Ghana Dams Forum and agreement on a code of conduct by all members present.
- A discussion on the composition of the Ghana Dams Forum and representation by stakeholders. The need for strong representation by the community and traditional structures was confirmed.

Minutes of the meeting are available in [Annex III](#).

### **Second National Coordination Committee (NCC) Meeting**

The second NCC meeting was held on the 22<sup>nd</sup> May, 2007 at the Novotel Hotel, Accra. The meeting was attended by 12 members of the NCC and one invited guest from University of Ghana, Legon.

During the meeting, the following was achieved:

- Issues on the Environmental and Social impact Management Plan and the Resettlement Planning Framework of the Bui Hydropower project were outlined for discussion in preparation for working group activities at the forthcoming Ghana Dams Forum meeting.
- A sub-committee was set up to plan for the Ghana Dams Forum. Their main assignment was to agree on a date and a venue for the first Ghana Dams Forum.
- Topics for presentation and methods and tools for facilitation during the forum were discussed.

Minutes of the meeting can be seen at [Annex IV](#).

### **Third National Coordination Committee (NCC) meeting**

The Third NCC meeting took place after the Ghana Dams Forum. The meeting was held on the 21st September, 2007 at the IWMI conference room, Accra, and was attended by 9

members and two invited persons.

This meeting achieved the following objectives:

- The committee reflected on the 1st Ghana Dams Forum and also confirmed the key issues identified by the working groups in the finalization of the Terms of Reference for identified consultants.
- The meeting agreed on the topics for the issues papers and identified four consultants to handle the papers.

Minutes of the meeting can be seen at [Annex V](#).

#### **Fourth National Coordination Committee (NCC) meeting**

The fourth NCC meeting was held on the 1st February, 2008 at IWMI Conference Room, Accra, and was attended by 13 members.

The following were discussed:

- Draft Issue Papers submitted by the Consultants and preparation towards the 2nd Ghana Dams Forum and Workshop on the Impact of Climate Change on the Bui Hydropower Project.
- The meeting was used to confirm the theme for the Forum and the list of stakeholders to be invited.
- It was agreed that a Press briefing would be held on the 18th of February, 2008 to throw more light and create awareness on the Second Ghana Dams to the media.

Minutes of the meeting can be seen at [Annex VI](#).

#### **Fifth National Coordination Committee (NCC) meeting**

The fifth and final NCC meeting for this phase of activities was held on the 4<sup>th</sup> March, 2008 at Novotel Hotel, Accra, and took place after the 2nd Ghana Dams Forum meeting. It was attended by 9 members and two representatives from GTZ.

The meeting achieved the following:

- Reflect on the Second Ghana Dams Forum
- Take stock of this phase of the project, review the achievements, and consider the way forward for the next phase.

- Representative of GTZ present at the meeting expressed their views and commended members of the NCC for the successful hosting of the Dams Forum Dams.

Minutes of the meeting can be seen at [Annex VII](#).

### **2.1.3 Preparation of Issue Papers**

A period of eleven months was used for the preparation of the issue papers. The consultants in the persons of Mr. B. D. Ofori and Mr. E.A. K. Kalitsi prepared the issues on the topic: Strategies for Community Participation in Dam Development and Issues on Compensation for Dam Affected Persons.

The last paper Research, Development and Capacity Building for the Sustainability of Dam Development with Special Reference to the Bui Dam Project was handled by IWMI.

The process of preparation of the issue papers involved two reviews by the NCC members. The issue papers were finalized after incorporation of suggestions/recommendations made by Forum members during the Second Ghana Dams Forum.

The study reports of the three issues are attached to the report.

### **2.1.4 Meetings of the Ghana Dams Forum**

In the course of the project the Forum met twice.

#### **First Ghana Dams Forum**

The first full forum meeting of the Ghana Dams Forum was a one day meeting which took place on Tuesday 4th September, 2007 at Fiesta Royale Hotel, Accra, Ghana. Proceedings of the workshops' programme can be seen at Attachment 1.

A total of 84 stakeholders attended the workshop. These comprised officials representing the membership categories of the Forum, namely Ministries, Departments and Agencies; Local Non-Governmental Organization and Media; National Operators and Private Sector; Communities and Traditional Structures; International Finance and Donor Agencies; Research Organizations and Local Level Institutions.

The Forum was structured into short plenary sessions and discussions. Three presentations were made on the following topics:

- Compensation and Resettlement Schemes of the Volta Hydropower Project (Akosombo and Kpong Dams) by Mr. Emmanuel Martey (Resettlement Officer, VRA)
- Community participation with special reference to the Bui Dam. By Mr. G. O. Boateng (Project Manager, Bui Development Secretariat)
- The Role of Research Development and Capacity Building for Sustainability of Dams in Ghana by Prof. Emmanuel Owusu-Bennoah, Director General of Centre for Scientific and Industrial Research (CSIR).

These topics had been selected by the NCC as being subjects of current interest in the light of the ongoing Bui development project.

During the afternoon session, working groups were set up on the following topics: Community Involvement; Institutions; Research and Development and Compensation to discuss and develop terms of reference for consultants to prepare the issue papers on the particular topic. It is to be noted that, eventually due to budget constraints only three of the topics were developed into full papers.

The Forum ended successfully with a communiqué as shown in Box 2 below:

**National Dialogue on Dams and Development in Ghana**

**1<sup>ST</sup> GHANA DAMS FORUM**

**COMMUNIQUÉ**

**Date: 4<sup>th</sup> September 2007**

**Venue: Fiesta Royale Hotel, Accra**

The development of a nation's water resources for hydroelectric power and other purposes which require large scale storage is one of the most important bases for economic development.

Yet, most large-scale dam projects despite their economic feasibility and viability can be crippled by certain ecological and human problems which most often are not adequately taken into account or deliberately disregarded during the planning and execution stages.

Subsequent to the Report from the World Commission on Dams and the outcomes of the UNEP-Dams and Development Project, it transpired that transparent multi-stakeholder dialogue processes could prepare the ground for better decision making pertaining to dams.

Therefore such a 60 member platform known as the Ghana Dams Forum was set up with proportionate representation from 6 institutional categories namely:

- Ministries, Departments and Agencies;
- National Operators and the Private Sector;
- Local Level Institutions;
- Dam Affected Communities and Traditional Structures;
- Local Non-Governmental organizations; and the
- Media and Research Organizations.

On the 4<sup>th</sup> day of September 2007 at the Fiesta Royal Hotel, Accra, Ghana,  
The Ghana Dams Forum met and resolved the following:

1. Institutional issues are critical to sustainable dam development and management. Therefore government is urged to provide the enabling environment (financial, technical, legislative, etc) for the relevant institution to perform.
2. Communities should be informed and sensitized about the project and be involved in every stage of the project planning, implementation, monitoring and maintenance.
3. Compensation must be given the needed attention it deserves (the Akosombo, Kpong must also be addressed). Sufficient amounts must be given. Organized resettlements must be properly done giving due consideration to all factors so that standards will be improved.
4. Given the background history of research funding in the country, it is important that adequate resources are made available to key research institutions to enable them to perform their required functions.

We of the Ghana Dams Forum urge the government to take these issues seriously and address them.

Box 2: Communiqué from the 1<sup>st</sup> Ghana Dams Forum

## **Second Ghana Dams Forum and Workshop on the Impact of Climate Change on the Bui Hydropower Project**

The second full forum meeting of the Ghana Dams Forum was a two day meeting which took place on 26<sup>th</sup> and 27<sup>th</sup> February, 2008 at M Plaza Hotel, Accra, Ghana. Proceedings of the workshops' programme can be seen at Attachment 2.

About 150 stakeholders attended the workshop over the two day period that was facilitated by an external facilitator.

The first day of the workshop saw the presentation by the consultants, of the three issue papers namely; Strategies for Community Participation in Dam Development; Issues on Compensation for Dam Affected Persons and Research, Development and Capacity Building for the Sustainability of Dam Development with Special Reference to the Bui Dam Project.

This was followed by discussions during which some very pertinent questions were raised (please see proceedings).

A working group session using adapted open space technology was organised after their presentations to give the opportunity for stakeholders to discuss the findings in detail and make recommendations which served as a guide to the consultants in finalizing their papers. The objectives of the working groups were:

1. Identification of priority issues and gaps in the discussed papers.
2. Identification of 2 actions for Government Immediate Action.
3. Identification of 2 actions for future Dams Forum

On the second day the ZEF funded GLOWA Volta project made presentations on aspects of climate change and water allocation in the Volta basin. The three presentations were:

1. Impact of environmental, climatic and socio-economic change on the water cycle of the Volta basin.
2. Climate change impacts on the water resources of the Volta river basin in Ghana.
3. The role of a Volta basin water allocation system for reservoir operation analysis.

Because of the great interest shown by the stakeholders an impromptu interactive round table was organised with the GLOWA and various other experts from the audience

participating. The questions posed indicated that the implications of climate change were still very poorly understood by the stakeholders. Communities were foremost in posing questions.

Two further outputs were the communiqué that was prepared (see box 3) and read at the closing of the workshop which would serve as a basis for discussions with government authorities at a later stage; and a policy brief on the impact of climate change on the Bui Dam (please see Policy Brief in [Annex XIII](#))

### **COMMUNIQUÉ FROM THE 2ND GHANA DAMS FORUM**

**We, members and participants of the Ghana Dams Forum, met at M Plaza Hotel, Accra on 26<sup>th</sup>-27<sup>th</sup> of February, 2008 for the 2nd Ghana Dams Forum and Workshop On The Impact Of Climate Change on the Bui Hydropower Project under the Theme: “Bringing Research Findings on Dams Closer to the People” and have resolved as follows:**

- that there is the need to adhere to and implement national social and environmental standards and set specific targets for monitoring purposes.
- that comprehensive options assessment is undertaken for future water and energy resources development.
- that modalities of community participation in project design, management, monitoring and evaluation be clearly defined, and that the roles and responsibilities of all stakeholders enunciated.
- pertaining to the Bui dam development project, we state:
  - that monitoring of project activities and implementation of recommendations (ESIA and EMP) be undertaken by a designated agency
  - undertake drought-flow analysis
  - assess the potential impact of climate change on the dam
  - assess the contribution of the dam on Green House Gases
- that detailed proposal for developing, implementation, monitoring and evaluation of hydropower and other water resource development projects be disseminated and made available (particularly at the local level) and strictly adhered to by relevant parties.

- that human capacities of all stakeholders should be strengthened with special emphasis on empowering communities which will lead to their active participation.
- that outstanding issues (e.g. compensation and royalties) relating to the existing dams should be urgently re-examined and addressed.
- that the living conditions of the people to be resettled should be enhanced through the provision of improved livelihoods and building of capacities for effective living
- that adequate funding for research and monitoring related to dams and development be provided from both government and private sources and researchers be motivated.
- that government should facilitate data management by tasking appropriate agencies for this purpose
- that appropriate avenues for dissemination of research findings be established.
- that relevant research findings and other pertinent information on dams development and planning should be made available to all stakeholders.

SIGNED

**Mrs. Cecilia Amoah**

Director, Volta Basin Research Project of the University of Ghana, Legon

**Chairperson, National Coordinating Committee of the Ghana Dams Dialogue**

**Mr. Minta A. Aboagye**

Director, Water of Ministry of the Ministry of Water Resources, Works and Housing

**Vice Chairman, National Coordinating Committee of the Ghana Dams Dialogue**

**Mr. Samuel Ayeh-Dartey**

Director, Finance and Administration of the Ministry of Energy

**Member, National Coordinating Committee of the Ghana Dams Dialogue**



Box 3: Communiqués from the 2<sup>nd</sup> Dams Forum

### 2.1.5 Awareness creation

#### Exchange programs at community level

During the project phase, as part of the effort to get first hand information about the scope, benefits and implications of resettlement; a four (4) day familiarization visit was organized for 10 members of the would-be affected communities of the Bui Hydropower project area to visit some of the resettlement communities of the Akosombo and Kpong Dam area. Activities that took place during the visit include a Press Conference and



Interviews, games, church service and get together.

A report prepared by the Chief of the Bui Traditional area is attached to this report (see [Annex IX](#)).

### **Press briefings**

Other awareness creation activities that took place during the project phase include two Press Briefings that were held to throw more light and create awareness on the two Dams  
Fora

## Chapter Three

### 3.1 Outputs and Impacts

The outputs and impacts derived from the second phase are as follows:

#### 3.1.1 Three Issue Papers

Three issue papers based on an inventory of issues of relevance to Ghana dams context and strategies to address the issues were presented during the Second Ghana Dams Forum. The presentations were structured to let members of the public (laymen) benefit the most. The papers were completed as per the Terms of Reference ([Annex II](#)) and are available to this report as attachment.

#### 3.1.2 First and Second Ghana Dams Fora

The project was able to bring together a broad-range of informed Ghanaian stakeholders to reflect and discuss dam related issues in a more integrated manner which considers social, environmental and economic dimensions of development to the planning and management of dams. A total of 84 and about 150 participants attended the first and second Fora respectively.

Participants of the Fora comprised representatives of Government Ministries; Decentralised Government Departments; Research Institutions; Opinion Leaders of Dam-affected Communities; Traditional Leaders; the private sectors; International Financial and Non-Financial Organizations and other stakeholders.

#### 3.1.3 A greater understanding and appreciation of the impact of climate

The Second Dams Forum was used to inform stakeholders on impact of climate change on the on the Black Volta Basin and the Bui Dam.

Looking at the ‘Environmental and Social Impact Assessment ‘(ESIA) of the Bui Hydropower project, it is clearly shown that, not much about the potential impact of global climate changes on the Bui dam is known.

The GLOWA Volta Project has been able to model future discharge scenarios that take climate change into account presented its findings during the Forum. The objective of this

exercise was to get a greater understanding and appreciation of the impact of climate change on hydropower dams to both scientists and non-scientists.

#### **3.1.4 A Policy Brief on Impact of climate change on the on the Black Volta Basin and the Bui Dam**

A short policy brief on the impacts of climate change on the on the Black Volta Basin and the Bui Dam was prepared by project scientists of the GLOWA Volta Project (GVP) of the Centre for Development Research (ZEF, University of Bonn). Two different studies that investigate the impact of global climate change on the water availability in the Ghanaian part of the Volta River basin served as the scientific background for this analysis. Both studies are based on different global climate change scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) that reflect different predictions for world wide CO<sub>2</sub> emissions (please see [Annex XIII](#)).

#### **3.1.5 Communiqué**

An action plan for the follow-up of recommendations on the issues discussed during the two fora were compiled through a communiqué (please see Boxes 2 and 3). The communiqué has been submitted to all the ministries that participated in the Forum. It is hoped that the communiqué will be useful during the dam decision making process in the country

The communiqué highlighted the following:

#### **3.1.6 High increase in participation recorded in 2nd Dams Forum**

The Second Dams Forum recorded about 150 participations as against 84 participants for the maiden Forum.

#### **3.1.7 Acceptance and high representation from Government Ministries**

The attendance at the Forum meetings, particularly the 2<sup>nd</sup> indicates that a great deal of interest has been generated by the dialogue. Following on the first dialogue, interest to participate in future ones was indicated by non participants at the first one. The press briefings have created a sense of familiarity and identification, and there is therefore a great impression of acceptance of the Ghana Dam Forum at a national and local level. This can be further confirmed with the attendance of five sector ministry heads. This

includes Ministry of Water Resources Works and Housing; Ministry of Local Government, Rural Development and Environment; Ministry of Lands and Forestry; Ministry of Finance & Economic Planning and lastly Ministry of Food and Agriculture.

In their speeches, all the Ministers stressed on the importance of the Forum in the decision making process in the country. Prof. Gorge Gyan-Baffour, Deputy Minister for Finance and Economic Planning stated that “It is my hope that experts on the issue of climate change participating in the dialogue will advice on how best we can handle this important issue. Early analysis will help governments to consider the implications of climate change for key sectors and evaluate proposals for action”.

The other minister applauded the NCC for organizing the Forum and Workshop and indicated their support for implementing the recommendation that comes out of the Forum.

### **3.1.8 Plans for the formation of National Association of Dam Affected Communities**

The National Association of 52 VRA Resettlement Township (NAVRAR/52) plans to mobilise VRA resettlement townships in the lower Basin and communities to be resettled in the wake of Bui project for common action towards the redress of the negative impacts of dams on the affected communities. This idea resulted from discussions during the Forum meetings and the exchange visit that took place.

# Annexes

## *Annex I: Members of the NCC*

### NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA

#### Members of the National Coordinating Committee

NAME	ORGANIZATION	POSITION
<b>Mr. Minta A. Aboagye</b>	Ministry of Water Resources Works and Housing	Director (Water)
<b>Mr. S. Ayeh-Dartey</b>	Ministry of Energy	Deputy Director
(F&A) <b>Mr. Isaac Asamoah</b>	Water Resources Commission	Water Res.
Engineer <b>Mr. K.D. Bright Siayor</b>		Volta River
Authority	Manager, Project	Management
<b>Mr. S.A. Appenteng</b>	Association of Ghana Industries	National Treasurer and Managing Director of Joissam, (Ghana) Limited
<b>Mr. David Sakitey Asare</b>	Manya Krobo District Assembly	District Chief Executive
<b>Torgbe Drayi II</b>	National Association of 52 Townships	Chairman
<b>Nene Tetteh Amoako IV</b>	Representative from the Lower Volta Basin	Chief of Natriku Resettlement Township
<b>Togbe Kpakpa</b>	Representative from the Proposed Bui Hydropower Area	Chief of Battor
<b>Mr. Richard Twum Koranteng</b>	Volta Basin Development Foundation	Executive Director
<b>Mr. Mike Anane</b>	Ghana Journalists Association	Member
<b>Mrs. Cecilia Amoah</b>	Volta Basin Research Project	Director
<b>Dr. K. Kankam-Yeboah</b>	Water Research Institute	Senior Research Scientist
<b>Dr. Liqa Raschid-Sally</b>	International Water Management Institute	Senior Researcher

## ***Annex II: Terms of Reference for the Issues Papers***

### **TERMS OF REFERENCE (TOR) FOR THE PREPARATION OF AN ISSUE PAPER FOR THE GHANA DAMS FORUM**

#### **TITLE: “COMPENSATIONAL ISSUES FOR DAM AFFECTED PEOPLE”**

##### **Services to be Provided:**

The Consultant shall undertake the following tasks and deliver a decision report which will address the following issues among others as appropriate:

- Identification of the various types and forms of Compensation available in Ghana. A fact sheet will be prepared for each form identified and the merits and demerits clearly outlined.
- Investigate the guiding principles underlying the compensations paid to affected persons in the past. The merits and demerits of the guiding principles shall be discussed and appropriate recommendations made for use in the future.
- Identification of the guiding principles underlying the determination of the amounts paid as compensation. An analysis of sample amounts shall be carried out to determine their adequacy or otherwise.
- Discuss the possible impact of a review of the various policies on payment of compensation on future development projects.
- Justify the need for a review of the types and forms of compensation available in Ghana.
- The consultant shall do a comprehensive review of existing documents (VRA resettlement trust fund and others as relevant) and legislation particularly relating to the compensation and resettlement measures undertaken for the Akosombo dam affected communities. He/she will furthermore undertake stakeholder consultations with selected affected groups or representative thereof as required and relevant, to validate his recommendations.

#### **TITLE: “STRATEGIES FOR COMMUNITY PARTICIPATION IN DAM DEVELOPMENT”**

##### **Services to be Provided**

The overall objective is to provide guidelines and framework for involving communities in dam development. The Consultant shall undertake the following tasks and deliver a decision report which will address the following issues, among others as appropriate.

- analyse how community involvement has been addressed to date in Ghana, in relation to dams development, citing examples where relevant.

- evaluate the lessons learned and the good and bad practices from these experiences
- establish a set criteria for determining or defining dam-affected communities;
- specify the stage at which communities should be involved in dam development;
- determine how communities should be involved in dam development;
- specify key or major issues that should constitute the subject of interest to stakeholders;
- establish modalities for fostering understanding between dam-affected communities and other stakeholders

The consultant shall do a comprehensive review of existing documents and will furthermore undertake stakeholder consultations with selected affected groups or representatives thereof, and other relevant key stakeholders as required, to validate his recommendations.

**TITLE: “RESEARCH, DEVELOPMENT AND CAPACITY BUILDING FOR THE SUSTAINABILITY OF DAM DEVELOPMENT WITH SPECIAL REFERENCE TO THE BUI DAM PROJECT”.**

**Services to be provided:**

The Consultant shall be required to do the following;

- Review the Bui Dam ESIA (available at erm.com) prepared by the Environmental Resources Management Consortium for weaknesses and identify potential research areas relevant to issues (i) – (vii) in annex. This analysis should:
  - Organize the information available in the ESIA
  - Provide a detailed analysis of the limitations of the study with respect to the specific area addressed
  - Identify the gaps and provide sufficient justification for the research areas identified for funding. and identify possible institutions to undertake the research activity so identified
  - Prioritise the research issues for further elaboration and develop outline TOR for studies/data collection for a baseline study on specific key parameters which could be used to monitor for change after construction of the dam.
- List the types of data that are available for use pertaining to the Water resources sector (e.g. rainfall, socio-economic/livelihood, ecology, hydrology and flows, health/water supply/sanitation etc) in what form and level of detail.
- Recommendations on new/other types of data to be collected and the objective.

- Identify research organisations, institutions and other agencies that collect data, their mandates and types of data collected, and how they can be strengthened.
- Identify some key capacity building needs in relation to other aspects of dams and development in Ghana e.g. dams safety, dam operation, environmental flow requirements etc.

The consultant is expected to have discussions with relevant key stakeholders as required, to validate his recommendations.

In all instances the consultant shall cite case studies to support or buttress key issues, and address other concerns as he sees as pertinent to the question.

The report shall comprise as a minimum:

- An executive summary;
- Introduction : which covers Background, Purpose, and Scope of report
- Brief section on methodology adopted: how information was collected and analysed
- Findings: this section can have subsections as the consultant sees fit.
- Conclusions and Recommendations.

### **Expertise required**

The consultant should have background in social science, anthropology and/or development studies and must be familiar with experiences relating to dam development. He/she should have good writing skills and must be conversant with making presentations using power point. He/She will be expected to make a presentation on the issue paper at the 2nd Ghana Dams Forum.



### ***Annex III: Minutes of First NCC Meeting***

#### NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA 1st National Coordinating Committee Meeting

#### MINUTES

Date: 24th April, 2007

Venue: Novotel Hotel

Time: 9.30am

#### **PRESENT**

- |                                       |   |
|---------------------------------------|---|
| • <b>Mr. Bob Alfa</b>                 | Water Resources Commission                |
| • <b>Mr. K.D. Bright Siayor</b>       | Volta River Authority                     |
| • <b>Mr. S.A. Appenteng</b>           | Association of Ghana Industries           |
| • <b>Mr. David Sakitey Asare</b>      | Manya Krobo District Assembly             |
| • <b>Togbe Adom Drayi II</b>          | NAVRAT 52                                 |
| • <b>Nene Tetteh Amoako IV</b>        | Representative from the Lower Volta Basin |
| • <b>Togbe Emmanuel Agbesi Kpakpa</b> | Bui Hydro power Area                      |
| • <b>Mr. Richard Twum Koranteng</b>   | Volta Basin Development Foundation        |
| • <b>Mr. Mike Anane</b>               | Ghana Journalists Association             |
| • <b>Mrs. Cecilia Amoah</b>           | Volta Basin Research Project              |
| • <b>Dr. E.O. Bekoe</b>               | Water Research Institute                  |
| • <b>Dr. Liqa Raschid-Sally</b>       | International Water Management            |

#### **MEMBERS EXCUSED**

- |                               |   |
|-------------------------------|---|
| • <b>Mr. Minta A. Aboagye</b> | Min. of Water Resources Works & Housing |
| • <b>Mr. S. Ayeh-Dartey</b>   | Ministry of Energy                      |

#### **AGENDA**

1. Introduction of NCC Representatives
2. Setting up of NCC
  - (i) Confirmation of Secretariat
  - (ii) Selection of the Chair
3. Presentation of Proposed Phase Two (2) Plan of Activities
4. Roles and Responsibilities of NCC

## 5. Ghana Dams Forum

- (i) Selection of Stakeholder Representatives
- (ii) Roles and Responsibilities of Stakeholder Groups
- (iii) Preliminary Brainstorming of Topics for the Forum

The meeting commenced with the self-introduction of the various members at exactly 10:00 am with 10 members out of the expected fifteen members present.

Committee member Mr. Richard Koranteng Twum (VBDF) presented a brief background of activities leading to the formation of the National Coordinating Committee. He traced the activities from the Steering Committee, Task Force and the National Consultative Meeting where the Coordinating Committee was formed. He briefed the members of the visit of the GTZ team in January 2007 and the discussions held with them which led to the inclusion of two very important stakeholders into the Coordinating Committee; International Water Management Institute and a representative from the Bui Dam area. He then led the discussion to the hosting of the Secretariat and the leadership of the Coordinating Committee.

### **Discussion on hosting of the Secretariat:**

Mr. Koranteng informed the members that IWMI has been approached by GTZ to host the Secretariat because of its experience in the global dams debate and also been seen as neutral in national issues. More so, IWMI meets the international accounting principles of GTZ our potential funding partners. However, VBDF will be the national partner in implementing the project. Mrs. Cecilia Amoah of the VBRP, impressed upon the NCC members not to use the NCC meeting as a platform to debate that issue since it was already agreed that the VBDF would be the national partner running the secretariat, and it seems to be playing that role.

Dr. Liqa responded that the basis for hosting the secretariat was the close collaboration between the VBDF and the IWMI with sharing of roles and responsibilities between the two. Technical assistance and professional services were being provided by IWMI to the national partner VBDF who would be responsible for the routine running of the secretariat activities with the concordance of the Chair of the committee.

**Chairing of the committee:**

The discussion then moved to the chairing of the committee. Dr. Liqa suggested that since the NCC has taken a national dimension, it would be suitable that one of the MDA's should be given the opportunity to chair the committee in order to obtain government commitment to the process and to make it easy for the committee to solicit help from the various government stakeholders. A vice chair from the non-government or private sector would ensure balance.

Dr. Bekoe however opined that though it could be advantageous having a governmental figure at the helm of the committee their numerous schedules at times makes it quite difficult getting in touch with them when ever they are urgently needed.

Mr. S.A. Appenteng also suggested that a private sector representative should rather chair the committee to be assisted by a governmental representative.

Upon the above-mentioned debates, Togbe Drayi, did not hesitate to nominate Mrs. Cecilia Amoah, the Director of the VBRP to chair the committee.

The nomination was seconded unanimously. Mrs. Cecilia Amoah accepted her nomination and thanked the entire committee members for the confidence they have reposed in her whilst asking for their support to help her succeed in her office as a Chairperson.

**Presentation of Phase 2 of the proposal:**

Dr. Liqa made a power-point presentation of the Phase 2 proposal prepared jointly by VBDF and IWMI and submitted to the GTZ; and invited comments from the committee for improving the content of the proposal.

In response to a question by Dr. Emanuel Bekoe, about the time frame, she answered that the proposal had a set of activities with a one year time frame but the process of dialogue could go on as long as it was needed.

Dr. Emmanuel Bekoe the raised an important point by saying that with the signing of the agreement on the construction of the Bui Dam, it would have been very helpful if the committee could furnish the government with some experiences and advice for the

various inputs that will be concluded in the proposal through dialogues with the government before the implementation of the project.

Dr. Liqa informed the committee members about the availability of the environmental impact assessment report on the Bui Dam. Mr Mike Anane requested that copies of the executive summary be made available to the committee members for close study. This call was supported by the Chairman, Mrs. Cecilia Amoah who said a closer look at the E.I.A could help patch up loopholes that might occur in the E.I.A.

It was then unanimously agreed that Dr. Emmanuel Bekoe and Mr. Mike Anane should study the E.I.A and then give recommendations to the N.C.C. during the next meeting. They agreed upon a 2 week time frame for this activity. Mrs. Cecilia Amoah reminded the Committee members of the need to brace themselves up for thorough discussion of matters that might arise out of the E.I.A and also to utilise the internet for discussions and for sharing information before the meeting.

Nomenclature for the Forum: To project a national dimension to the process, it was originally proposed to be called Ghana Dams and Development Forum but upon reflection the entire committee agreed that Dams were the central issue and should be highlighted accordingly. It was unanimously agreed that it should be called Ghana Dams Forum.

The roles of the National Coordinating Committee were outlined as below, and agreed upon;

1. Provide advice to stakeholder including government
2. Ensure that the multi-stokers consultative character is maintained
3. Convene meetings of the Ghana Dams Forum
4. Provide reports and information to the Ghana Dams Forum members
5. Forge links with the Global Dams Forum and related organizations.

#### **Stakeholders for the Ghana Dams Forum:**

The stakeholder categories, the composition of the Forum and the potential representatives were presented for discussion. The committee, debated as to whether MOFA-GIDA should be under MDA's or as a national operator. Mr. Appenteng however suggested that GIDA should not be separated from MOFA but the committee should rather wait and invite the consultant Dr Gordon who prepared the report to the next

meeting to explain the rationale before merging MOFA and GIDA. Other changes suggested were that the Ministry of Fisheries be added to the MDA's whilst GNCC be replaced by E.C.G as a national operator.

On the reps for the community and traditional structures, it was agreed that the secretariat should research on the various Dam sites in order to select appropriate District for representation.

On local NGO's and media, VBDF, CI league of environmental formalities and ISODEC were selected for representation. And on research organisations, CAW, CSIR-WRI, IWMI, KNUST, ISSER, VBRP were also selected for representation.

**Preliminary brainstorming for Forum activities:**

On the preliminary brainstorming of activities for the Forum, the Chairperson, Mrs. Cecilia Amoah, suggested that each member of the committee should reflect upon this in preparation for the next meeting.

It was unanimously agreed that the next meeting should be convened on 22nd May, 2007.

**Tenure of chairperson:**

Mrs. Cecilia Amoah wanted to know the tenure of office of Chair and the Secretariat. Mr. Richard Koranteng Twum responded that as the activities of phase 2 had a one year duration, it could be understood that both the committee and the chair would function for a one-year period initially, to be reviewed depending on future developments.

The Chairperson requested the Secretariat to make telephone numbers of all members available for easy communication and contacts. She then thanked all the committee members for their corporation.

The meeting was adjourned at 1:00 pm with a prayer by Mr. S.A. Appenteng.

## **Annex IV: Minutes of Second NCC Meeting**

### NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA

#### 2nd National Coordinating Committee Meeting

#### MINUTES

**Date:** 22<sup>nd</sup> May, 2007

**Venue:** Novotel Hotel

**Time:** 9.30am

#### CO-CHAIRMEN

Mr. Minta A. Aboagye

Mr. S. Ayeh-Datey

#### PRESENT

- **Togbe Emmanuel Agbesi Kpakpa** Proposed Bui Hydro power Area
- **Dr. E.O. Bekoe** Water Research Institute
- **Dr. Liqa Raschid-Sally** International Water Management
- **Mr. Bob Alfa** Water Resources Commission
- **Prof. Chris Gordon** Legon (**Invited**)
- **Nene Tetteh Amoako IV** Representative from the Lower Volta Basin
- **Mr. Richard Twum Koranteng** Volta Basin Development Foundation
- **Mr. S.A. Appenteng** Association of Ghana Industries
- **Mr. Isaac Asamoah** Water Resources Commission
- **Mr. S. Ayeh-Datey** Ministry of Energy
- **Togbe Adom Drayi II** NAVRAT 52
- **Mr. K.D. Bright Siayor** Volta River Authority
- **Mr. Minta A. Aboagye** Min. of Water Resource, Works & Housing
- **Mr. David Sakitey Asare** Manya Krobo District Assembly

#### MEMBERS EXCUSED

- **Mr. Mike Anane** Ghana Journalists Association
- **Mrs. Cecilia Amoah** Volta Basin Research Project

## AGENDA

1. Confirmation of the minutes of the 1<sup>st</sup> NCC Meeting
2. Update on the Bui ESIA Review
3. Discussion of the Themes/Topics for the Forum
4. Ghana Dams Forum
  - (iv) Provisional List of Stakeholders
  - (v) Date and Venue
  - (vi) Methods and tools for facilitation
  - (vii) Topics for presentation and presenters
5. A.O.B.

## LUNCH

ITEMS	ISSUES	RESPONSIBILITIES/ STRATAGY	ACTORS
<b>(1) Confirmation of minutes of the 1<sup>st</sup> NCC meeting</b>	<ul style="list-style-type: none"> <li>• The pages should be numbered properly and the content should not be narrative.</li> <li>• Spelling of names of members and institutions should be correct.</li> <li>• Motion was moved for the acceptance of the minutes.</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat</li> <li>• Dr. Liqa Raschid-Sally moved for the acceptance of the minutes and was seconded by Mr. Samuel Appenteng</li> </ul>	
<b>(2) Update on the Bui Environmental and Social Impact Assessment Review.</b>	<ul style="list-style-type: none"> <li>• The Executive summary of the report contained all the relevant issues for consideration.</li> <li>• The issues on the environmental and social impact management plan and the resettlement planning framework was outlined for discussion.</li> </ul>	<ul style="list-style-type: none"> <li>• Dr. Emmanuel Bekoe presented the report of the three (3) man committee.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Recommendation on the Ghana Dams Forum should be factored into the implementation of the Bui project</li> <li>• Ghana Dams Forum should develop a very close working relationship with the Bui Development Secretariat.</li> <li>• Recommendation in the report should be enforced.</li> <li>• Include Bui Secretariat under national operators</li> </ul>	<ul style="list-style-type: none"> <li>• The Minister of Energy will be briefed on the activities of the Forum.</li> <li>• The Forum to be properly recognized and institutionalized</li> <li>• Sub committee should be formed to liaise between the Forum and the Secretariat</li> <li>• The head of the secretariat should be invited to the meetings of the NCC.</li> <li>• Ghana Dams forum should monitor all activities of the project.</li> </ul>	Mr. S. Ayeh Datey
<b>(3) Discussion of themes / topics for the Ghana Dams Forum.</b>	<ul style="list-style-type: none"> <li>• After brainstorming by the NCC members, about 40 suggestions were made.</li> <li>• The suggestions were categorised into six (6) main topics or themes : <ul style="list-style-type: none"> <li>(i) compensation and resettlement</li> <li>(ii) community involvement</li> <li>(iii) capacity building</li> <li>(iv) research and development .</li> <li>(v) institutions</li> <li>(vi) socio-cultural issues</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A sub committee set up to classify and prioritize the suggestions for review by members of NCC</li> </ul>	Dr. Liqa Raschid-Sally Dr. E.O. Bekoe Dr. Mike Anane Prof. Chris Gordon
<b>(4) Provisional list stakeholders for the Ghana Dams Forum</b>	<ul style="list-style-type: none"> <li>• Agreed to keep the number of stakeholders in the Forum to 60</li> <li>• The status of the Ghana Irrigation Development Authority was clarified under the category of national operators.</li> <li>• The Brong Ahafo Regional Co-ordinating Council should be added to the list because of the Bui project.</li> <li>• Identifiable community and traditional representation should be given priority.</li> <li>• A representative from either the</li> </ul>	<ul style="list-style-type: none"> <li>• The National Association of 52 Volta Resettlement Township should be allotted more spaces since it represented most of the affected communities.</li> <li>• Final list should be</li> </ul>	-  Secretariat



	<p>North or South Tongu District Assembly should be added to the list.</p> <ul style="list-style-type: none"> <li>Care should be taken not to compromise efficiency with the number</li> </ul>	<p>prepared and circulated to members</p>	
<b>(5) Date and venue of the forum</b>	<ul style="list-style-type: none"> <li>It was agreed that the forum should be held in the last week of July but not on the 24th as some of the members will be engaged with national assignments.</li> <li>In the selection of the venue the current vehicular traffic in Accra should be taken into consideration and also the services offered.</li> </ul>	<ul style="list-style-type: none"> <li>The secretariat should liaise with members to fix the actual date within the time frame.</li> <li>A sub committee was set up to come out with the agenda, date and venue.</li> </ul>	<p><b>Secretariat</b></p> <p>Dr. Liqa Raschid-Sally Mr. S.A. Appenteng Miss. Cecilia Amoah Secretariat</p>
<b>(6) AOB (Publicity)</b>	<ul style="list-style-type: none"> <li>A suggestion was made that there was the need to sell the ideas of the Forum to the general public.</li> <li>A press briefing</li> </ul>	<ul style="list-style-type: none"> <li>Press releases</li> <li>Radio and TV talks</li> <li>National Media Commission should be approached to help the Forum partner one media house</li> <li>Some selected media houses should be approached to cover the activities of the Forum.</li> </ul>	<p><b>Secretariat</b></p>
<b>(7) Field visits</b>	<ul style="list-style-type: none"> <li>There was the need to organize field visits to the resettlement township and the Bui area.</li> </ul>	<ul style="list-style-type: none"> <li>Funding from the project and local sources should be utilized for this purpose.</li> <li>One or more of the NCC meetings could take place in the communities.</li> <li>Exchange of visits between the settlement township and the Bui area.</li> </ul>	<p><b>Secretariat</b></p>

## ***Annex V: Minutes of Third NCC Meeting***

### **NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA**

#### **3rd National Coordinating Committee Meeting**

#### **MINUTES**

**Date:** 21<sup>st</sup> September, 2007

**Venue:** I. W. M. I.

**Time:** 10:00am

#### **CHAIRPERSON**

Mrs. Cecilia Amoah

#### **PRESENT**

- |                                     |   |
|-------------------------------------|---|
| • <b>Dr. E.O. Bekoe</b>             | Water Research Institute                  |
| • <b>Mr. B. D. Ofori</b>            | Legon ( <b>Invited</b> )                  |
| • <b>Mr. Isaac Asamoah</b>          | Water Resources Commission                |
| • <b>Prof. George Odametten</b>     | Legon ( <b>Invited</b> )                  |
| • <b>Nene Tetteh Amoako IV</b>      | Representative from the Lower Volta Basin |
| • <b>Mr. Richard Twum Koranteng</b> | Volta Basin Development Foundation        |
| • <b>Mr. S.A. Appenteng</b>         | Association of Ghana Industries           |
| • <b>Mr. K.D. Bright Siayor</b>     | Volta River Authority                     |
| • <b>Mr. Minta A. Aboagye</b>       | Ministry of Water Res., Works and Housing |
| • <b>Mr. Mike Anane</b>             | League of Env. Journalists                |
| • <b>Mrs. Cecilia Amoah</b>         | Volta Basin Research Project              |

#### **MEMBERS EXCUSED**

- |                                   |  |
|-----------------------------------|--|
| • <b>Mr. Samuel Ayer- Dateh</b>   | Ministry of Energy                       |
| • <b>Dr. Liqa Raschid -Sally</b>  | International Water Management Institute |
| • <b>Torgbe Adom Drayi II</b>     | NAVRAT 52                                |
| • <b>Torgbe Emmanuel Kpapkpa</b>  | Bui Rep                                  |
| • <b>Mr. David Asare Sackitey</b> | Manya Krobo District Assembly            |

## AGENDA

1. Confirmation of the minutes of the 2nd NCC Meeting
2. Reflections, Lessons and Actions Point from the 1<sup>st</sup> Ghana Dams Forum
3. Confirmation of critical issues identified by the working groups
4. Identification of potential consultants
5. Preparation of draft Terms of Reference
6. Reviewing of Time frame and fees for the issue papers
7. A.O.B.

### MINUTES OF THE THIRD NCC MEETING

ITEMS	ISSUES	RESPONSIBILITIES/ STRATAGY	ACTORS
(1) Confirmation of minutes of the 2nd NCC meeting	<ul style="list-style-type: none"> <li>• The pages should be numbered properly and the content should not be narrative.</li> <li>• Spelling of names of members and institutions should be correct.</li> <li>• Motion was moved for the acceptance of the minutes.</li> </ul>	<p>Secretariat</p> <p>Mr. Isaac Asamoah moved for the acceptance of the minutes and was seconded by Mr. Bright Siayor</p>	Secretariat
(2) Reflections, lessons and actions points from the First Ghana Dams Forum	<ul style="list-style-type: none"> <li>• Members do not have enough time to reflect on the First Ghana Dams Forum</li> </ul>	<p>Comments on the Forum should be sent to the Secretariat for compilation and circulation.</p>	
(3) Confirmation of critical issues identified by the working groups at the Forum.	<ul style="list-style-type: none"> <li>• Most of the issues have been captured.</li> <li>• There was the need to streamline some of the issues like the nature and type of compensation and also points like definition and</li> </ul>	<p>Sheets of paper outlining the critical issues were given out to NCC members</p> <p>These concerns were raised by Dr. Bekoe, Mr. Isaac Asamoah, and Prof. Odametten.</p>	

	identification need to be elaborated		
(4) Identification of potential consultants	<ul style="list-style-type: none"> <li>• After brainstorming on the potential consultants, it was agreed based on the draft Terms of Reference and the fee to be paid to assign the four issue papers on Research and Development, Compensation, Community Involvement and Institution to Messer's Seth Larmie Kalitsi, Ofori and Prof. Odametten respectively.</li> <li>• There was the need to seek for the consent of the consultants identified</li> </ul>	<p>Mrs. Cecilia Amoah led the discussion on the identification of potential consultants and asked members to deal with the issue case by case.</p> <p>Letters should be written to the consultants informing them of the decision of the NCC and requesting for their CVs.</p>	
(5) Preparation of draft Terms of Reference	<p>➤ There was the need to reframe the topics for the issue papers</p> <p>Four sub-groups should be formed to work on the issue papers in detail</p>	<p>- The Four topics agreed on after brainstorming are;</p> <ol style="list-style-type: none"> <li>a. Identification of gaps in the ESIA of the Bui Hydropower Project,</li> <li>b. Institutional strengthening and collaboration in the development of dams in Ghana,</li> <li>c. Compensational issues for dam affected people and</li> <li>d. Strategies for Community participation in dam development.</li> </ol> <p>- The sub-groups formed to work on the Terms of Reference for the issue papers are; Mr. Minta and Dr. Bekoe (Research), Prof. Odametten and Mr. Anane (Institution), Mr. Siayor and Nene Amoako (Compensation) and Mr. Ofori and Asamoah (Community Involvement).</p>	Secretariat
(1) Reviewing of time frame and fees for the issue papers	<p>➤ The contents of the Terms of Reference will determine the time for the completion of the assignment and amount to be paid to the consultants for their services.</p>	<p>- There was a suggestion that the consultants should be paid well for a good job.</p> <p>- The sub-groups working on the Terms of Reference should determine the time frame taking into consideration the overall project completion time</p>	

		which is March, 2008.	
(2) A. O. B.	<ul style="list-style-type: none"> <li>➤ There was the need to invite other relevant stakeholder organizations to NCC meetings as observers.</li> <li>➤ There was the need to coordinate the activities of the various sub-groups to ensure timely delivery of the Terms of Reference.</li> </ul>	<ul style="list-style-type: none"> <li>- The Bui Development Secretariat should be invited to subsequent NCC meetings.</li> <li>- Mr. Appenteng should liaise with the secretariat to coordinate this activity.</li> </ul>	Secretariat

## ***Annex VI: Minutes of Fourth NCC Meeting***

### **NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA**

#### **4th National Coordinating Committee Meeting**

#### **MINUTES**

**Date:** 1st February, 2008

**Venue:** I. W. M. I.

**Time:** 9:00am

#### **CHAIRPERSON**

Mrs. Cecilia Amoah

#### **MEMBERS PRESENT**

- |                                      |   |
|--------------------------------------|---|
| 1. <b>Mrs. Cecilia Amoah</b>         | Volta Basin Research Project              |
| 2. <b>Dr. E.O. Bekoe</b>             | Water Research Institute                  |
| 3. <b>Mr. Isaac Asamoah</b>          | Water Resources Commission                |
| 4. <b>Nene Tetteh Amoako IV</b>      | Representative from the Lower Volta Basin |
| 5. <b>Nana Kojo Wunn II</b>          | Chief of Bui Traditional Area             |
| 6. <b>Mr. Richard Twum Koranteng</b> | Volta Basin Development Foundation        |
| 7. <b>Mr. K.D. Bright Siayor</b>     | Volta River Authority                     |
| 8. <b>Mr. Minta A. Aboagye</b>       | Ministry of Water Res., Works and Housing |
| 9. <b>Dr. Liqa Raschid -Sally</b>    | International Water Management Institute  |
| 10. <b>Torgbe Adom Drayi II</b>      | NAVRAT 52                                 |
| 11. <b>Torgbe Emmanuel Kpapka</b>    | Bui Rep                                   |
| 12. <b>Andrews Madjitey</b>          | Manya Krobo District Assembly (Rep.)      |
| 13. <b>Mr. Edmund K. Akoto-Danso</b> | International Water Management Institute  |

#### **MEMBERS ABSENT**

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 1. <b>Mr. S.A. Appenteng</b>     | Association of Ghana Industries |
| 2. <b>Mr. Mike Anane</b>         | League of Env. Journalists      |
| 3. <b>Mr. Samuel Ayer- Dateh</b> | Ministry of Energy              |

## **AGENDA**

1. Confirmation of Minutes of 3rd NCC Meeting
2. Discussion of Draft Issue Papers from Consultants
3. Discussion of 2<sup>nd</sup> Forum
  - Theme
  - Programme for the 2<sup>nd</sup> Forum
  - Press Briefing
  - List of Invited Chairmen/Stakeholders
4. Way forward for the next phase
5. Any other matter

The meeting started at 9:30 after a quorum has been formed with an opening prayer from Mr. Richard Koranteng. The Chairperson, Mrs. Cecilia Amoah welcomed all present at the 4<sup>th</sup> NCC meeting. In her welcome address, she commended members for their support and effort towards the Ghana Dams Dialogue.

## MINUTES OF THE FOURTH NCC MEETING

ITEMS	ISSUES	RESPONSIBILITY
1. Confirmation of Minutes of 3rd NCC Meeting	The minutes of the 3 <sup>rd</sup> NCC meeting was read and confirmed by the meeting. Two corrections were made after which Dr.E.O. Bekoe moved for the acceptance of the minutes and was seconded by Nene Tetteh Amoako IV.	
2. Discussion of Draft Issue Papers from Consultants	<ul style="list-style-type: none"> <li>• Mr. Richard Koranteng informed the meeting on the status of the issue papers. He indicated that, after the terms of reference (ToR's) were finalized by members of the NCC, the consultants were consulted to begin the study. Three issue papers (thus Community Involvement; Compensation and Research and Development) were commissioned.</li> <li>• Mr. Richard Koranteng informed members that, though from the timeline for the preparation of the issue papers, members should have had the three issue papers during the meeting, only that of the Community Involvement is available due to situation beyond the control of the two other Consultants. He indicated that, members will have copies of the other papers by Monday, 4<sup>th</sup> February, 2008.</li> <li>• The Chairperson indicated to the meeting that, members have a week to read and comment on the Issue papers. Submission of comments was therefore fixed at 8<sup>th</sup> Feb, 2008 for collation and onward submission to the respective Consultants.</li> <li>• Dr. E. O. Bekoe suggested assigning members to specific papers. After long deliberation it was agreed that, though members will go through all the issue papers, specific members will be assign to look at individual papers. The groups formed to look at the issue papers are as follow:               <ol style="list-style-type: none"> <li>1. <b>Community Involvement</b> (Mr. Isaac Asamoah; Togbe Emmanuel Kpapka and Mr. Mike Anane)</li> <li>2. <b>Research and Development</b>(Mr. E.O Bekoe; Mrs Cecilia Amoah; Mr. Mintah Aboagye) and</li> <li>3. <b>Compensation</b> (Mr. K.D. Siayor; Nene Tetteh Amoako IV; Mr. S.A. Appenteng and Nana Kojo Wunn)</li> </ol> </li> </ul>	<p style="text-align: right;">Secretariat</p> <p style="text-align: right;">Members</p> <p style="text-align: right;">Group Members</p>
4. Discussion of 2 <sup>nd</sup> Forum <ul style="list-style-type: none"> <li>• Theme</li> <li>• Programme</li> </ul>	The general overview of the 2 <sup>nd</sup> Forum programme was elaborated by Mr. Richard Koranteng to members. <b>Theme:</b>	



<p>for the 2<sup>nd</sup> Forum</p> <ul style="list-style-type: none"> <li>• Press Briefing</li> <li>• List of Invited Chairmen/S takeholders</li> </ul>	<p>The chairperson requested members to come up with suggested theme for the 2nd Forum. The title on the draft programme (thus “2nd Ghana Dams Forum and Workshop on the Impact of Climate Change on the Bui Hydropower Project” was suggested by Mrs. Cecilia Amoah.</p> <p>After a long deliberation, the meeting agreed on a main theme as: <b>“Bringing Research findings on Dams closer to the People”</b>. Two sub-themes were suggested and agreed to be used for the first and second days respectively. The sub-themes are as follows:</p> <p>Day 1: <b>Contribution of community involvements, compensation, research and capacity building to dam development in Ghana.</b></p> <p>Day 2: <b>Impact of Climatic Change on Dams, the Case Study of the Bui Hydropower Project.</b></p> <p><b>Programme for the 2<sup>nd</sup> Forum</b></p> <p>The draft programme presented at the meeting was read and discussed. A number of changes were made and finally agreed and adopted to be used for the Forum.</p> <p><b>Press Briefing</b></p> <p>The meeting was informed about the press briefing scheduled to take place on the 18<sup>th</sup> of Feb, 2008 at the Ghana International Conference Center at 10am. All NCC members in collaboration with ZEF are invited to attend this press briefing.</p> <p>Members requested the Secretariat to invite all the consultants for the Issue papers for the press briefing.</p> <p>The Chairperson, Dr. Liqa Raschid-Sally and Mr. Isaac Asamoah asked permission to absent themselves from the press briefing. Mr. Mintah Aboagye was therefore appointed to chair the press briefing.</p> <p><b>List of Invited Chairmen/Stakeholders</b></p> <p>The meeting went through the list of people to be invited for the Forum. The Secretariat was tasked to start as soon as possible to contact the intended people who have been selected to be Guest of Honor and also chair the programmes.</p>	<p>Secretariat</p> <p>Secretariat</p> <p>Mr. Mintah Aboagye</p> <p>Secretariat</p>
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<p>5. Way forward for the next phase</p>	<ul style="list-style-type: none"> <li>• Isaac Asamoah wanted to know the outcome of our appraisal conducted by the GTZ.</li> <li>• Nana Kojo Wunn II informed the meeting on the situation at the Bui area.</li> <li>• Liqa commenting on his concern indicated that, his concern is very much considered more especially as all the consultant of the issue papers consulted him.</li> <li>• The Net-Map toolbox (developed by Ms. Eva Schiffer of IFPRI) was brought up by Liqa and Richard. The tool (an Influence Mapping of Social Networks tool) they said can be used to prepare the last paper which could not be launched because of lack of funds.</li> <li>• Mr. Isaac Asamoah commenting on the issue by Nana Wunn suggested that members should quickly move in and see the situation at first hand more especially as we are preparing to hold the second Ghana Dams Forum.</li> <li>• After a long deliberation the meeting agreed to visit the Bui area on the 14<sup>th</sup> -16<sup>th</sup> February, 2008. Six members volunteer to visit the area. The aim of the visit was set to: <ul style="list-style-type: none"> <li>• <b>To identify immediate concerns of the project area</b></li> <li>• <b>Know the ground information from the DCE and other stakeholder of the area.</b></li> </ul> </li> </ul>	
<p>6. Any other matter</p>	<p>Having discussed issues like the use of tools to identify the different actors and the relationship that exist between them and more of the stakeholder meetings as way forward for the Dams Dialogue, Mr. K.D. Siayor moved for the end of the meeting and was seconded by Mr. Isaac Asamoah.</p>	

## ***Annex VII: Minutes of Firth NCC Meeting***

### **NATIONAL DIALOGUE ON DAMS AND DEVELOPMENT IN GHANA 5th National Coordinating Committee Meeting MINUTES**

**Date:** 4<sup>th</sup> March, 2008

**Venue:** Novotel Hotel

**Time:** 9:00am

#### **CHAIRPERSON**

Mrs. Cecilia Amoah

#### **MEMBERS PRESENT**

- |                               |   |
|-------------------------------|---|
| 1. Mrs. Cecilia Amoah         | Volta Basin Research Project              |
| 2. Dr. E.O. Bekoe             | Water Research Institute                  |
| 3. Nene Tetteh Amoako IV      | Representative from the Lower Volta Basin |
| 4. Mr. Richard Twum Koranteng | Volta Basin Development Foundation        |
| 5. Dr. Liqa Raschid-Sally     | International Water Management Institute  |
| 6. Togbe Adom Drayi II        | NAVRART 52                                |
| 7. Torgbe Adbesi Kpapka       | Bui Rep                                   |
| 8. Mr. Andrews Madjitey       | Manya Krobo District Assembly             |
| 9. Mr. Edmund K. Akoto-Danso  | International Water Management Institute  |

#### **MEMBERS INVITED**

- |                            |     |
|----------------------------|-----|
| 10. Dr. Daniela Kussberger | GTZ |
| 11. Dr. Cathleen Seeger    | GTZ |

#### **MEMBERS ABSENT**

- |                           |   |
|---------------------------|---|
| 1. Mr. Samuel Ayer-Dateh  | Ministry of Energy                        |
| 2. Mr. Isaac Asamoah      | Water Resources Commission                |
| 3. Mr. S.A. Appenteng     | Association of Ghana Industries           |
| 4. Mr. Mike Anane         | League of Env. Journalists                |
| 5. Mr. K.D. Bright Siayor | Volta River Authority                     |
| 6. Mr. Minta A. Aboagye   | Ministry of Water Res., Works and Housing |

## AGENDA

1. Review and Adoption of Minutes of 4th NCC Meeting
2. Matters Arising
3. Reflection
  - 2nd Ghana Dams Forum and Workshop on Climate Change Impact on Bui Hydropower Project
  - Second Phase of the Project
4. Way forward for the Next phase
5. View from GTZ
6. AOB

The meeting begun at exactly 10 O'clock am with a prayer from Mr. Richard Koranteng. In her welcome address, the Chairperson proposed a one minute silence for a member of the Committee (Mr. Isaac Asamoah) who passed away on the 25th of February, 2008. The Chairperson continued by commending the team from the GTZ for their support for the Ghana Dams Forum and for their presence on the 5th National Coordinating Committee (NCC) Meeting which happens to be the last of the NCC meeting of the first phase of the project.

## MINUTES OF THE FIFTH NCC MEETING

ITEMS	ISSUES	RESPONSIBILITY
<p>1. Review and Adoption of Minutes of 4th NCC Meeting</p>	<p>The minutes of the 4<sup>th</sup> NCC meeting was reviewed and a number of corrections made. Nene Tetteh Amoako moved for the acceptance and adoption of the minutes and was seconded by Togbe Adom Drayi II.</p>	
<p>2. Mater Arising</p>	<p>Tackling matters arising from the 4<sup>th</sup> NCC meeting, Mr. Richard Koranteng commented on the following:</p> <ul style="list-style-type: none"> <li>• The consultants of the three issue papers are working on the comments received from the NCC and also from members during the 2<sup>nd</sup> Dams Forum. Members indicated that, the consultants should be informed to indicate precisely where corrections or omissions are made in their respective papers for easy reference. The Secretariat of the NCC was tasked to thoroughly look at the final paper to be submitted before final payment is made. The final copy should be distributed to all members.</li> <li>• The report of evaluation conducted by GTZ is ready and will be disseminated to all members as soon as possible. Dr. Daniela Kussberger summarized the report to members in which she indicated the Dialogue is playing a useful role as evidenced by the positive feeling of all participants towards it.</li> <li>• The Press briefing took place as scheduled on the 18<sup>th</sup> February, 2008 to inform the general public about the 2<sup>nd</sup> Ghana Dams Forum. Six NCC members and the consultants attended the briefing in addition to about 58 press houses. The programme was chaired by Dr. E.O. Bekoe and was captured on the internet and a number of newspapers including the TV Africa.</li> <li>• The 2<sup>nd</sup> Ghana Dams Forum was successfully held with the entire guest attending. The Vice President was represented by the Minister of Fisheries, Mrs. Gladys Asmah. In all 120 stakeholders were invited in which 158 participants</li> </ul>	<p style="text-align: center;">Secretariat</p>

	<p>attended.</p> <ul style="list-style-type: none"> <li>• Dr. Liqa Raschid-Sally asked about the influence of publicity on the objective of the Forum. The Chairperson commenting on her question indicated the positive effect of the publicity as the public realize the stand of the Forum not as against but for dams and development in Ghana. She also shared the impact of the Forum as realized from the Ministers who attended the Forum.</li> <li>• Togbe Adom Drayi II indicated that, the Forum should go beyond where we are currently for commitment by from the people in charge to handle issues. The chairperson indicated that the issue can be well discussed in the way forward.</li> <li>• The scheduled visit to the Bui area (on the 14<sup>th</sup> and 15<sup>th</sup> February, 2008) by some members could not come on due to the fact that, VRA was not able to release to us a vehicle for the trip. VRA indicated their inability very late and as such, the Secretariat could not have any other alternative than to cancel the trip. Members reechoed the importance of the trip by urging the Secretariat to see how best the trip can come off. Discussing the issue, members tasked the Secretariat to re-plan the trip and schedule it on the 10<sup>th</sup> to 12<sup>th</sup> of April, 2008. Dr. Daniela Kussberger stressing on the importance of the trip indicated that the trip can be part of the proposal for the next phase of the project. She however agreed that, looking at the time members would want to make the trip, it can be pre-financed by International Water Management Institute (IWMI). She therefore asked Dr. Liqa Raschid-Sally to support the Secretariat to make the trip come off.</li> <li>• The issue of contacting the Bui Development Committee (BDC) came to light as members wanted a meeting with the Secretariat of the BDC. The meeting will aim to foster a close relationship between the BDS and the NCC. Members further proposed having the planned visit to the Bui area with a representative of the BDS. The Chairperson agreed to liaise with Secretariat</li> </ul>	<p>Dr. Liqa Raschid-Sally / Secretariat</p> <p>Chairperson / Secretariat</p>
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	to meet with the BDC.	
<p>3. Reflection</p> <ul style="list-style-type: none"> <li>○ 2nd Ghana Dams Forum and Workshop on Climate Change Impact on Bui Hydropower Project</li> <li>○ Second Phase of the Project</li> </ul>	<ul style="list-style-type: none"> <li>○ Togbe Adom Drayi II reflecting on the 2<sup>nd</sup> Ghana Dams Forum commended the Secretariat for their immense support in the organization of the Forum. He realized the deep interest by all and sundry who attended the forum. On the second day of the Forum which happens to be the presentation and discussions on the “Impact of Climatic Change on Dams, the Case Study of the Bui Hydropower Project”, Togbe Adom Drayi II indicated that, it was really a laudable discussion, however he observed that, the topic was a little bit beyond his standard. He recommended that, the NCC should look for a better in discussing the same issue so as to be able for members to disseminate the information to laymen within dam constructed communities.</li> <li>○ Adding up to the concern raised by Togbe Adom Drayi II, Dr. E.O. Bekoe indicated that, the issue of Climate Change is complex issue with a number of controversy behind it. It is therefore important to conduct research to discuss issues concerning Climate Change. It is sometimes misunderstood and interchanged when issues concerning change and variability are discussed in respect to climate.</li> <li>○ Nene Tetteh Amoako IV on his submission stated that, the Members of Parliament and Chief Executives of Constituencies and Districts bordering dam constructed communities are not showing much interest in the Forum and as such none of them showed up for the meeting. Mr. Richard Koranteng responded to his comment by informing the meeting that, an invitation was sent to a all the Chief Executives in and around the two dams (thus Akosombo</li> </ul>	

	<p>and Kpong) and the Bui dam but only the Manya Krobo Chief Executive attended. Apart from that some of the District sent in people to represent them. He also indicated that, it is part of the plan to have meeting with Chief Executives and also some key ministers in the next phase of the project.</p> <ul style="list-style-type: none"> <li>○ Dr. E.O. Bekoe remarked that the Forum was successful but suggested that funding should be enough for research data and report to help substantiate our information for dissemination. Commenting on the project budget, he indicated that the budget should be looked at every well so as to pay substantial sitting allowance (transport refund) for the next phase of the project.</li> <li>○ Dr. Daniela Kussberger indicated that, the Forum was successful regarding the dignitaries who graced the occasions and the whole programme. She also recommended that, for our next Forum there should be more time allocated for the participant rather than having long speeches from the Ministers.</li> </ul>	
<p>4. Way forward for the Next phase</p>	<ul style="list-style-type: none"> <li>○ Togbe Adom Drayi II indicated that “so far so good. He was however worried about the representation of the NCC members especially from the ministries. Most of these members have been absenting themselves from our NCC meeting. He also proposed capacity build packages and various presentations for the NCC members to adequately adapt ourselves. Dr. Liqa Raschid-Sally, upported his first comment and suggested that further meeting be planned in the various institutions of the members. This will enable them to have full responsibilities and also attend the meeting.</li> <li>○ Nene Tetteh Amoako IV wanted to know what the Members of the NCC can do to influence the payment of Compensation to affected communities e.g. Adjena. Dr. Liqa Raschid-Sally, responded to his question by indicating that, in submitting the communiqué and further meetings with the targeted ministries (key ministries who can influence change), these issues can be brought up and hope it can help to resolve the problem.</li> </ul>	



	<p>The issue of meeting targeted Ministries/groups in discussing pertinent issues regarding the affected communities and other issues concerning the Forum was discussed thoroughly. The Chairperson tasked the Secretariat of the NCC to schedule with the targeted ministries/groups and inform members. The ministries/groups include VRA Resettlement Trust Fund, Bui Secretariat, Chinese Consultant, Ministries of Energy, Finance, Water Resources etc.</p> <ul style="list-style-type: none"> <li>○ The communiqué was read and slightly modified and accepted by the members. The Communiqué is to be endorsed by the Chairperson and representatives of the Ministries of Energy and Water Resources. Members agreed to disseminate the communiqué via the Energy Minister to the Vice President.</li> </ul>	
5. View from GTZ	<ul style="list-style-type: none"> <li>○ Dr. Daniela Kussberger thanked the NCC members for the commitment to the dialogue process and a very successful second Forum. She prayed to member to work for the process not loses it dynamics and assured the sustainability of the process especially for the next phase.</li> </ul>	
6. Any other matter	<ul style="list-style-type: none"> <li>○ Dr. Liqa Raschid-Sally suggested that members should get time to sympathize with the family and friends of our former member, the late Mr. Isaac Asamoah. The meeting also agreed to request from the Water Resources Commission of another representative to the Committee.</li> <li>○ The Secretariat finally distributed certificates for members of the NCC for the distinguish work for the one year period of the project.</li> </ul>	

The meeting ended at 12:30 with a motion by Nene Tetteh Amoako IV and was seconded by Mrs. Cecilia Amoah.

## Annex XIII: Policy Brief on Climate Change Impact

### POLICY BRIEF ON IMPACT OF CLIMATE CHANGE ON BUI

#### GLOWA Volta Policy Brief:

March, 2008

Wolfram Laube, Constanze Leemhuis and Barnabas Amisigo

Impact of Climate Change on the Black Volta Basin and the Bui Dam



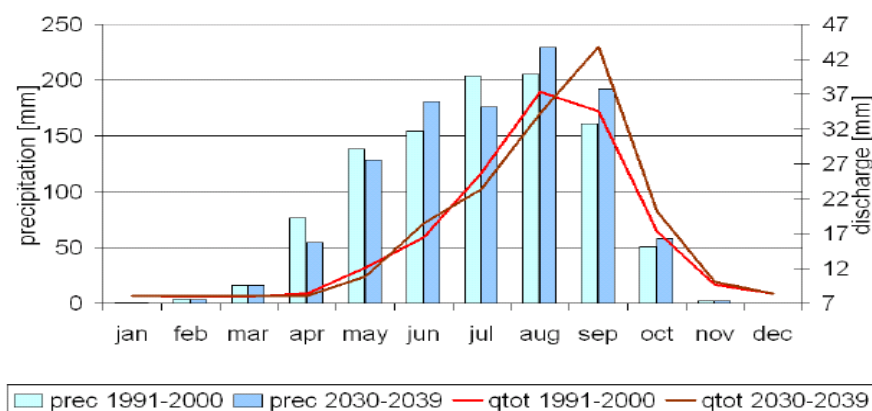
As contribution to the ‘Second Ghana Dams Forum of the National Dialogue on Dams and Development’ scientists of the GLOWA Volta Project (GVP) of the Center for Development Research (ZEF, University of Bonn) have undertaken a hydrological assessment of the likely impact of climate change on Black Volta River and the Bui Dam. Two different studies that investigate the impact of global climate change on the water availability in the Ghanaian part of the Volta River basin served as the scientific background for this analysis. Both studies are based on different global climate change scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) that reflect different predictions for world wide CO<sub>2</sub> emissions.

Climate modeling does not lead to exact predictions of climatic events but allows projections into the future. By looking at different scenarios that take different assumptions into account and by comparing the modeling results for different scenarios, the reliability of climatic predictions can be enhanced. Future trends that can be observed under different scenarios are more likely to really occur than trends that can be only observed under individual scenarios. One prediction for the Volta basin on which various global climate change scenarios agree, is the overall increase of seasonal river flow variability due to a change of the rainfall pattern. In that prediction, less water will be available during the dry season, while river flows will increase in the rainy season.

#### GVP’s regional climate predictions for the Volta Basin

A regional analysis on the impact of climate change on the Volta Basin was conducted by GVP researchers (Kunstmann and Jung, 2005; Jung, 2006). A coupled climate-hydrological model allowed simulating seasonal and spatial predictions for the Black Volta subcatchment, which is the main source of inflow for the Bui reservoir.

**Figure 1:** Monthly amounts of rainfall (precipitation) and river flow (discharge) 1991-2000 and 2030-2039.



Comparing the simulated rainfall and streamflow for a historical time series (1991-2000) and a global climate change scenario (2030-2039) the following changes are predicted:

- Decreasing rainfall in the month of April
- Increasing duration of the dry season
- Increasing unpredictability of the onset of the rainy season
- Increase and intensification of rainfall at the end of the rainy season
- Slight decrease of river flow
- Increase in flood-events

Potential consequences of GVP regional climate predictions:

The decreasing rainfall in April and an increased duration of the dry season render rain-fed agriculture less reliable. It becomes difficult for farmers to predict the onset of the rainy season and therefore the right time to plant crops. Greater variability and a general shortening of the rainy season may cause the loss or even failure of crops. With regard to the Bui dam, the decrease of stream flow and the increase of flood events have negative impacts. Less water becomes available, while floods increase erosion and speed up the siltation of the dam.

### Regional Climate Predictions of the Water Research Institute

The second study discussed at the Forum was conducted by the Water Research Institute (WRI, 2000) as part of Netherlands Climate Assistance Programme (NCAP). While eight independent sectoral climate change studies were undertaken, the WRI study had a special focus on the impact of global climate change on the water resources. The predictions of this study with regard to surface water availability and river flows were discussed at the Second Dam Forum.

Based on different GCM-based global climate change scenarios, the change in river flow in the Volta Basin was simulated for years 2020 and 2050.

**Table 1:** Percentage change in streamflow in the Volta Basin from GCM-based climate change scenarios for year 2020 and 2050.

YEAR	Low Sensitivity	Medium Sensitivity	High Sensitivity
2020	-8.8	-15.8	-22.9
2050	-24.0	-37.1	-50.9

Potential consequences of WRI's regional climate predictions:

The WRI study predicts a considerably stronger reduction in river flow than the GVP study. The decrease of the annual mean of river flow and the predicted increase of temperatures and evapo-transpiration would seriously impact the Black Volta basin and the Bui dam. Under these scenarios the inflows into the reservoir will be seriously reduced and may render the dam operations under the current design difficult.

## Conclusions

Both studies discussed at the Second Ghana Dams Forum predict a significant negative impact of global climate change on the water resources of the Volta River basin. While the GVP study predicts relatively small changes in overall water availability, it points to serious changes in seasonal rainfall and river flows that may cause droughts and flood events. The WRI study predicts a much higher decrease in river flows. Both studies agree that water availability will be further reduced by higher temperatures and increased evapo-transpiration. While these factors alone have the potential to negatively affect water availability in the Black Volta basin and the operation of the Bui hydropower project, additional factors have to be taken into consideration also. The increase in flood events predicted by the GVP study will increase erosion and speed up the siltation of the Bui dam. This has the potential to seriously affect the lifespan of the dam. Increased erosion, also through an increasing deforestation of the Black Volta basin, needs to be taken account of when the economic viability of the Bui project is evaluated.

It is a serious oversight that the impact of global climate change was not taken into account when the plans for the construction of the Bui dam were evaluated and finalised. This is even more so, as climate change will not only affect rainfall, evapo-transpiration and river flows directly, but will also lead to an increase of water demand for irrigation. The overwhelming majority of the population of the Black Volta basin depends on rain-fed farming for their livelihoods. However, climate change makes rain-fed agriculture increasingly unreliable. Throughout the Volta Basin this will lead to an expansion of irrigated agriculture. How competing water needs for hydropower generation and agriculture will affect each other is very important and should have been taken into consideration when the Bui dam was planned. The failure to account for the dynamics of climate change is a major shortcoming of the planning and evaluation process of the Bui dam and should not be repeated when other major hydraulic infrastructure projects are planned and commissioned.

Literature:

**Amisigo, B.** (2006) Modelling Riverflow in the Volta basin of West Africa. A data-driven framework. Doctoral Thesis. Available at: [www.glowa-volta.de](http://www.glowa-volta.de).

**Jung, G.**, 2006. Regional Climate Change and the Impact on Hydrology in the Volta Basin of West Africa. PhD Thesis. Available at: [www.glowa-volta.de](http://www.glowa-volta.de).

**Kunstmann, H. and G. Jung**, 2005. Impact of regional climate change on water availability in the Volta basin of West Africa. In: Regional Hydrological Impacts of Climatic Variability and Change. IAHS Publ. 295.

**CSIR-Water Research Institute**, 2000. Climate Change Vulnerability and Adaptation Assessment on Water Resources of Ghana.

Links:

[www.zef.de](http://www.zef.de)      [www.glowa-volta.de](http://www.glowa-volta.de)

The GLOWA Volta Project has been generously funded by the Federal German Ministry for Education and Research, BMBF.

## ***Annex IX: Report of Field Visit***

### **A REPORT OF A 4 DAY VISIT BY TEN MEMBERS FROM THE WOULD-BE DAM AFFECTED AREA TO SOME OF THE RESETTLEMENT COMMUNITIES BUILT AS A RESULT OF THE CONSTRUCTION OF THE AKOSOMBO AND KPNG DAMS.**

#### **INTRODUCTION:**

As part of effort to get first hand information about the scope, benefits and implication that the would-be affected communities in the Bui are experiencing, a ten member committee from the area undertook a four-day trip to some of the resettlement communities which were built as a result of the construction of the Akosombo and Kpong dams.

#### **MEMBERS AND THEIR COMMUNITIES**

The members comprised the following:

- |                           |            |
|---------------------------|------------|
| 1. Nana Kwadwo Wuo II     | Bui        |
| 2. Janet Kpakpa           | Bui        |
| 3. Edward Kor             | Bui        |
| 4. Torgbe Emmanuel Kpakpa | Akonyakora |
| 5. Matthew Agburke        |            |
| 6. Akua Kpakpa            |            |
| 7. Joseph Kofi            | Dam Site   |
| 8. Maxwell Gbadoya        | Dam Site   |
| 9. Paul Kpakpa            | Dokuchina  |
| 10. Akwasi James          | Dokuchina  |

#### **SPONSOR**

The trip was sponsored by GTZ.

#### **ACTIVITIES**

1. Visit
2. Press Conference and Interviews
3. Games
4. Church Services
5. Get-Together

#### **VISITS**

The group was hosted at Somanya by Mr. Richard Koranteng, the Chief Executive Director of the Volta Basin Development Foundation, Accra. Prior to the arrival at Somanya at about 3:30pm on the 27<sup>th</sup> of September, 2007, the lodging and feeding arrangements had already been put in place.

The visits took the visitors to:

Destination	Date
New Somanya	28/09/07
Kpong	28/09/07
Akosombo Power Station	29/09/07
Kpong Power Station	29/09/07
Natriku	29/09/07
Natriku	30/09/07

In all the visits, the team interacted with chiefs and elders to share ideas and experience. At Akosombo and Kpong dam sites, the visitors were taken through the various stages of power generation.

### **PRESS CONFERENCE AND INTERVIEWS**

The leader of the team, Nana Kwadwo Wuo II and the chief of New Somanya and Mr. Richard Koranteng, were granted audience by Rite FM at Somanya on the 28<sup>th</sup> of September 2007. Two pressmen from Graphic Corporation, Koforidua also interviewed members on the 28<sup>th</sup> and 30<sup>th</sup> September, 2007 on their expectations and anxiety about the project.

### **GAMES**

A football match was organized for the visiting team and a local team at Natriku. The game ended goalless.

### **CHURCH SERVICE**

The visiting team attended a thanksgiving service at Somanya Presbyterian Church on the 30<sup>th</sup> of September, 2007.

### **GET-TOGETHER**

Activities of the visit were climaxed with a get together at the river side at Natriu where meals and drinks were served. The occasion coincided with the celebration of the World Rivers Day which fell on 30<sup>th</sup> September, 2007.

### **OBSERVATIONS**

1. Lands acquired to resettle displaced populations were not properly documented.
2. Affected communities were not adequately informed, sensitized and educated about the scope, benefits and implications of the project.
3. Payment of compensations was not effected and where they were paid, payment was unduly delayed.

### **RECOMMENDATIONS**

It is recommended that:

1. 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 settlers and avoid conflicts.
2. Would-be dam affected communities should be adequately informed, sensitized and educated about the scope, benefits and implications of the project.
3. All communities should be regarded as equal partners and must be given adequate time to offer their consent to dam projects before their implementation.
4. Would-be dam affected populations and all potential settlers should be given the chance to be activities players in decision making with regards to where they would want to be relocated and who should server as their host communities.
5. There should be consensus with respect to the nature and amount of compensation for loss of properties during dam construction and development and record keeping on compensation paid is also essential in avoiding future disputes.
6. It is important to sustain and protect Community interest in dam projects through regular consultations between project managers and representatives of affected communities.
7. There is the need for project managers to demonstrate serious commitment to the adoptive mechanism and coping strategies of displace and resettled communities in order to promote their total welfare and sustained livelihood.

8. There should be a monitoring agency that will check the issues of implementation.

#### Acknowledgement

Undertaking this trip has only been possible through the Almighty God and many people who helped in many different ways.

We would like to express our sincerest gratitude to GTZ who financed this trip with a generous grant. Like Oliver Twist, we are appealing for more assistance to sustain the relationship. Thanks to Mr. Richard Koranteng, The Executive Director, Volta Basin Development Foundation, Accra for his valuable assistance.

We benefited enormously from the discussions with the Chiefs and elders and workers of the two dams sites visited. We thank them very much.

Finally, we thank the cooks who prepared delicious meals for us.

SIGNED

NANA KWADWO WUO II  
(BUI – CHIEF – LEADER OF THE GROUP)