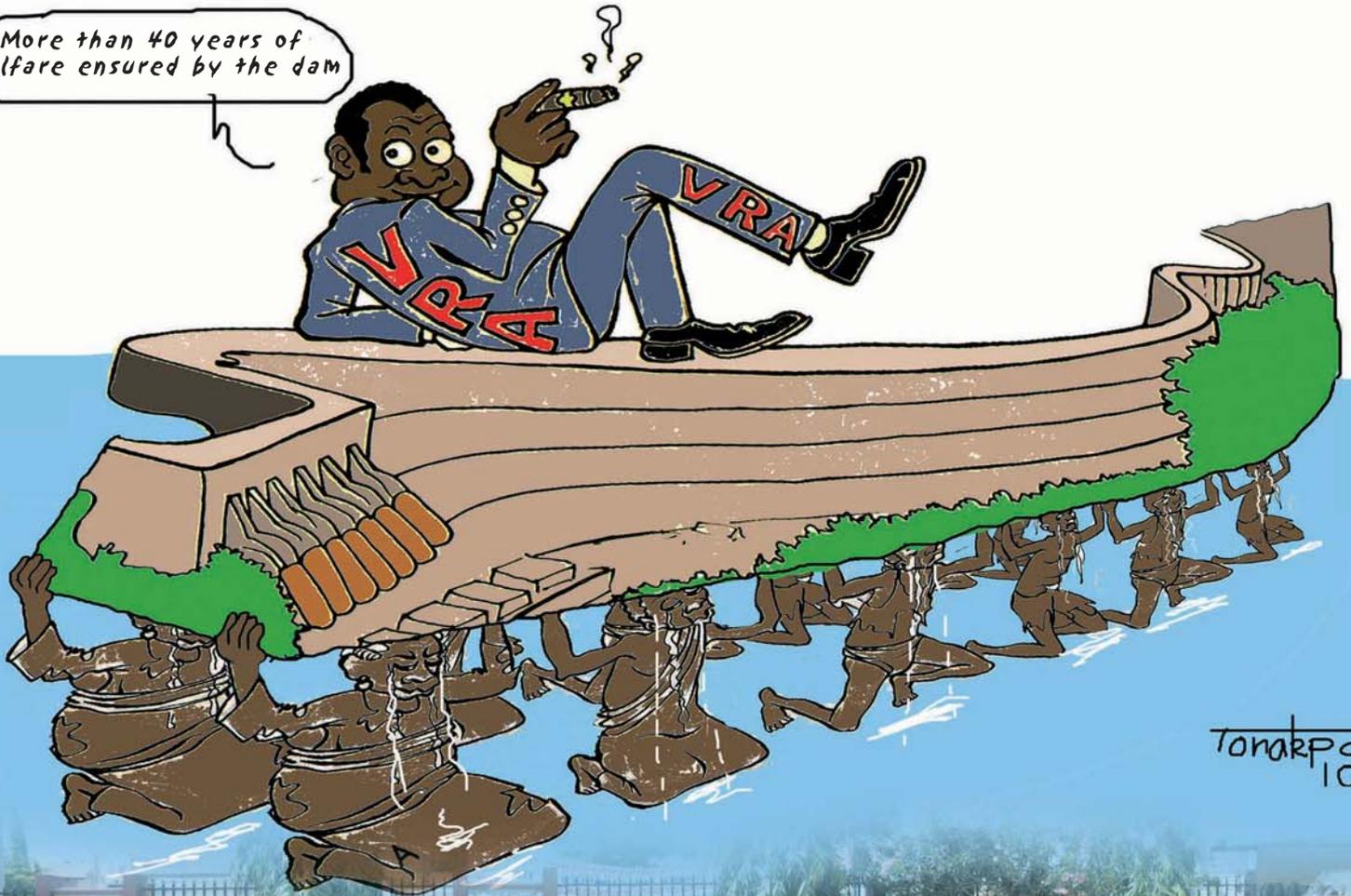




THE CONTRIBUTION OF BIG WATER INFRASTRUCTURES TO THE SUSTAINABLE DEVELOPMENT OF COUNTRIES IN WEST AFRICA

AKOSOMBO DAM : GROWTH AND SUFFERING

More than 40 years of welfare ensured by the dam



4TH REGIONAL WEST AFRICAN JOURNALISTS WORKSHOP



CONTENTS

DAMS & COMMUNITIES

When Dams Become A Curse	Page 4
Ghana's Jewel and the forgotten ones	Page 6
APAASO- What A lure!	Page 6
Near Hydro Power Plant But Living in Darkness	Page 8
AkOSOMBO HYDROPOWER DAM: No joy at Apaaso!	Page 9
VRA talks back	Page 9

DAMS AND REGIONAL COOPERATION

Large dams: sources of disputes and linkages	Page 10
The Akosombo Dam, a symbol of regional integration	Page 11
HUMOUR Akosombo, a town created by a dam	Page 11
Abdoulaye Doumbouya, Representative of the Niger Basin Authority (NBA) "No problem if every country plays its role"	Page 12

DAMS CONSTRUCTION

Akosombo Dam Too Strong for Earthquake?	Page 13
Construction of New Dams ...Government Urged to Take Second Look at Impacts	Page 14
Interview Tamsir Ndiaye, Coordinator of the African Network of Basin Organizations "Dams are issues of major stakes"	Page 16

NEWS REPORT

Capacity Building Workshop for West African Journalists Held in Accra	Page 17
GWP / WA strengthens journalists' knowledge on large dams	Page 18
ADB to Sponsor Survey on Hydro Potential of Mano River	Page 19

ANALYSIS

AKOSOMBO DAM: Time to act	Page 20
Lessons to Learn from Akosombo	Page 22

DAMS AND ECONOMIC DEVELOPMENT

Gap in West Africa's Electrification Blamed on Under Utilisation of Potential	Page 24
Hydraulic Infrastructure in West Africa... Alarming figures	Page 25
Mrs. Rhoda Arthur, Assistant information of the VRA "We play a big role in the economy of the sub-region"	Page 26

OPINION

Fresh Water is a Finite and Vulnerable Resource	Page 27
More infrastructures for our development !	Page 29

Newsletter on water and environment

Managing Editor

Dam MOGBANTE

Editor in chief

Sidi COULIBALY

Editing board

HOUNGBADJI Leonce (Benin)
Germaine BONI (Côte d'Ivoire)
Emilia ENNIN (Ghana)
William Freeman (Sierra Leone)
Frederick ASIAMAH (Ghana)
Dora Asare (Ghana)
Gertrude ANKAH (Ghana)
Edmund Smith ASANTE (Ghana)
Dzifa AZUMAH (Ghana)
Mohamed M. JALLOW (The Gambia)
Alain TOSSOUNON (Benin)
Abdoulaye THIAM (Senegal)
TONAKPA Constant (Benin)
Cheick B. SIGUE (Burkina Faso)
Kounkou MARA (Rep. Guinea)
Assane KONE (Mali)
Obi Amako (Nigeria)
Bece Duho (Ghana)
Michael SIMIRE (Nigeria)
Sani ABOUBACAR (Niger)
Edem GADEGBEKU (Togo)

Illustrations

TONAKPA Constant (Benin)
Obi Amako (Nigeria)

Photos

S. Coulibaly (GWP-WA)
Edmund Smith ASANTE (Ghana)
William Freeman (Sierra Leone)

© GWP-WA, August 2010

Views express in this newsletter do not
reflect the position of GWP-WA



Programme for Improving Water governance in
West Africa funded by the European Union and
Global Water Partnership

By Dam MOGBANTE

GWP/WA Executive Secretary

This fourth journalists' workshop organized by GWP West Africa in partnership with Ghana Country Water Partnership is an opportunity to show our commitment for bring awareness of the masses on issues related to the good management of water resources.

Water is an undeniable development factor whose good governance leads to poverty alleviation and the improvement of living conditions of the populations. Its bad management is a factor for the degradation of living conditions and shows lack of global governance for the countries.

The choice of the theme of the workshop of Accra is a proof of GWP/WA will to support the issues at stakes for countries in West Africa. In fact, ECOWAS has started a dialogue on big water infrastructures. GWP West Africa is part of this dialogue and by bringing journalists to be interested in to this issue is a justification for our will to extend the debate to all social actors of the region. Journalists are the voice of the voiceless and the essential relays of the will of the authorities and the people in the countries.

Journalists have a great responsibility in our society and a big role to play in the awareness raising of the people on various development aspects of the countries. GWP is conscious of this and has established this partnership with them since four years.

After the workshops in Bamako in 2007, Niamey in 2008 and Cotonou in 2009, West African journalists were once again gathered in Accra to exchange on the contribution of big water infrastructures to the sustainable development of the countries. The Cotonou experience was very enriching and has allowed producing radio magazines and a newsletter, a job unanimously greeted by all for its quality. In Accra media women and men showed professionalism and competence on such a technical theme and this is much to their credit. This Accra step has allowed us to create an interaction beneficial both to our media friends and all the basin management organizations' officers of the sub region and of the African Union Fouta Djallon program that we have intentionally gathered in Accra for a workshop.

Another reason for satisfaction was the opportunity given to those taking part to the two workshops to visit the famous Akosombo dam and the village of Apaaso, where live the resettled people, to be aware of the realities linked to the daily management of such a big water infrastructure. We greet the extremely positive results of this kind of organization that has enabled the journalists to better know the basin organizations and to exchange with them on the challenges linked to their ambitions and their running.

The challenge for our countries in a worrying climate change forecast is to have efficient development and wise use of water resources for development. And for that infrastructures are required.

Big infrastructures mainly dams are undeniable factors of development for our countries. They allow the development of, depending on how they are designed, Agriculture,



fishing, energy production and at some level participate to regulate water flows on the Rivers. We also know that these infrastructures can impact negatively the environment and the people if not duly taken into account.

Ghana did understand the needs for infrastructures and already in the early sixties built one of the largest artificial lakes with the Akosombo Dam. So it is normal if we wanted a workshop on this theme to hold it in Ghana.

I would like to congratulate the Ghana Country Water Partnership for its collaboration in this great initiative, but I would also like to thank the Ghanaian authorities for having showed by their support to this approach that the issue of infrastructures is important. We really appreciated the official opening of the workshop by the Minister of Information and the closing session by the Minister in charge of water and who have both brought qualitative advices to the works.

Before I finish, I would like to thank the European Union Commission and Global Water Partnership for financing since two and a half years the Programme for the Improvement of Water Governance in West Africa which supports the financial costs of this meeting and the printing of this document.

I would once again thank the Honorable Ministers for being available and would like to reiterate GWP commitment to accompany all country initiatives for a better management of water resources.

Congratulations to media men and women who have proved that we can rely on them in the achievement of GWP's vision of "a water secure world"

*Dam Mogbante,
Executive Secretary, GWP West Africa*

When Dams Become A Curse

By **Edmund Smith-Asante**, *Ghana Business.com* & **Becce Duho**, *Daily Graphic - GHANA*

Janet Ofori is a healthy mother of three in her productive age of 45 who should be rejoicing that she has been blessed with a beautiful family, but she is rather wailing.

“My little boy, Nat Asare, has just been sent home from school for his school fees and as neither I nor his father has money now, he will have to stay home for sometime till we get money,” she howled.

Narrating that their predicament has been brought about by construction of the Akosombo dam 47 years ago, because it has taken away their main source of livelihood – farming, she continued, “Nat is my third child and we want him to have better education so we have sent him to a preparatory school, unlike his older siblings who attend a government school but he has been sent home because we have not paid his fees and I am unemployed.”

Janet Ofori, a resident of Apaaso, a resettlement village near Akosombo in the Asuogyaman District of the Eastern Region in Ghana, bemoaned that as a result of the inability of parents to pay fees of their wards in school, the dropout rate in the community has soared over the years.

Although she is strong and desires to trade to eke out a living, she remains unemployed because she cannot pursue her dream, she emphasised.



Janet Ofori

Answering whether she had been unemployed all her working life, Janet explained that she tried selling shoes and feminine creams but the business collapsed because her debtors failed to pay up what they owed her. She intimated that because of the dire straits she and the other women in the community face, some engage in prostitution in order to make ends meet.

Madam Janet, despite her present status, still nurses the desire to go back to trading if she

receives financial assistance from any quarter. She indicated that in order not to suffer the fate she experienced with her first business, she will trade in a number of the villages nearby and not concentrate on Apaaso alone if she gets a second chance.

Janet only echoed the plight of several other women of the community and others like it, which are resettlement villages that have been created as a result of the construction of dams.

Dams are huge structures constructed to contain water, either to generate hydroelectric power or irrigate large farms or fields.

In all instances they are considered as huge investments that are very necessary to enhance the development of communities, towns and countries.

However, belying that widely held belief of enhancement of human lives with the construction of dams are the silent cries, groaning, moans and pains that communities which have been affected by dam construction, have had to endure for several years.

A typical community in Ghana, which has been at the receiving end of dam construction is Apaaso, which is one of 52 resettlement

villages created by the Volta River Authority (VRA) on behalf of the Ghana government for over 80,000 people who were displaced by construction of one of the world’s finest hydroelectric dams ever – the Akosombo Dam.

All is not well with the people of Apaaso near the dam town of Akosombo who number about 1,000. This came up during a field trip by over forty media persons from 14 countries in the West Africa sub-region attending a five-day workshop in Accra on “The contribution of big water infrastructures to the sustainable development of countries in West Africa” on Wednesday May 19, 2010.

The community members expressed their exasperation at the hardships they have had to endure because of the construction of the dam in 1963 by the Nkrumah government.

To them, the fact that the dam generates 1,020 mega watts of electric power for the entire country and some countries in the West Africa sub region such as Togo, Benin, Burkina Faso and sometimes Cote D’Ivoire is of no importance, because although they stay close to the world famous dam, they are not enjoying any benefits from it.

At Apaaso, Mr. Kwame Foster, one of the people who witnessed the resettling process as a school boy, said his father had a very big farm right by the Volta River but had to give it up, as they saw their land being swallowed by the volumes of water that swept through their village into other villages.

Today, he is a driver in Accra and his wife and seven children live at Apaaso. Three of his children are presently in senior high school and he had to expand the single room house that he inherited from his father, so as to be able to accommodate his family. He said times are hard in their various communities as they do not have land to farm on and do not have any means of livelihood, compelling most of them to go to Accra in search of greener pastures.

The problems of the resettled communities have been further compounded with the collapse of two of the three main sources of employment for the people, which are the Juapong Textile factory and the Ghana Industrial Holding Corporation (GIHOC) with the third factory, Akosombo Textiles Limited also on the verge of collapse due to the influx of cheap foreign textiles into the country.

According to Mr. Foster, his father used to work in one of the factories before he went into full time farming after he retired from there and it was his dream that he would also work in the factory since people who worked there were treated well and had a lot of money.

The story of Apaaso is no different from the other resettled communities, as an interview with an official from the Water Research Institute, Mr. K. Kankam-Yeboah, said the resettling of the people has become a test case for the government for future reference.

He said on the drawing board, each community was supposed to have its own school, clinic and tarred roads among others to make life more comfortable for them.

At a forum called by the elders of Apaaso to welcome the team of African journalists who had visited their community, Elder Andrews Gyenti, a linguist, lamented that being moved from their original community had only brought them untold hardships and pain.

“Although we were told when we were being moved here that electricity would be provided for us free of charge, we have to pay GHC 200 per household for meters before we get electricity in our homes.



Andrews Gyenti

“What’s more, we have many electricity poles but no cables to send power to the community,” he said.

He also bewailed that the houses put up for them have no toilet facilities, while getting access to potable water has been a challenge for many years.

According to Mr. Gyenti who is popularly referred to as Okyeame Gyenti, the accommodation provided for them is also inadequate, citing that in spite of the fact that many of them had

dwellings which had many rooms, they were all given single-roomed residencies in the resettlement village.

“Many families were given pieces of land to farm on. However, during Acheampong’s regime it was taken back from them,” he lamented.

He also grieved that now if they want to farm, they must agree to share the produce with owners of the land – the people of Akradie and Senchi, who are the original settlers of the land, according to a system known as “Abusa” which means the produce is divided into three and a third part given to the land owner.

Contributing at the forum, Mr. Francis Kwesi Dankwa, another elder of the community, complained that there is no proper drainage in the resettlement village, adding that the promise of a health centre for them by government had also gone unfulfilled and that they were through their own efforts trying to put up the semblance of a clinic.

“We have met with many government officials on our plight but no help has come forth,” he cried, pleading with government and other stakeholders to make sure everything is in place at a site before a community is resettled in the future.

Responding to the concerns of the Apaaso community at an encounter with the workshop participants, Mr. Emmanuel Martey, an official of the Volta River Authority (VRA) Real Estate Department, said in order not to delay the dam project, the VRA built a room each for the resettlers and having equipped them with building materials, asked the beneficiaries to move in and complete the two-bedroom houses.

He contended that some of the community members held the view that they were given single room quarters because they or their forbears failed to complete their housing project as per the agreement.

He however admitted that the houses were not built with toilets but added that public toilets were provided for the entire community.

Touching on the issue of farm lands, he said it was not automatic that every resettler should be given farm land. He explained that the land that some of the community members were using for farming purposes was used to resettle those who had been displaced by construction of another dam downstream – the Kpong Hydroelectric Power Dam,

Emmanuel Martey



because such people did not indicate during deliberations that they needed farm land.

Reacting to the issue of compensation, Mr. Martey said although some resettlers have not been paid compensation according to available records, it was not deliberate.

He explained that in some cases it was due to the issue of many people making overlapping claims or the same claims being made and so no compensation was paid.

According to the VRA official, others also did not make any claims so there was no processing for compensation.

He stated further that the Volta River Authority is operating under an Act, Act 46, which states that the Authority should not pay more than £3.5 million in compensation, but that all compensation liabilities in excess of claims must be paid by central government.

Mr. Emmanuel Martey divulged that by 1971 VRA had paid far in excess of £3.5 million in compensations alone.

For her part, Gertrude Koomson, the Public Relations Manager, VRA, said the Authority commits \$500,000 annually, to a Resettlement Trust Fund that was set up in 1997.

The Trust Fund, which is run by a Board comprising representatives of all stakeholders including the VRA Chief Executive, she explained, has been set up to tackle matters of concern to the resettled communities.

The Board, she said, deliberates on most pressing needs as well as its capabilities, before considering the help to be offered to each of the communities, adding “The Board is supposed to issue a report which is audited every year.”

She said to further enhance that, a Community Development Initiative has also been established, which involves working with the community to identify what their needs are.

Reacting to the assertion that the community members were made to believe that they wouldn’t have to pay for electricity, she said,

“When the communities were built electricity was provided, but 50 years on, the community has expanded. Definitely we are not going back to provide electricity for communities that have come up after the resettlement.”

She added that as natural resources are pooled, they bring them together for everybody to enjoy. VRA’s PRO admitted that there was a time that the community was enjoying free electricity but said as the cost to the Authority was rising, the community was asked to pay for electricity used.

Touching on healthcare, Gertrude Koomson said a health boat, known as “Onipa Nua” goes round communities that do not have access to health services periodically, though not very often because when the boat returns from a mission it has to be restocked before it sets off again.

“And then we also recognise that Local Government has a role to play. So we are only complementing what they are doing. We expect that Local Government will provide the vital facilities,” she said.

Speaking on Education, Gertrude Koomson intimated that although there is a proposal for training and scholarships, this has not been finalised.

Edmund Smith-Asante & Becce Duho

Gertrude Koomson,
VRA Relations officer

Ghana's Jewel and the forgotten ones

By Alain Tossounon, *Le Municipal / BENIN*

The communities resettled because of the Akosombo Dam, a legacy of late President N'krumah and symbol of a progressive Ghana, are surviving and fighting to get access to the basic services.

N'krumah's dream has left nothing but a bitter taste for the Senchie Apaaso communities, doomed to live on hope. The huge Akosombo Dam, the Ghanaian jewel which is a regional and African pride, contrasts with the miserable feeling shared by these communities whose lands were taken away from them, for the germination of a prosperous Ghana today and an evolving Africa. Both the integrating and federating vocation of this pioneering work has laid the foundations for a fruitful regional cooperation in West Africa which forces admiration and serves as an example for other regions of Africa. However, next to the structure which is hugely high, impressive in size, and imposing due to the nature of the projects and investments, is the senchee Apaaso community which, 50 years after resettlement, even though no longer isolated, is still facing difficulties to access electricity. Between houses that have been abandoned and those that have been stripped of their working hands because of rural exodus, only the elders who wallow only on nostalgia make up this community which is reduced to 800 inhabitants. They still remember, like yesterday, the quiet life they had before they were forced to move. For these communities, resettlement remains a painful experience. According to Gyenti Okyeame, the proximity of the electrical substation is not a pass to energy which they have to struggle for. For the old lady Afia Akonedu, despite the 1020 MW produced by the dam, there are only disadvantages.

Unsatisfactory measures

For the Volta River Authority (VRA), the institution established by parliament in 1961 for the building of the dam, the experience was not as challenging as with the 52 com-

munities whose lands have been expropriated. For the 80,000 people affected, "the conditions of resettlement have followed the rules in force". And even if an official of the institution recalls that things had to be "done quickly" not to lose the funding, 3.5 million pounds were allocated by the government to cover all costs for relocating the communities. But for compensation relating to lands covered by the dam, communities had to prove with appropriate documents that the land belong to them. And

APAASO- What A lure!

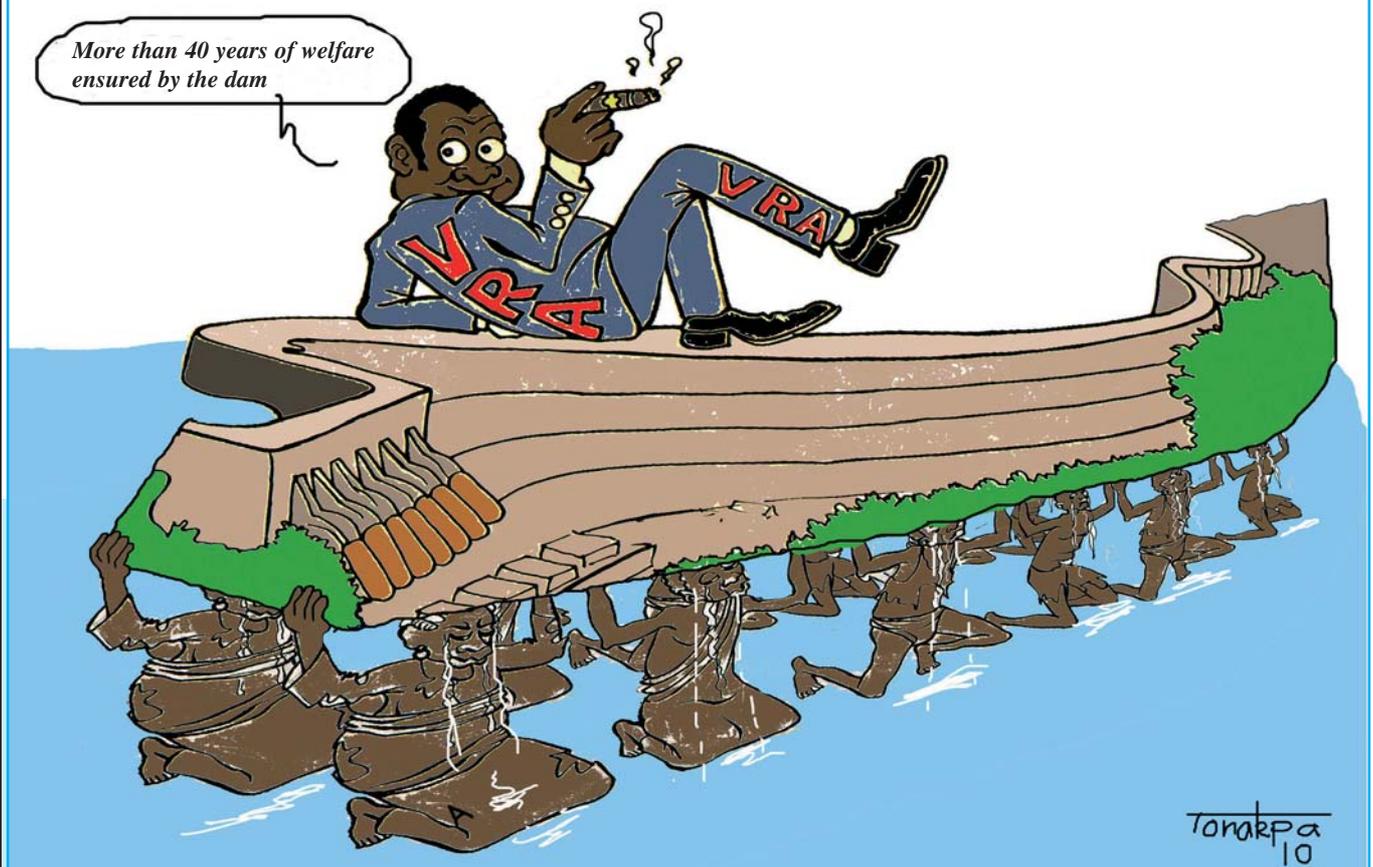
By Cheick Beldh'or Sigué, *Le PAYS, Burkina Faso*

Diddled! The tone of the villagers of Apaaso was bitter during the exchange with their hosts on Wednesday, May 19, 2010, in the evening. It was worth being up against those they said have been fooling them and who should know about their pique. Water, sanitation, electricity, in short, well-being was promised in exchange for their displacement from their houses to make space for the dam. Apparently, the promises were not kept, or they were only partially. But the population is still gnawed by regrets, for agreeing to leave their little "heaven on earth" to go to the other side of the riverside, to hell where there is no electricity, no clean water, no adequate sanitation ... Initially, the populations had access to electricity for free. But this could not last forever. One day, they had to grow and take care of themselves, argues an officer of the Volta River Authority (VRA). Can we compare Apaaso to places where politics has gone by? In any case, the administrative-political discourse has



Journalists exchanging with villagers at Apaaso

AKOSOMBO DAM : GROWTH AND SUFFERING



left, in its wake, bitter and disillusioned Apaaso populations, still scrutinizing the sky, always hoping that tomorrow will be better, and that the commitments made yesterday will finally be met. If electricity was actually supplied free sometime, could things remain the same? An equally important question: what was message delivered to these people? Have they ever imagined that the privileges in terms of free electricity, if it ever happened, would end one day? And if not, what is the part of responsibility of politics and the VRA? In any event, there is no place in the world, where public utility, which, above all, is concerned with profitability, will provide free services even to rural populations. In Apaaso like elsewhere, the VRA cannot afford the luxury of investing at a loss. To pretend otherwise will be to lie. So, if there were promises that there would be free electricity for all and for all time, the vendors of illusions should be given a red card! Overall, we want to say that the language that was delivered, somehow, was not true and frank, that communication has failed somewhere. Surely, this explains the vexation of a population that has now left the feeling of having been taken for a ride up to the other bank of the river. Finally, it was nothing but a lure.

Cheick Beldh'or SIGUE

not all resettled persons were automatically given a land for farming. They should be farmers and apply for a farm land. Since 1997, a trust fund of \$500,000 is set each year to assist the 52 communities for social support. These communities receive free medical care through a medical boat that visits the communities time to time.

On the site, the public relations officer reassures that a priority is given to communities residents when they have the qualifications for an employment position.. A development initiative is in place to support communities.

But these measures are far from meeting the needs of the communities of senchee Apaaso who protest against the silence of the Ghanaian authorities.

For now, the turbines at Akosombo continue to spin, releasing megawatts for the prosperity of the economy of Ghana. But for those communities that have remained long in the hope of having their expectations met, it may be time for them to take responsibility for themselves. "The resettlement areas refuse to grow. They behave like babies," says Marty Emman of the VRA.

Alain Tossounon

Near Hydro Power Plant But Living in Darkness

By *Emelia Ennin*, *The Business guide, GHANA*

Electricity consumers in Ghana who are connected to the national power grid grumble when they experience power outages for brief moments, yet over 40 percent of the nation's over 23 million population live in total darkness. One of such people who does not have electricity is Madam Afua Akomadu, an 80-year-old mother of eight who lives at Apaaso, one of the resettlement townships that were affected by the construction of the Akosombo Hydro-electric Dam on the Volta Lake.

Apaaso is one of 52 resettlement townships made up of about 80,000 people who were relocated to make room for the Akosombo Hydroelectric project estimated to have cost £130 million, which is 660 Metres wide and 114 Metres high but ironically, a number of residents in these



villages do not have access to electricity.

Anybody would have thought there was better life ahead for the relocated people as the then President of Ghana, Dr. Kwame Nkrumah, had promised housing, and the provision of basic amenities to make life worth living for them.

Yet 40 years after their relocation, which meant the loss of the victims' primary economic activities of fishing and agriculture, loss of their homes, loss of their loved ones' grave sites, loss of community stability, and the eventual loss of important social values, the promises have not been fully fulfilled.

According to Afua Akomadu who has witnessed the death of most of her community members following the resettlement, the promises of successive governments have all been in vain. "All they ever wanted is our votes and after elections they forget us," she lamented.

A visit to some of the villages by a group of journalists from 14 West African countries brought to the fore the

challenges faced by members of the resettlement communities.

One of the community elders, Okyeame Andrews Gyenti, hinted that after several pleas with the Volta River Authority, a part of the community was connected to the national power grid in 1995.

"Through our community help project we have been able to mount several electricity poles with the anticipation that the VRA would connect us easily, but it does not look like we will get electricity any moment soon," said Okyeame Gyenti, who is also the chief's linguist.

The absence of electricity is not only affecting the old, as young Foster Kumi, a 13-year-old class six pupil told this reporter "I have no light to do my homework. I cannot study in the night after school and my uniform is always crumpled."

As hydroelectricity is the primary source of Ghana's power, the Akosombo Hydroelectric Project (HEP) benefits industrial and economic activities in most parts of the country as well as supplying power to neighbouring countries such as Togo and Benin.

Yet the poor living conditions of the people in the immediate environs of this huge infrastructure that is expected to propel the country to its development destination is a clear indication that the construction of such projects adversely affects the lives of the people.

At Apaaso, the women explained that with electricity they can start a business such as selling iced water, adding, "we can cook easily with electricity, iron our cloth and this will make life easy."

Energy is essential for meeting basic human needs, reducing poverty, creating and accumulating wealth and sustaining advances in social development, without electricity people are not able to refrigerate and therefore have difficulty preserving their food and other items.

Mrs. Gertrude Koomson, Public Relations Officer of the Volta River Authority does not agree with the re-settlers' assertion that they should be connected to electricity because they are near the dam.

"It is a national resource that is pooled for everyone. If that is the case then we will have people in cocoa communities asking for free chocolate, while those in the mining community will ask for gold to be distributed amongst them," she stated.

Emelia Ennin

Akosombo Hydropower dam : No joy at Apaaso!

By **Koukou Mara**, *Le Lynx-la Lance/REPUBLIC OF GUINEA*

The training of journalists held in Accra from 17- 21 May 2010 under the topic: "The Contribution of large hydraulic infrastructure for the sustainable development of West African countries" was not conducted only inside Paloma Hotel that hosted it. It was marked by a field visit to Adjena Apaaso and the outskirts of the dam.

On May 19, 2010, the journalists from countries of the West African sub region were at Akosombo on the dam worksite, located on the Volta River built in 1965, for hydropower generation. Just for the media women and men to understand the problem of large water infrastructure. "The district owes its existence to the Akosombo dam. Before its implantation, there were only 10 households. Today, the district has 24,000 inhabitants. In all, 80,000 people were resettled in 52 communities", Meister Afriyie, Mayor of Akosombo said.

After visiting the facilities of the dam, around 3 o'clock in the afternoon, we headed for Adjena, the first community visited. No representative, to the dismay of journalists who wanted to exchange with that community. "The village chief lives in Accra. He waited for you all the morning, he has gone back. Nobody should speak without his authorization", we were told. The tour continued; the next stop was the village of Apaaso. At 4:15pm, the journalists were welcome by the villagers.

Alternately, the village elders told us what they think of the Akosombo and Kpong dams facilities. "Before 1963 we were on the other side of the dam. There, we had our fields and many houses. For us to be relocated here, we received only one room each", said an old man who added: "Before our resettlement, some of us had four or five concrete houses on the original site. Here, the authorities came and built mud bedrooms for us. They promised us the moon. They told us that the electricity would be free for us. When the dam began operating, we were asked to pay Ghanaian



Cedis 200 to have electricity. In addition, we have no water at all times. We have lost our best agricultural land. Because of this, young people have migrated. They either go to Accra or Kumasi, in the big cities in search for better living conditions. Our women have become idle because there are no more income-generating activities. There are no sanitary facilities, either", the sixty-year-old man said indignantly. And another villager went further: "The installation of the dam made us so poor that we are unable to provide education for our children". Actions were undertaken by the villagers to meet the authorities to restore their rights, in vain! "We wanted them to, at least, give us back our land. At the time of resettlement, the land we were allocated were later on taken back for other projects," the residents said. These villagers, who no longer know where to turn, invited the group of journalists to be their mouthpiece with the Ghanaian authorities. Pending resolution of their problems, they are still hoping to be heard!

Koukou Mara

VRA talks back

After the field visit of the journalists, the directorate of the Volta River Authority (VRA) responded to accusations made against them by the inhabitants of Apaaso. Speaking to journalists, Mr. Emmanuel Martey, Programme Officer of the VRA Resettlement, said that about 80,000 people were affected by the building of the dam. "These people have received compensations. 52 communities were established in other localities. At Apaaso, some lands were available but were not allocated. In principle, the Ministry

of Agriculture should have done that". He added, however, that the resettlement towns are not different from the other towns in the country. And he added that: "After installation, these villagers constantly received support for 4 or 5 years from the Government. Why should the authorities continue to pay them special attention 60 years after resettlement? The resettled communities always want to be treated like babies and this cannot continue. The time has come for them to understand that the government cannot always assist indefinitely".

Koukou Mara

Large dams: sources of disputes and linkages

By Edem Gadegbeku , *Golfe Info, TOGO*

Factors of national and intra-regional cohesion, dams, which are huge infrastructure remain unfortunately the source of potential conflict, too.

Only 17% of the hydroelectric potential of West Africa is exploited, according to expert estimates. The operation of dams in this part of Africa leads to painful consequences (local as well as foreign) for the local populations and the ecosystem. This is exactly the case with the works of Akosombo and Kpong (Ghana) that were put into service in 1965 and 1982 respectively, based on the exploitation of the catchment basin of the Volta River that flows over a distance of 1,850 km. In the opinion of Dr. Philip Gyau-Boakye, expert on West African rivers, the trouble involves both the communities relocated upstream of the structure of Akosombo as those located downstream, “because of, for example, the 12 km migration of the embouchure of the Volta, since the construction of the dam. Not to mention that the construction projects of Akosombo and Kpong dams represent a loss of farmlands to various populations”, Dr. Gyau-Boakye noted. On an international scale, “the Akosombo and Kpong dams contribute to coastal erosion not only in Ghana but also in Benin and Togo,” the specialist said. And, he added: “the construction of the Bagre Dam in Burkina Faso (Volta) several decades ago represents a potential source of conflict with neighboring Ghana. Water from the spillway of Bagre Dam sometimes causes floods in villages in Ghana. But commendable efforts are being made by both countries to cope with the situation. These two countries share 83% of the Volta Basin. There are so many nega-

tive impacts of the two major hydroelectric projects which are essential in the life of Ghana. However, they are far from overshadowing the many benefits that the former “Gold Coast” and other West African States are drawing from Akosombo and Kpong dams.

Integrating aspect

There discussions are ongoing on a project to supply water to the city of Lome (Togo) from Lake Volta “in addition to the fact that the electrical energy generated at Akosombo supplies neighboring countries.

To make the large West African dams perfect integration tools, P. Gyau-Boakye said: “We must find a balance between their positive and negative impacts, establish transparent and democratic legal procedures for their management.” The contribution of riparian communities should not be forgotten in the design of new dams construction projects. It is especially necessary to emphasize the establishment of a permanent dialogue between the different parties involved in such initiatives”, our interlocutor said.

Edem Gadegbeku



The Akosombo Dam, a symbol of regional integration

By Germaine Boni, *Fraternité Matin /CÔTE D'IVOIRE*

Located in the eastern part of the Ghanaian territory, the Akosombo Dam, the largest hydroelectric work the country, is a true symbol of sub-regional integration because of the fact that its production benefits to other countries and the variety of water courses and rivers that have contributed to its implementation.

Outside, six large pipes immersed in water, a large dike made of rocks, earth and clay, blocks the river, diverting water into these large pipes. Upstream of the barrier, stretches a 8502 km²-wide lake. Downstream, water runs out of the pipes. This is what a layman can note from a look on this work. It is actually a hydroelectric dam consisting of six units or six turbines and generators, according to Mr. Ben Klorthey, dam engineer commissioned to guide the visit of the West African journalists, who took part in a workshop in Accra on the theme: "Contribution of large hydraulic infrastructures to the sustainable development of West African countries". The initiative is from the executive secretariat of Global water partnership West Africa (GWP-WA), in the framework of the project to support water security in West African region "PIWAG". Since their operation, these turbines and generators work day and night. They receive water flow



from the lake to produce electricity. According to Rhoda Arthur, the dam's communications officer, the idea of building such a structure on the Volta Lake has been issued, for the first time, in 1915 by an Australian geologist. In his research, the scientist discovered the hydroelectric potential of the Volta River. We just need to remind that this lake is the converging zone of many rivers which originate from Cote d'Ivoire, Togo, Benin, and Burkina Faso. The geologist also found bauxite, diamonds, and gold reserve on the Ghanaian territory. To better exploit these natural resources, he suggested the construction of a hydroelectric dam in the area. It was only after independ-

ence that the then President of Ghana, Dr. Kwame N'krumah, was able to obtain funding from donors for this work to come out of the water, now the pride of Ghana and the rest of the sub-region. Entrusted to an Italian company, the construction of the dam lasted three years (January 1962 -September 1965) and has cost US\$196 million to the Ghanaian government. "In construction, production was estimated at 912 megawatts, but now, after rehabilitation and because of increased demand, it has risen to 1,020 megawatts," Rhoda said. She added that the purpose of the dam is not just electricity but also the country's industrialization and the development of other activities, such as river transportation, modern fishing. With this capability, Akosombo produces 67% of electricity in Ghana, and some is produced by the second dam of Kpong (160Mw) downstream of Akosombo and two thermal power plants.

After meeting the domestic demand, Ghana exports part of its production to neighboring applicant countries: Burkina Faso, Benin, Cote d'Ivoire, and Togo. When there is a decline in production, the Ghanaian authorities call for help from other countries, including Côte d'Ivoire where it imports energy. "Due to the location of the dam, we depend on the rainfall of Togo, Côte d'Ivoire, and Burkina Faso. When we see a drop in river levels, we immediately request the authorities of other countries to provide us with electricity", said Rhoda. For her, all these exchanges come within the scope of inter- State co-operation.

Germaine Boni

HUMOUR

Akosombo, a town created by a dam

Akosombo owes its existence to the dam. It is surrounded by villages and camps which are also created thanks to the construction of the dam. After an hour and half drive from Accra (without traffic jam from Tema), visitors are amazed by the landscape: green forest, hilly land (mountains and hills) that are a characteristic of this region and an attraction for tourists. "The landscape is beautiful and relaxing. You breathe the fresh air of the forest", exclaimed Celia d'Almeida of radio Klédu in Mali, my neighbor in the bus. In this converted greenness, hotels, restaurants, schools, and hospitals enhance the beauty of the landscape. The mayor of the town of Akosombo, Mr. Meister Afriyie, affable, strives to improve the lives of 24,000 citizens.

By Germaine Boni

Abdoulaye Doumbouya, Representative of the Niger Basin Authority (NBA) “No problem if every country plays its role”

By **Sani Aboubacar**, *L'Evènement*, NIGER

Three members of the NBA launched the work to build three large dams, to enhance their socio-economic development. After a visit to the site of the Akosombo dam, we spoke to the representative of the Niger Basin Authority. Although Abdoulaye Doumbouya, Head of operations division, appreciates the Akosombo hydroelectric work, he discusses the problems of large dams in the Niger basin and the need for countries to better manage water resources.

Inf'O: *You've just toured the facilities of the Akosombo dam. What are your impressions?*

Abdoulaye Doumbouya: The Akosombo Dam is among the top ten of West Africa in terms of construction of hydroelectric work. Given the state of maintenance, I can only tip my hat at them. Frankly, I welcome the commitment of authorities responsible for managing this work.

Three of the nine member countries of the NBA plan to build a large hydroelectric dam each. Can you say the reasons behind these projects?

The main reason that led to these projects is mainly to take advantage of the water in the river. They will help regulate the river flow, but also increase agricultural areas. We must not warp our eyes; as long as Africa will fail to feed its people, we shall not develop. All the nations that have developed began by feeding their populations.

Therefore, these three works will really help the countries of the basin to take-off at food security level. So far, there is one work that regulates the river. According to the simulations that have been made, taking into account climate changes, the river may stop one day right after the delta if it is not regulated as soon as possible. In addition, the basin is facing sand filling, with a risk of decrease in the flow in the years to come.



Is the construction of large dams a factor of integration or potential sources of conflict?

We are in an umbrella organization of nine States that have a common vision. To translate it into concrete action, there is the social and economic component which is a priority. The Heads of State themselves have adopted this model of development. With the Fomi Dam in Guinea, there will be more than 200,000 hectares available for agriculture. At Taoussa Dam in Mali, there will be over 10,000 and the same for the Kandaji Dam in Niger. Thus, it is together that the countries have decided that these infrastructures should be built. At the same time, we have legal frameworks, especially the Water Charter signed by the Heads of State and currently ratified by seven countries. Four States have already deposited their instruments at the headquarters in Niger. So, there are principles that help manage water in a concerted manner. Given all these elements, we can say that there will be no problem if every country plays its role and accepts the rules that were laid down.

Interview by Sani Aboubacar

Akosombo Dam Too Strong for Earthquake?

By **Frederic Asiamah**, *Public Agenda/ GHANA*

Earthquakes, like all natural disasters, leave a lot of destruction in their trail. They have little respect – if any at all – for all manner of infrastructure. Like death, they destroy everything in sight, neither sparing the great nor small; the strong nor weak; the rich nor poor.

Roads, bridges, forts, and big water infrastructure like dams are all at risk. This came up during discussions on the resistance or otherwise of a dam to an earthquake, especially in view of recent advocacy for a collaborative establishment of big infrastructures on West Africa's major water bodies, to allow for equitable, fair, and democratic distribution of the precious resource.

Indeed, there has been a lot of talk in recent years about trans-boundary management of water resources. The school of thought behind this proposition is that "there is strength in numbers".

This was emphasised at the fourth Global Water Partnership GWP West Africa (GWP-WA) training workshop for West African journalists. The workshop, held from Monday May 17 to Friday May 21, 2010 in Accra, was on the theme: *The Contribution of big water infrastructures to the sustainable development of countries in West Africa*.

On Wednesday May 19, 2010, there was an opportunity for participating journalists to visit the Akosombo Dam, a hydroelectric dam in the southern part of the Eastern Region of Ghana in the Akosombo gorge on the Volta River. The dam generates 1020 megawatts of electricity for industrial and domestic purposes in Ghana. Power from the dam also serves Lomé, capital of Ghana's right-hand neighbours, Togo.

Besides, the Akosombo dam has associated benefits for fishing, irrigation and others, according to Emmanuel Martey, Resettlement Officer, Volta River Authority (VRA).

It had been earlier established that earthquakes have

already become more common due to the crustal re-adjustments from the added weight of the water within Lake Volta (Gyau-Boakye 2001).

During the May 19 visit, Rhoda Arthur, assistant information officer of VRA, while introducing the team of journalists to the massive, and indeed, imposing infrastructure, intimated that in the event of an earthquake the dam will settle in.

"If there is earthquake the dam will just settle in and we might be safe," she said.

This is because it is composed of laterite in the middle – there is a mix of clay and sand and rocks in the middle of the dam. A quake is most likely to cause minimal damage to the dam.

Perhaps, this is reassuring, particularly for Ghanaians, against the backdrop that last January's earthquake in Haiti had reignited debates about Ghana's preparedness for such disasters, should they occur.

It is argued that Ghana is located well clear of the major earthquake zones of the earth. Nonetheless, Ghana has had its fair share of earthquakes. There have been damaging earthquakes in 1615, 1636, 1862, 1906 and 1939. It was recorded, for example, that in 1615 an earthquake destroyed what was then known as Takoradi.

In 1636, an earthquake occurred in Axim in the Western Region and the whole of East Nzema was badly shaken. It caused a widespread collapse of buildings in that area. A gold mine in Aboasi, northeast of Axim was also reported to have collapsed, burying many of the miners.

The 1939 earthquake in Ghana, which registered 6.5 on the richter scale took the lives of 17 people and properties worth one million British Pounds were destroyed.

Additionally, the country has experienced smaller ones or earth tremors, the most recent being in 1997, 2003 and 2006.

In more recent times, Weija and Accra (in Greater Accra Region), Ho (Volta Region), Axim (Western Region), and Elmina and Cape Coast (Central Region) have been mentioned as some of the earthquake-prone areas. Geologists have pointed out that, any location within 50-kilometer radius of an earthquake prone area is at risk.

People living in low-lying areas, reclaimed lands and hills are particularly at risk. Generally, the caution has been that those living in the southern part of Ghana should always prepare against an imminent earthquake; it could happen any time, but as to the exact day and time nobody can tell.

Thankfully, Akosombo dam appears too strong to collapse in the event of an earthquake.

Frederick Asiamah



Construction of New Dams

...Government Urged to Take Second Look at Impacts

By **Ankah Gertrude**, *Ghana Observer/ GHANA*

Every decision taken by leaders of every nation is geared towards benefitting its people and the nation as a whole, although it is sometimes intended to gain favour from the people.

Even though some economic decisions like mining projects tend to negatively affect the lives of the people, some economic projects like hydropower dam construction, go a long way to help the nations from generations to generations.

The Akosombo dam has been of service to the people of Ghana and some of its neighbouring countries for some decades now, but just as anything during its productivity wears out as time goes by, or if it is subjected to too much pressure, construction and operation of the Akosombo dam has also resulted in some negative impacts.

Dr. Philip Gyau- Boakye of the Water Research Institute of the Centre for Scientific and Industrial Research of Ghana, has therefore called on the government of Ghana, to learn from its past mistakes with regard to the construction of new dams and the problems associated with their operation.

Using the Akosombo dam as a case study in an exclusive interview with this reporter shortly after a presentation at a workshop for 40 West African journalists in Accra, he said the Akosombo Hydroelectric Project (HEP) benefited some industrial and economic activities with the addition of lake transportation, increased fishing, new farming activities along the shoreline and tourism.

He added that the power generated has provided for primary interests within Ghana, while also supplying power to the neighbouring countries of Togo, some parts of Cote d'Ivoire, Burkina Faso and Benin.

"Ghana's industrial and economic expansion triggered a

higher demand for power, beyond the Akosombo HEP capabilities. By 1981, a smaller dam was built at the town of Kpong, downstream from Akosombo and further upgrades to Akosombo have become necessary for maintaining hydropower output," he said.

He stated that initially, the dam's power production capabilities greatly overreached the actual demand; while, the demand since the dam's inception has resulted in the doubling of hydropower production.

Increasing demands for power, he said, exceed what can be provided by the current infrastructure. "Power demands, along with unforeseen environmental trends, have resulted in rolling blackouts and major power outages. A trend of lower lake levels has been observed, sometimes below the requirement for operation of the Akosombo dam."

Dr. Gyau- Boakye also disclosed that following the construction of the dam at Akosombo, there was a steady decline in agricultural productivity along the lake and the associated tributaries. He said land surrounding Lake Volta was not nearly as fertile as the formerly cultivated land residing underneath the lake, and heavy agricultural activity has since exhausted the already inadequate soils.

He pointed out that the upstream agricultural systems have lost soil fertility without the periodic flooding that brought nutrients to the soil before the natural river flow was halted by the dam. "The growth of commercially intensive agriculture has produced a rise in fertiliser run-off into the river. This, along with run-off from nearby cattle stocks and sewage pollution, has caused eutrophication of the river waters," said Gyau-Boakye.

He was however quick to add that, the nutrient enrich-



Akossombo dam



ment, in combination with the low water movement, has allowed for the invasion of aquatic weeds (*Ceratophyllum*). These weeds, according to him, have become a formidable challenge to water navigation and transportation.

Dr. Gyau- Boakye continued that the presence of aquatic weeds along the lake and within the tributaries has become even a greater detriment to local human health. “The weeds provide the necessary habitat for black-fly, mosquitoes and snails, which are the vectors of water-borne illnesses such as bilharzia and malaria. Since the instalment of the dam, these diseases have increased remarkably. In particular, resettlement villages have show an increase in disease prevalence since the establishment of Lake Volta, and a village’s likelihood of infection corresponds to its proximity to the Lake,” he said.

Children and fishermen have been especially hard hit by this rise of disease prevalence. Additionally, the degradation of aquatic habitat has resulted in the decline of shrimp and clam populations. The physical health of local communities has been diminished from this loss of shellfish populations, as they provided an essential source of dietary protein. Likewise, the rural and industrial economies have experienced the financial losses associated with the decimation of river aquaculture.

Mr. Gyau-Boakye further explained that the loss of land experienced by the 80,000 people forcibly relocated meant the loss of their primary economic activities such as fishing and

agriculture, loss of their homes, loss of their loved ones’ grave sites, loss of community stability, and the eventual loss of important social values.

He also stated that the resettlement programme demonstrated the social complexities involved in establishing “socially cohesive and integrated” communities, adding that “The high death rate among the elderly community members following their resettlement is representative of the psychological and social burdens accompanying a resettlement programme”.

He said insufficient planning resulted in the relocation of communities into areas that were not capable of providing for their former livelihoods and traditions.

The loss of the naturally fertile soils beneath Lake Volta, according to him, essentially led to the loss of traditional farming practices which led to poor living conditions. Dr. Gyau- Boakye was of the view that the aforementioned conditions provided within the resettlement villages have been demonstrated by population reductions since resettlement. “Increased economic risks and experiences of poverty are associated with those communities most impacted by the Volta River’s development. The extensive human migration and degradation of natural resources within the Volta-basin area are the products of poverty in conjunction with population pressure” he said.

Gertrude Ankah



Tamsir Ndiaye, Coordinator of the African Network of Basin Organizations “Dams are issues of major stakes”

By **Abdoulaye Thiam**, *Le Soleil/ SÉNÉGAL*

In this interview, Mr. Tamsir Ndiaye, Coordinator of the Africa Network of Basin Organizations, Director of the Observatory of the Organization for the Development of the Senegal River (OMVS) explains the major issues at stake on dams. He believes that African countries must join together to make infrastructure that are certainly costly, but necessary for development.

Inf’O: *there is little development of water infrastructure in Africa. What is the reason for this situation? What is the use of a dam in a developing country?*

Mr. Tamsir Ndiaye: I must say that the small number of dams in our continent is linked to the financial ability of countries. It is difficult for a single country to mobilize funds for large scale projects. Countries in the same geographic area should agree to borrow from development partners who are not always in favor of the development of infrastructure arguing that the impacts are not always positive. These are long-term works whose funding is very expensive, whereas donors prefer to invest in other areas with immediate results.

What are the issues at stake of these dams?

There are major issues at stake. Look at what is happening in the Americas or Europe. These infrastructures contribute to the rapid development of countries with energy production.

This source is necessary if one wants to achieve certain goals. Dams facilitate the development of agriculture and when you have energy and good agriculture you have the foundation for development.

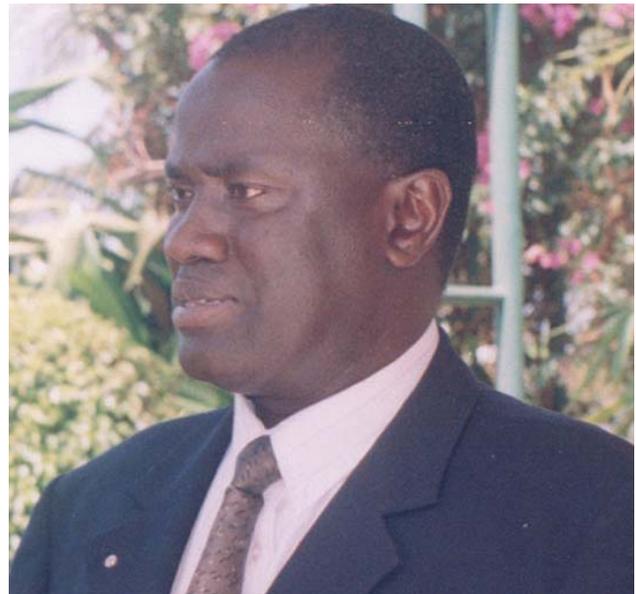
What would you recommend, if you have to?

I would ask Governments to pool their strength and together they would be able to raise necessary funds to make large dams. Management mechanisms should be set up and the impacts taken into account.

Negative impacts of dams have been noticed, especially waterborne diseases and invasive plants. What is OMVS doing on this?



Bassins organisations representatives and others during panel debate with journalists



It should be noted that dams undeniably alter the ecosystem. There are negative impacts but we must find ways to minimize them. In the Senegal River, there are invasive plants and diseases such as malaria and bilharzia. In its mentoring program, OMVS has taken measures in the riparian villages, by providing medicines and support to health centers along the River. We have involved NGOs, civil society and grass-root community organizations with whom we are bound by performance contracts. Through media, we participate in the outreach activities. The education sector contributes to the awareness of students on some waterborne diseases.

What are the positive impacts?

There are the small irrigation and traditional fishing. Concerning Manantali Dam, in Mali, fishing has become a central activity. We have taken all the measures to help fishermen organize themselves and equip them with refrigerated trucks so that they can sell their products up to Bamako via other cities in the country. We also allowed the installation of outboard motor mechanics. Thus, we participate in the self-development of the locality. These initiatives contribute to improving the living conditions of populations.

Interview by Abdoulaye Thiam

Capacity Building Workshop for West African Journalists Held in Accra

By **Azumah Dzifa**, *GHANA News Agency*
& **Freeman William**, *Awoko/ SIERRA LEONE*

Information Minister of Ghana, Mr. John Tia Akologu, has said in-service training is very important in every sector, in order for workers and professionals to catch up with changing trends in their occupations and careers.

"It is however a must for those who are in the journalism profession, since it is their duty to inform and educate society on issues concerning their daily lives in every aspect," he said.

Mr. Akologu said this at the opening of a five-day workshop in Accra Ghana, for journalists from 14 west African countries interested in water issues, who are also members of the Global Water Partnership (GWP), West Africa serve list.

The workshop, the fourth since 2007, was held from Monday May 17 to Friday May 21, 2010, on the theme; "The Contribution of Big Water Infrastructures to the Sustainable Development of Countries".

It was organised by the Global Water Partnership (GWP) West Africa, in collaboration with the Ghana Country Water Partnership (CWP) and with support from the European Union (EU).

The workshop was aimed at addressing the many challenges related to the management of water resources and their mobilisation for development purposes and also to equip Journalists in West Africa to sensitise politicians and riparian populations to get a better knowledge of these challenges.

Addressing participants, the Information Minister said the Ghana government beginning this year, would provide scholarships to 20 media personnel inclusive of 10 females, in specialised programmes every year.

Training Journalists, he said, would help them disseminate accurate and reliable information to the public on government policies and programmes, to ensure that the populace is enlightened and brought on board government's development agenda.

The enlightenment extends to the management of water, a vital resource, especially at a point when climate change is recognised as the greatest threat to socio-economic development and certainly a threat to the life-sustaining resources, water and land resources especially in the tropics, where high temperatures are forecasted, he said.

Mr. Akologu said the importance of water cannot be overemphasised, adding that water certainly ranks next to air, hence the cru-



sade on awareness creation to ensure sustainable management of the resource.

Mr. John Tia Akologu said it was the policy of his Ministry to facilitate the human resource development programmes of its sector agencies to enhance efficiency in the media and information sector, adding that it would leave no stone unturned to support the media in capacity building programmes.

The Information Minister commended organisers of the workshop for the inclusion of women in building capacity and undoubtedly putting into practice the four principles of the Dublin Conference in 1992, which among other things stated that freshwater was finite and vulnerable, essential to sustain life, development and the environment.

He contended that the women will play a central role in sensitising the populace on sustainable management of the all important resource, water and described the workshop as a welcome opportunity that gives him the platform to interact with media personnel, especially because the media constitutes the Fourth Estate.

Mr. Nii Boi Ayibotele, Chairman of the CWP, said in making provision for water, there was the need not to focus on human life alone, but the ecosystem as a whole to ensure that countries did not compromise on the future.

Water resources, he said, are a global challenge and need to be managed by bringing all stakeholders on board. The chairman disclosed to participants that one of the problems they are faced with at the Integrated Water Resources Management (IWRM) is to communicate knowledge and information to create awareness and to change attitudes and beliefs so as to secure the informed participation of people in Integrated Water Resources Management.

"Therefore it is appropriate that within the framework of IWRM, we address the issue of communication to sensitise and make aware various categories of people from policy makers, regulators, law makers, planners, managers, educators, designers, operators, service providers to users of water," the chairman stated.

Mr. Dam Mogbante, Executive Secretary of GWP, West Africa, encouraged governments of the West African states to take the issue of development of big water infrastructures as a major concern as it is a vital tool that contributes to the reduction of poverty which is now a great concern of the sub-region.

"Water is an undeniable development factor whose good governance leads to poverty alleviation and the betterness of living conditions of the population. Its bad management is a factor for degradation of living conditions and shows lack of global governance for the country," Dam Mogbante stated.

The GWP, he said, believes the media has the capacity to influence and change attitudes in people, adding that the media has an important role to play in awareness creation for the development



L-R Executive Secretary of GWP- W/A, Dam Mogbante, Ghana's Minister of Information, John Tia Akologu and Nii Boi Ayeibotele; Chairman of GWP-Ghana

of infrastructure and the optimal utilisation of water resources. He commended Ghana for being the first country in west Africa to create the biggest artificial lake, not only in west Africa but the world at large through the Akosombo dam, which neighbouring Togo is also benefiting from.

Over forty Journalists from 14 West African countries participated in the five-day capacity building and sensitisation workshop on the improvement of water development, management and governance in west Africa.

Dzifa Azumah & William Freeman



GWP / WA strengthens journalists' knowledge on large dams

By Assane Koné, *Le Republicain / MALI*

The 4th Regional capacity building workshop for media men and women, initiated by Global Water Partnership / West Africa (GWP / WA), focused on the topic "The contribution of large water infrastructure to the sustainable development of West African countries". This workshop which was organized in collaboration with the Country Water Partnership (CWP) of Ghana, with funding from the European Union, aims to inform and sensitize on the challenges of managing water resources and their mobilization for development.



Group picture of participants with the Minister of Information of Ghana (middle)

On May 17, 2010, His Excellency John Tia Akologu, Information Minister of Ghana, chaired at Paloma Hotel Accra, the opening ceremony of the workshop, which recorded three interventions. Nii Boi Ayebotele, Chairman of the Ghana CWP stressed the importance of Integrated Water Resources Management for our lives, economy, and environment by inviting men and women in the media to make every effort to educate people about the importance of IWRM. For his part, Mr. Dam Mogbanté, Executive Secretary of the West Africa Water Partnership, said the workshop was a good opportunity for his institution to demonstrate its commitment to awareness raising of the masses on issues related to the good management of water resources. He said water is an undeniable factor of development. *"The good management of water contributes to poverty reduction and improving people's living conditions; poor management, on the other hand, is a factor of degradation of living conditions and shows a lack of general governance,"* he said. He added that the choice of the topic for the Accra workshop is a proof of the willingness of the West Africa Water Partnership to take into account the concerns of the West African States. Dam Mogbanté recalled that ECOWAS has launched a dialogue on

large water infrastructure. He stressed that the challenge for our countries in a difficult climate change context is the effective mobilization and optimized use of water resources for development purpose. According to him, this also involves infrastructure. *"Depending on their configuration, they participate in the development of agriculture, fisheries, energy production and, to a certain extent, in regulating the flow of rivers,"* he added. He recalled that the same infrastructure can have negative impacts on the environment and human, if appropriate measures are not taken upstream. Hon. John Tia Akologu, Ghanaian Minister of Information, for his part, indicated that the time has come for people to understand the issues related to the good management of water resources. He quoted, as example, the initiatives of Radio Klédu in Bamako for its program "Nyugudji" and the Burkinabe newspaper "Le Pays" for its column "Espace Environnement" and invited all the other media to follow suit. This workshop comes within the framework of the project to support water security in West Africa (PIWAG) implemented by GWP-WA, with funding from the EU.

Assane Kone

ADB to Sponsor Survey on Hydro Potential of Mano River

By **William Freeman**, *Awoko/ SIERRA LEONE*

The Deputy Secretary General of the Mano River Union, Simeon Moriba, has disclosed to Journalists during a panel debate between the media and authorities of different river basins in West Africa that the African Development Bank (ADB) will be providing funds for a study to be undertaken on the hydro potential of the Mano River.

The Mano River, Guinea, starts from the Guinean Island and it flows through the Atlantic Ocean to separate Sierra Leone and Liberia. Initially Sierra Leone and Liberia saw the need to form a Union of the Mano River between the two countries in 1973 and that led to the establishment of the Mano River Union (MRU) with its secretariat in Freetown. Guinea was encouraged to join the Union in 1980 and Ivory Coast in 2008, making it a four member Union.

Simeon Moriba represented the Mano River Basin at a meeting of river basin authorities and Journalists that participated in the 4th Sub-regional workshop organised by the Global Water Partnership –West Africa.

The MRU representative intimated to the Journalists that experts will be conducting a study that will last for two years on the hydro potential of the river and also to see whether it could serve as a source for agricultural productivity for the economic good of member states.

He said a study on the river's hydro potential has been conducted before but it was not operationalised because of the civil wars in Liberia and Sierra Leone.

The MRU Deputy Secretary further stated that after the study is completed the secretariat will in collaboration



Simeon Moriba, MRU Dept. Secretary during a visit to the Akosombo Dam in Ghana

with the different member states start searching for funds to actualise the project.

When asked how realistic the establishment of a Mano River hydro project will be and how soon it will be realised, Mr. Moriba said: "It is a dream that can be realised but cannot be given a definite timeline, considering the necessary requirements and negotiations involved.

William Freeman



Journalists visiting the machines of the dam down inside the installation

Akosombo dam : Time to act

By **Obi Amako**, *The Sanitarian Newspaper/NIGERIA*

(with references to studies by GWP West Africa water writers, Gyau-Boakye, and Zakhary)

At independence, Ghana had a substantial physical and social infrastructure and \$481 million in foreign reserves. The Nkrumah government further developed the infrastructure and made important public investments in the industrial sector.

With assistance from the United States, the World Bank, and the United Kingdom, construction of the Akosombo Dam was completed on the Volta River in 1965. Two U.S. companies built Valco, Africa's largest aluminum smelter, to use power generated from the dam. Aluminium exports from Valco were a major source of foreign exchange for Ghana.

Many Nkrumah-era investments were monumental public works projects which were assets for the country, agricultural and industrial schemes. With cocoa prices falling and the country's foreign exchange reserves fast disappearing, the government resorted to supplier credits to finance many projects.

By the mid-1960s, Ghana's reserves were gone, and the country could not meet repayment schedules. To rationalise, the National Liberation Council abandoned unprofitable projects, and some inefficient state-owned enterprises were sold to private investors. Ghana then went into a long battle with debts.

Fortunately, today the economy of Ghana after long years of turmoil has a diverse and rich resource base, and as such, has one of the highest GDP per capita in Africa. Ghana remains somewhat dependent on international financial and technical assistance as well as the activities of the extensive Ghanaian Diaspora. Gold, timber, cocoa, diamond, bauxite, and manganese exports are major sources of foreign exchange. And all these will not be dissociated from the continuous supply of electricity from the country's major source of power generation - the Akosombo dam.

Recently an oilfield which is reported to contain up to 3 billion barrels ($480 \times 10^6 \text{ m}^3$) of light oil was discovered in 2007. Oil exploration is ongoing and, the amount of oil continues to increase. The Akosombo dam-generated electricity is used and will continue being used for all these discoveries and other activities connected with exploration.

Ghana is mainly agricultural, with majority of its workers engaged in farming. Ghana Export Promotion Council is the government arm that operates, maintains, overlooks the planting of cocoa, cashew etc and other major crops for export. This agricultural arm of the government also harvests gold for export sales. Since its inception, it has drastically assisted the government in stabilising the economy and boosting it as illegal sales of the major crops/nuts have been meaningfully and instantly curbed and also rendering employment to thousands of Ghanaians. The Akosombo generated power is also in many ways helpful in the smooth running of the agriculture industry.

So it is not in doubt that the Akosombo dam is one of the

most important facilities ever built in Ghana. However, the understanding of the level of negligence witnessed in the surroundings of the Akosombo dam is totally in doubt.

In the time following the construction of the dam at Akosombo, studies have shown there has been a steady decline in agricultural productivity along the lake and the associated tributaries. The land surrounding Lake Volta is not nearly as fertile as the formerly cultivated land residing underneath the lake, and heavy agricultural activity has since exhausted the already inadequate soils.

Upstream agricultural systems are losing soil fertility without the periodic flooding that brought nutrients to the soil before the natural river flow was halted by the dam. The

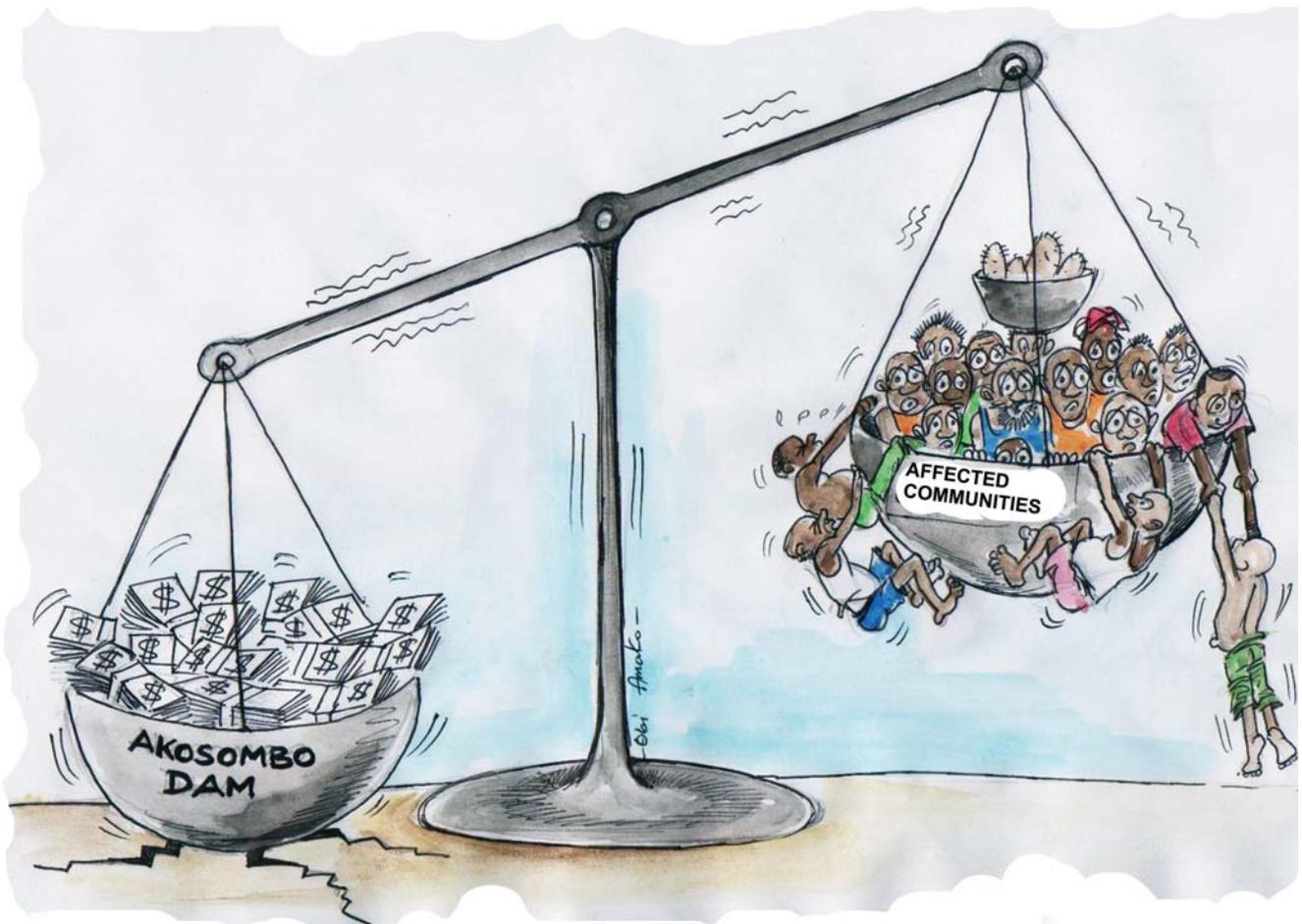


growth of commercially intensive agriculture has produced a rise in fertiliser run-off into the river. This, along with run-off from nearby cattle stocks and sewage pollution, has caused eutrophication of the river waters. The nutrient enrichment, in combination with the low water movement, has allowed for the invasion of aquatic weeds (*Ceratophyllum*). These weeds have become a formidable challenge to water navigation and transportation.

The presence of aquatic weed along the lake and within the tributaries has resulted in even greater detriment to local human health. The weeds provide the necessary habitat for black-fly, mosquitoes and snails, which are the vectors of water-borne illnesses such as bilharzia and malaria.

Since the installment of the dam, these diseases have increased remarkably. In particular, resettlement villages have showed an increase in disease prevalence since the establishment of Lake Volta, and a village's likelihood of infection corresponds to its proximity to the lake. Children and fishermen have been especially hard hit by this rise of disease prevalence. Additionally, the degradation of aquatic habitat has resulted in the decline of shrimp and clam populations. The physical health of local communities has been diminished from this loss of shellfish populations, as they provided an essential source of dietary protein. Likewise, the rural and industrial economies have experienced the financial losses associated with the decimation of river aquaculture.

The loss of land experienced by the 80,000 people forcibly



relocated meant the loss of their primary economic activities from fishing and agriculture, loss of their homes, loss of their loved ones' grave sites, loss of community stability, and the eventual loss of important social values.

The poor living conditions provided within the resettlement villages has been demonstrated by population reductions since resettlement. One resettlement village in particular experienced a greater than 50% population reduction in the 23 years following relocation.

Further studies by a group of West African journalists under the auspices of Global Water Partnership (GWP) West Africa also revealed that the resettled communities are currently living in decadence caused by unanticipated lapses in the resettlement scheme in the cases of Apaaso, Dasaasi, Ajena and the Ghanaian government admits this in various ways.

The situation underlines the strength of the local factors upon these districts. Commercial sex work was established in response to the thousands of male workers that were in the area for building the dam. Ten percent of the child-bearing females from these two districts migrated out of their districts during this time. In 1986, "ninety percent of AIDS victims in Ghana were women, and ninety-six percent of them had recently lived outside the country."

The changes in the river hydrology have altered the local

heat budget, which has caused microclimatic changes such as decreasing rain and higher mean monthly temperatures. All of these larger scale environmental impacts will all further compound the problems surrounding disruptions to local economic activities and associated difficult human welfare conditions.

With Ghana's present booming economy and the emergence of oil prospects, it is the time to revisit the issues surrounding this hurried dam. The government should utilise a large chunk of her juicy income to attend to these issues in order to curb a likely disaster in the near future. The communities that have been settled in new unfertile areas without basic amenities should be revisited with immediate effect and compensated appropriately for five decades of negligence. A proper evaluation should be carried out as to the efficiency of the VRA Trust Fund established to cater for the wellbeing of these forcibly resettled communities and also the implementation process well mirrored to ascertain if there were foul plays in the management of these funds.

Without the immediate revalidation of these processes the country would have done a great injustice to a large number of her indigenes and may have shot herself in the foot.

Obi Amako

Lessons to Learn from Akosombo

By **Muhtarr Jallow** / *The GAMBIA*

Before visiting Ghana I never had an understanding of what a dam looks like; not until I visited the Akosombo Dam in the Asougyaman district of the Eastern Region, about 160km from the capital, Accra.

Many other Gambians too have only read from papers, some in books, others from other people.

It is hoped that this report will give its readership more than imaginations about the Akosombo dam, which is a huge infrastructure lying between the two rocky mountains of the lake Volta which runs through Burkina Faso, Ivory Coast, Benin, Togo and Ghana. The River Volta runs through six countries; Mali, Burkina Faso, Cote d'Ivoire, Togo, Benin and Ghana.

The Accra West Africa sub-regional workshop which took me to Ghana, was aimed at informing and sensitising media men and women on the challenges related to the management of water resources and their mobilisation for development purposes.

The theme was "The contribution of big water infrastructures to the sustainable development of countries in West Africa."

It was sponsored by the European Union (EU) and organised jointly by Global Water Partnership (GWP) West Africa and the Ghana Country Water Partnership (CWP). GWP is an institution created in 1966 in Stockholm to support countries in the sustainable development and management of their water resources and its vision is for a water secure world.

In line with this mission, GWP - West Africa, gave itself the task of building alliance and the institutional capacities of its members in order to encourage and strengthen networks of research, expertise and information on integrated water resources management (IWRM).

From what I saw in Akosombo, dam construction is very scaring for any country that wants to build a dam as big as the Akosombo dam. Speaking to some of the villagers of Dasasi who were affected by the Akosombo dam project,

revealed that they were relocated from their old settlement since 1963 to resettle in this new place which is about 30-40 km from their original homes. They told a team of West African journalists that the resettlement package was done following consultations with the local chiefs by the government of the then President of Ghana Dr Nkrumah and these included provision of new farm land areas, housing, health facilities and schools.

According to them these houses do not commensurate with their previous houses, the rooms are small and they have no toilet facilities.

"We are also charged electricity like any other consumer", they added. The communities of Dasasi pointed out that even those lands given to them for farming purposes have now been taken away from them for the construction of two more new small dams and they are left with no other kind of economic activities.

They said that teenage pregnancy is very high as early as 13 years girls got parented because they have no other means of survival. Some of the men who were fisher folks no longer have places for fishing as they were advised to move away from their old settlement to avoid spillages from the dam which sometimes caused flooding.

In response to some of the affected villagers, the representative from the Volta River Authority (VRA) disclosed that the authority has created trust fund which they can tap to solved some of their community problems.

They said that it is high time now resettled communities change their attitudes, these people were living at this place for the past 40 years, but they still want to continue to depend on government.

The Gambian situation is a complex one that needs to be studied carefully as compared to the Ghanaian situation because most major towns in the Gambia starting from Koina, Fatoto, Basse and Bansang among others are all living along the River Gambia.

However since 1978 to date the governments of the Gambia, Guinea Conakry, Guinea Bissau and Senegal under the Gambia River Basin Development Organisation acronymed OMVG in French had tasked themselves to develop and Manage the Gambia River Basin. One of the development initiative is to build a dam across the Gambia River around Kedougou in Senegal in replacement of the then Balingho bridge barrage. The former was purposely to stop the salt water intrusion, thereby increasing agricultural production, particularly rice which is the staple food of the country and also to create easy access for the movement of people's and goods from northern Senegal across the Gambia into its southern regions of Cassamance.

Currently plans are on the way for the construction of a dam at Sambangalou in Eastern Senegal on the Gambia River to generate





hydroelectric power supply for the four member states of the OMVG namely: Senegal, the Gambia, Guinea and Guinea Bissau

Speaking to Mr Lamine Konate, the Hydrologist at the OMVG during our Accra workshop, also explained that the Balingho Bridge barrage could not take off because of the serious environmental impacts. He said that this project if it had been implemented could have been disastrous because about 600 Kilometres of the Mangrove in the Gambia could have disappeared and fish production could also cut down because of the high concentration of fresh water level.

Mr. Konate pointed out that similar studies were also conducted at Niokolokoba in Senegal but it also failed because of similar problems. He said that with Sambangalou Dam project also in Senegal the problems of The Gambia, Senegal and Guinea will all be addressed. "The Gambia is interested in reducing salt water intrusion by 100 km downstream, which will allow the Gambia continue to enjoy fresh water supply throughout the year by the construction of the dam. With regard to Guinea the Problem of illegal trafficking and transportation will also be solved, whilst Senegal's interest in hydro electric power will be addressed", Konate added. He disclosed that construction of dams have both positive and negative impacts on society. It is positive in terms of economic

growth, but it also have some negative effects in terms of social and environmental health issues.

Mr. Konate further pointed out that dam construction is not only putting up the structure but it has so many other factors that need to be looked into such as resettlement packages.

Speaking to this reporter the OMVG Environmentalist, Mr. Amadou Camara, also stated that there is positive impact in dams in terms of economic growth. Citing the river Gambia as an example which covers about 500km long and 250km of which is occupied by salt water, with a dam in place the issue of salt water intrusion is going to be addressed thereby giving access to more farmland to river side farming communities. He pointed out that the turbined water coming from the dam can stop the saline front at 150km from Banjul hence putting much land under rice cultivation throughout the year.

Muhtarr Jallow

Gap in West Africa's Electrification Blamed on Under Utilisation of Potential

By **Gertrude Ankah**, *Ghana Observer/ GHANA*

Mr. Ben Ampomah of the Water Resources Commission (WRC) of Ghana, has attributed the gap in electrification in West Africa to the under utilisation of hydropower potential by West African states.

He said only 17% of the large hydropower potential has been developed in West Africa, hence the growing gap in electrification.

During a presentation at a sub-regional workshop for selected journalists from 14 West African countries in Accra, he also underscored the importance of hydraulic infrastructure in the development of nations, saying West African economies are extremely vulnerable to hydrological variability.

According to him, government must invest in water storage through infrastructural development since it is very critical, adding that hydraulic infrastructure development is a principal driver to boost economic growth needed to reduce poverty and accelerate development in Africa.

He observed that the volume of water storage capacity per person for West Africa is 540m³ compared to the world average of 963m³.

He said the current state of underdeveloped infrastructure in West Africa results in losses of about 5% of GDP due to poor coverage of water and sanitation, 2% of GDP to power outages, between 5-25% to droughts and floods in affected countries, and 5% to the future impacts of climate change.

Mr. Ampomah was of the view that agricultural water management in the region has been woefully deficient, which has led to a food import bill of over US\$17 billion annually.

He said food security and water security are closely linked, hence this requires harnessing and development of water infrastructure to support agriculture production.

He added that weak development of water facilities is having an impact on the continent's health, cities, agriculture, energy, industry and environment.

Touching on the Hydraulic Infrastructure Needs of West Africa, he said dams/reservoirs provide storage for water used for hydroelectric project (HEP) and supplied for households and irrigation.

He further stated that "the expansion of infrastructure has a positive relation with increase in urban water and sanitation coverage, while treated sewage is a valuable source of water. But wastewater treatment facilities for reuse are much less developed and endanger public health and pollution"

Mr. Ampomah continued that infrastructure for dealing with industrial waste is lagging. Countries are encouraged to have industrial zone infrastructure for effluent treatment, he said.

He further pointed out that flood control or protection systems are critical for disaster management and reduction in vulnerability. He added that multipurpose infrastructure should and would serve as a major driver for transboundary cooperation, regional integration and development.

On the way forward, he said development requires investments in infrastructure as much as in water management



institutions.

"Proper management of the infrastructure goes with development of appropriate management institutions. Development requires investments in infrastructure as much as in water management institutions," Mr Ampomah asserted.

Gertrude Ankah

Hydraulic Infrastructure in West Africa... **Alarming figures**

By Assane Koné, *Le Republicain* / MALI

With only 17% of its hydroelectric potential used and a food import bill of over U.S. \$ 17 billion per year, there is no doubt that the underdevelopment of Africa is partly due to its low level of infrastructure of all kinds, especially hydraulics, mainly in the West.

To feed its population whose growth rate is one of the highest in the world, the continent has irrigated only 6% of its potential of 35 million ha of land. This represents only 2.3% of irrigated land in the world against 37% for Asia. But this is not surprising when you consider that out of the 45, 000 large dams in the world, Africa has only 1,300, or 3%.

In this meager share, West Africa does not look good. Only 110 large dams are installed, with 78 for Nigeria.

But most of the economies of the West African States, based on agriculture, are becoming increasingly vulnerable to climate change. The water control through the development of large water infrastructure arises in this area is an urgent obligation. Since West Africa cannot continue to lose part of its GDP because of water control problems. Mr. Ben Ampomah, from the Ghana Water Resources Commission, is categorical: “West Africa loses 5% of its GDP due to poor water and sanitation coverage, 2% for power outages, 5 to 25% due to droughts and floodings, and 5% will be lost due to future impacts of climate change”.

Conscious of this, the ministers in charge of Water of the



Journalists on their way to Akosombo taking a rest

African countries, admitted in a statement in Tunis in 2008 that: “The development of water infrastructure is the main engine to launch the economic growth needed, in order to reduce poverty and accelerate development”. Even better, in the same year, the Heads of State and Government of the African Union placed “the issue of water infrastructure in the center of the priorities of the development agenda”.

If, today, there is no doubt that development in Africa is through the construction of major infrastructures, the continent will have to face a significant financial gap.

According to Ben Ampomah, the financing gap for the extension of major infrastructure is estimated to U.S\$ 50 billion / year. He said U.S. \$ 5 billion will go to the construction of multipurpose water reservoirs, US\$ 20 billion for predominantly hydroelectric reservoirs, US\$5 billion for irrigation water control, US\$12 billion for drinking water and sanitation, US\$1 billion for desalination and US\$ 2 billion to support non-structural measures and management institutions.

Assane Koné



Mrs. Rhoda Arthur, Assistant information of the VRA

“We play a big role in the economy of the sub-region”

By **Léonce Houngbadji**, *L'Opinion Infos/BENIN*

The usefulness of the Akosombo hydroelectric dam in the economic development of Ghana and other countries of the West African sub-region that benefit from its services is clear enough. This dam that was built by an Italian company at \$196 million and put into service in September 1965 forces the admiration of everybody because of the quality of its equipments, allowing a gradual increase of its energy production capacity. In an interview she gave us, at Akosombo, the public relations officer of the Volta River Authority (VRA- set up by Ghana for the management of the dam), Mrs. Rhoda Arthur talks about the genesis of the station, the activities that have been developed, and the problems it may create.

The Akosombo dam is now the pride of Ghana. Could you make us know it better?

In 1915, an Australian geologist discovered the hydroelectric potential of the river Akosombo. With the independence, the then Ghanaian Head of State, Dr. Kwame Nkrumah, succeeded in mobilizing funds for energy exploitation of that river with the World Bank. Before starting works, he began negotiations with the chiefs of villages in the area. In total, 80,000 people were resettled. This enabled the launching of the site. The dam is made of rocks, clay and sand. Started in January 1962, its construction has met all the international standards in this area, so that even if there were an earthquake today it will have no impact on the facilities. To date, the power generation capacity of the dam has risen from 912 to 1020 mw.



When listening to you, everything seems rosy in Akosombo. Do you think that the initial objectives are achieved, in other words, are the beneficiaries satisfied with your services?

At that time, the first vision was the industrialization of Ghana. The service we could provide to the neighboring countries was not a priority. But today, everyone agrees on the importance of the dam for both Ghana and the other States that benefit from it: Benin, Burkina Faso, Togo, and Cote d'Ivoire. So, this is just to say that, in the end, everyone is satisfied.

Are there any activities around the dam?

Of course, the dam is not just for energy production. River transportation is especially well developed.

Do you often face difficulties? If so, do they affect the neighboring countries?

When the water level gets low, there is a problem automatically. The more there is water, the more we can generate power. We depend on high rainfall and we just have to go by. To answer the first part of your question, I say “yes”. But these are usually minor problems that we try to solve immediately. Concerning the second part of your ques-

tion, it is obvious. It is a causal relationship. When there is any problem on the dam, our partners of the other countries will undoubtedly feel the impact. The dam plays an important role in the economy of each of our countries.

How do you manage the periods of flooding and what are your relations with the riparian populations?

We have reservoirs. In times of flood, we open the gates to spill out. Up until now, we have not yet experienced flooding problems. Since 1991, no disaster has been recorded on the dam. For this reason, we have excellent relations with the local populations.

Is the discharged water polluted?

Nothing of the kind! We do not use chemicals. If so, the 24,000 inhabitants of Akosombo would have all died already or suffered from various diseases.

What does Akosombo's production represent in the nation's consumption?

The electricity generated at Akosombo covers 65% of Ghana's needs.

Interview by Léonce Houngbadji

Fresh Water is a Finite and Vulnerable Resource

By **Muhtarr Jallow**, *GAMBIE*

For most people, fresh water is infinite and hence one can use it anyhow he or she wants to use it.

However, experts in the water resources sub-sector do not agree with this thinking. For them, fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.

Because of the increasing scarcity of water and lack of financial investment, the finite and vulnerable nature of water as a resource, as well as the increasing demands, it is high time that attitudes changed towards the way water is handled today, to move to a more responsible and efficient manner of use of water.

It is universally recognised and accepted that water is a basic human right for all people, meaning that every person has the right to have access to adequate clean water for sustenance.

The right can only be sustainable if we change our behaviours in the way we perceive its existence i.e. it is God given and is infinite and the way we use it especially in these days of unpredictable climate of the world.

Water Resources Status

The present use of the resource should be managed in a way that does not undermine the life-support system, thereby compromising use by future generations of the same resource.

Mr. Momodou S. Jallow, Principal Hydrologist at the Department of Water Resources in The Gambia, is also totally against this concept by many, describing it as false and baseless. He is also of the view that every natural resource has limitations, including water, noting that despite the fact that there is adequate water for now in The Gambia, must not warrant misuse of the water, consider-

ing that it has its limitations.

Mr. Jallow pointed out that water resources management is critical and necessary because the population is growing, the economy is also growing and there is increasing demand for water for direct consumption, agricultural production and industrial development, to mention a few amongst the many uses which have direct bearings on the quality and quantity of the resources.

“If our population is growing we will obviously have waste and the waste produced by the population if not properly managed, may impact negatively on the quality of our water resources, both surface and ground water.

“Therefore the management of water should not only focus on the judicious use of the resource, but must also include the protection of the quality of the resources, by timely collection of refuse and waste and avoiding indiscriminate dumping of waste,” stated Mr. Jallow.

Threats on Water Resources

Commenting on the impact of high population growth, especially on water resources particularly in the greater Banjul area, he said that the impact is twofold.

Firstly, when there is high population growth there is the high demand for expansion of the water facilities, failure of which will result in concentrations at one point, which sometimes creates conflicts.

On the other hand, because the population has increased there is the high demand of new settlements, which sometimes encourages indiscriminate settlements at groundwater recharge zones and surface water courses as is evident in the Kombos and at Kotu stream, which is situated in one of the mostly densely populated areas of the greater Banjul.



People indiscriminately settling on the water courses (river estuary and/or streams), creates blockages for the free flow of the surface runoffs, which has a very important role of draining excess rainfall especially during heavy storms. Mr. Jallow cited the example of the Kotu stream, which is supposed to drain all the surface water runoffs coming from some parts of the Kanifing Municipal area made up of Serekunda, Latrikunda, Dippa Kunda, Manjai, Bakoteh, Bundung as well as Wellingara, the Sinchus and Nema Kunku, which runs down to this channel and then empties into the sea.

The indiscriminate construction of houses and other structures in this stream and its channels

encourages unnecessary flooding, which many people have been suffering from all these years. Stressing the importance of this stream, the Principal Hydrologist said apart from drainage and water conservation which are also important, small dams or dykes could be built to retain some of the water for agricultural purposes, such as vegetable gardening or for aqua culture, whilst the remaining flows freely to sea.

Health Implications

Hence there is blockage of the channel which creates ponds and this is due to indiscriminate waste dumping that could have severe health implications such as malaria and other diseases.



Brief History about the Kotu stream

An elderly person who has lived in Bundung for many years revealed that up to the late 1960s, the Kotu stream area used to be thick and bushy and it was full of palm trees and other tree species and shrubs like *Saba senegalensis* (Botanical Name) or “Kaba” in Mandinka and *Landolphia heudelotti* “Foleo”. These trees and shrubby climbers are usually found on sandy beaches or coastal areas.

According to him, the area used to have water throughout the year and during the rainy season the women cultivated rice, whereas in the dry season they engaged in vegetable gardening. It was also a habitat for birds, monkeys and other reptiles.

The Groundwater Systems

Various studies conducted regarding the ground water systems in The Gambia have indicated that The Gambia sits on top of one of the continent’s major sedimentary basins referred to as the Mauritania -Senegal-Gambia - Guinea Bissau and the Republic of Guinea (MSGGB) Basin. This is characterised by two main aquifer systems, a shallow sandstone aquifer (SSA) and a deep sandstone aquifer (DSA). The shallow sandstone aquifer known as the pyretic aquifer is found at depths ranging from 4 to 30 meters below ground level (mbgl) whilst semi-confine aquifer (SCA) occurs between 30 and 50 mbgl.

The same studies also estimate that the SSA reserve is at 0.1cubic kilometers (low side), whilst the deep sandstone aquifer (DSA) which occurs below 50 metres is estimated to hold reserves in the order of 80 cubic kilometres, which is enough water to meet the demand of the population in the next 10- 20years, according to officials at the Ministry of Fisheries and Water Resources.

The new approach to water development and management is based on participatory approach involving users, planners and policy makers at all levels especially in the management of water facilities.

Women, who play a key role in collection and safeguarding of water, have less influence than men in the management of water resources and decision-making. These factors are largely determined by cultural, religious and other local conditions.

For most people, water is considered as having only social value. Today this is not so, as it can also have an economic value in all its competing uses and should be recognised as an economic good. Water supply infrastructures require heavy investments, which are most of the time born by governments and does not pay back dividend because of the perception that it is free.

Water Management at Regional Level

The ECOWAS Water Resources Coordination Centre (WRCC) for Integrated Water Resources Management (IWRM) is an integral part in that process, a process which seeks to promote the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems (GWP/TAC).

The Gambia is also part of the WRCC, which is the regional body working on IWRM process at the regional level.

Mr. Jallow further disclosed that The Gambia in fulfilling its regional commitment in this area has developed and validated the national IWRM road map, which is the first step in the IWRM processes.

He said that the Ministry and the Department has also prepared a project and is now seeking funding from the African water facility through the African Development Bank (ADB) for the further development of the IWRM action plan and reform of the water sector.

Muhtarr Jallow

More infrastructure for our development!

Dam Mogbanté, GWP-AO

The lack of hydraulic infrastructures in West Africa certainly shows vulnerability of the West African sub region to climate hazards and is at the same time one of the main causes of poverty.

There is an important correlation between water control and development. The great disparities between developing countries and northern countries, which through several years of investment in infrastructure have exhausted all their building potential, allow us to make this assertion.

The statement that says that development can be done without any damage to environment and without large infrastructure can only have a repercussion on those who don't live with destitute populations. And when we know that they're at the mercy of the weather for their agricultural production and that both their lives and goods are endangered in case of floods or extreme dryness, there is no reason not to encourage infrastructure building in the

large dams, but also about any building that has a significant impact on waterways' regimes, whether they are hydraulic thresholds, outlets of large irrigated perimeters, or big towns, work of water transfers from a basin to another one, etc.

IWRM recommends us to always evaluate all possible options in order to make the right choice. The consultation of stakeholders should then help to avoid negative social and environmental impacts and where appropriate to minimize them through the definition and implementation of proper measures.

Omelets cannot be made without breaking eggs, it is said, but it should be ensured that a few do not bear the whole weight for the happiness of others. Therefore, the efforts of the Government of Ghana should be welcome, since the resettlement of displaced persons was done in the 60s. Though it certainly was not perfect, but this is a strong indication that the concern for the well-being of "sacrificed" persons on the altar of

prosperity of Ghana, but also of Togo, and Benin in particular, was there. Who can say what the economy of Ghana would be today without electricity from the Akosombo dam? Could we talk about an economic boom in Ghana in the 70s without this dam? And what impact on GDP and the index of poverty in the country?

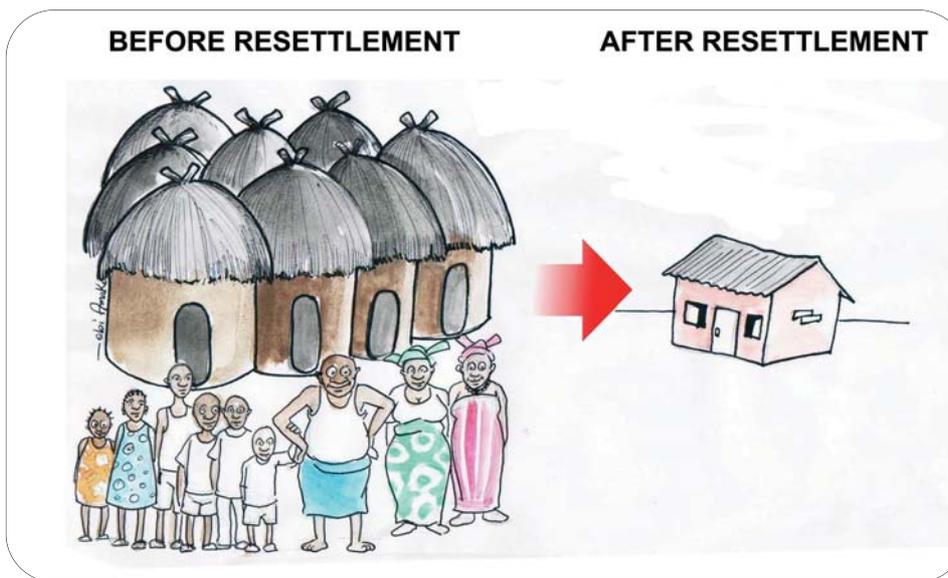
Let's not be mistaken! If the experience were to be renewed, I honestly think it should be done, with more follow up and support to displaced persons.

It seems that the other side of the story (that of the VRA) has

not been much listening to compared to that of the inhabitants of the resettled communities! How much credit do we give to a person in a camp for displaced people who says that his/her family lived in a concrete house with a toilet in the sixties in the hold of the Akosombo Lake, before ending up in a small adobe house with no rest-rooms in a camp for displaced persons and how long should displaced people be assisted?

The Ghanaian government and the VRA efforts should be saluted in the management of this situation before asking for more actions for the displaced persons. This example should serve and be improved for future achievements not only in Ghana, but throughout the West African region.

**Dam Mogbanté
GWP-AO**



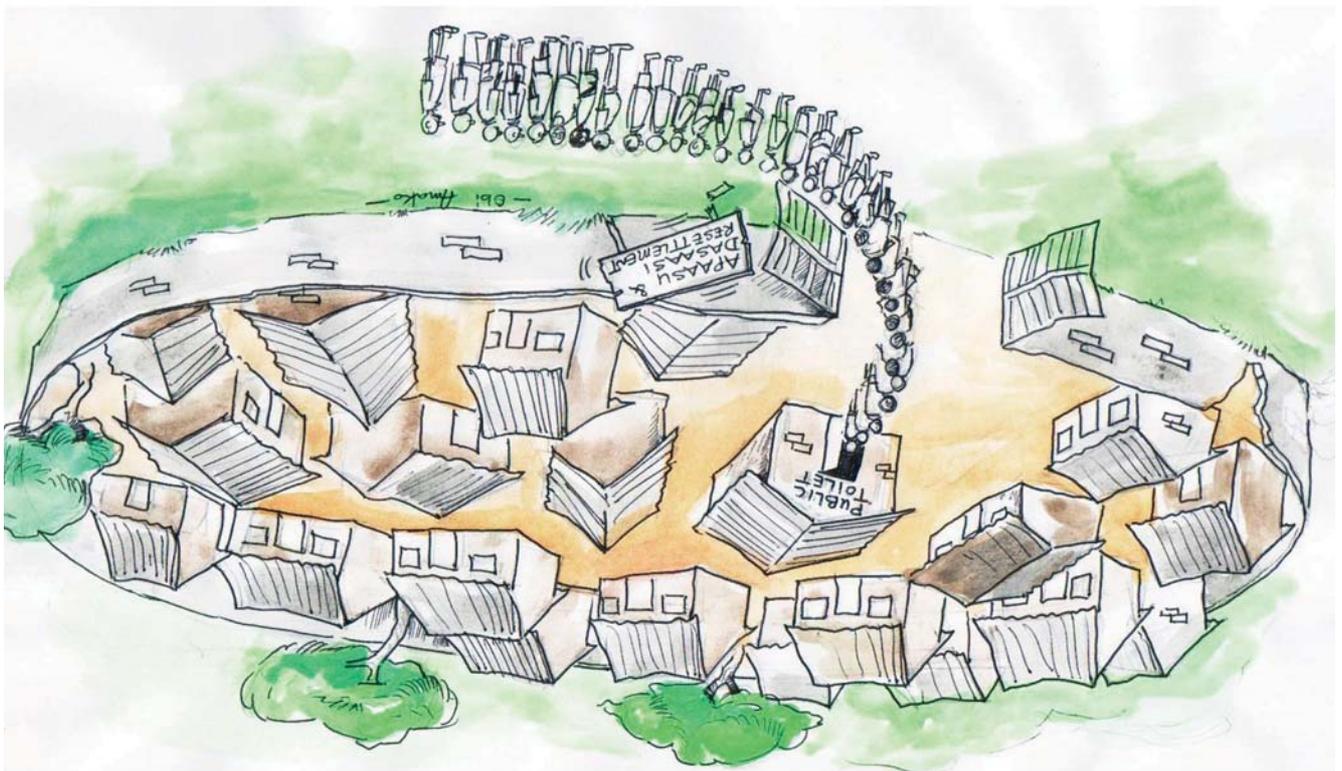
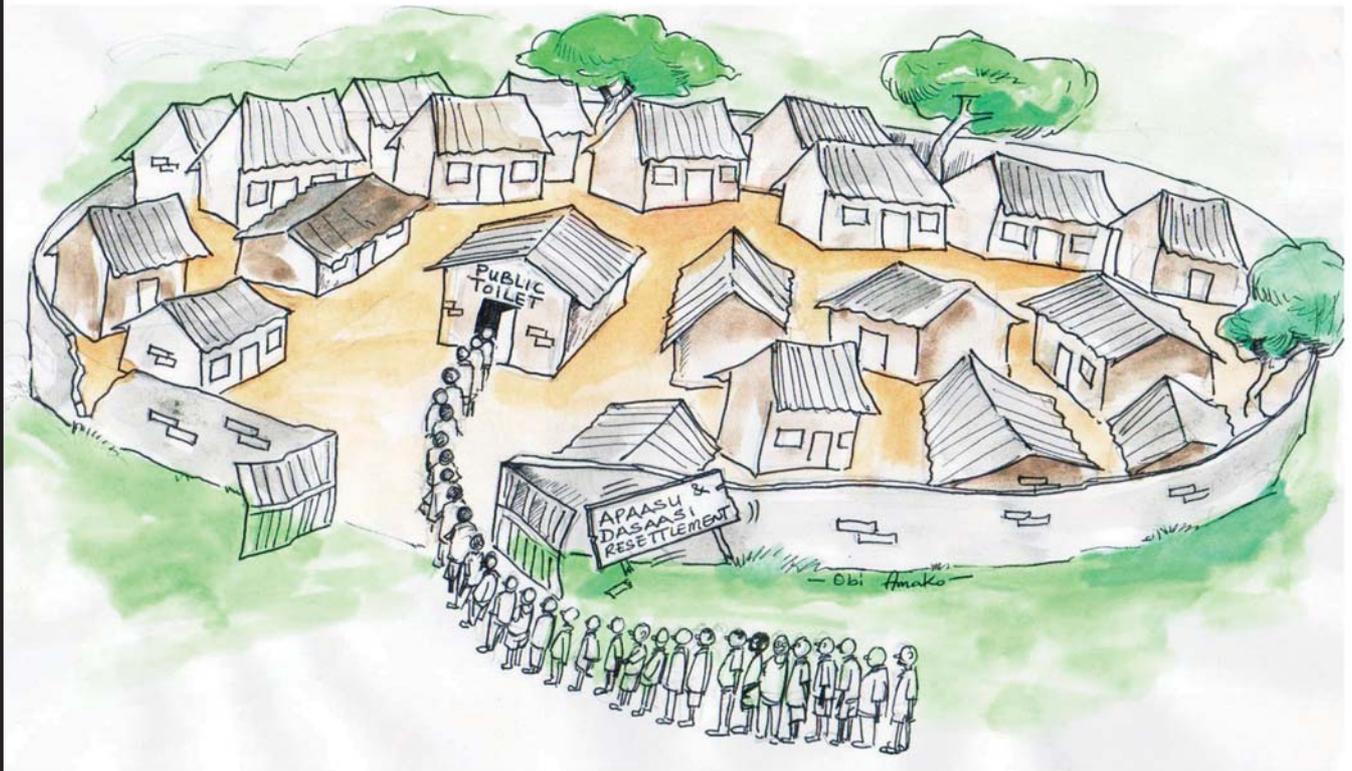
region! In West Africa and in Sahelian areas in particular, we have a good idea of the people's vulnerability when it comes to the effects and impacts of climate changes. Putting the high costs of investments as a reason for not acting indicates a relentless pursuit that can be assimilated to cowardice or an unspeakable lack of vision.

The political decision-makers of this region have no choice but to go beyond speeches and agree at once, and set up long lasting installations, for the sake of future generations.

Basin Organisations are important integration tools at the disposal of the states to help in the planning, the construction and management of common interest big works, and sharing benefits at basin level.

When we talk about infrastructure, it's not only about

TWO TOWNS....one small Toilet?



Deux villes...Une petite toilette ?