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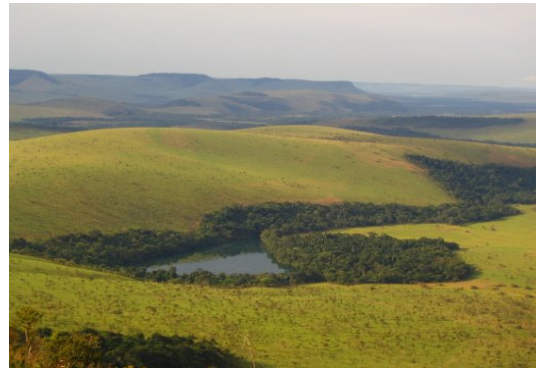


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SHARING THE BENEFITS OF LARGE DAMS IN WEST AFRICA: *THE CASE OF DISPLACED PEOPLE*



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The Global Water Initiative (GWI), supported by the Howard G. Buffett Foundation, addresses the challenge of providing long term access to clean water and sanitation, as well as protecting and managing ecosystem services and watersheds, for the poorest and most vulnerable people dependant on those services.

Water provision under GWI takes place in the context of securing the resource base and developing new or improved approaches to water management, and forms part of a larger framework for addressing poverty, power and inequalities that particularly affect the poorest populations.

This means combining a practical focus on water and sanitation delivery with investments targeted at strengthening institutions, raising awareness and developing effective policies.

The Regional GWI consortium for West Africa includes the following Partners:

- International Union for the Conservation of Nature (IUCN)
- Catholic Relief Services (CRS)
- CARE International
- SOS Sahel (UK)
- International Institute for Environment and Development (IIED)

GWI West Africa covers 5 countries : Senegal, Ghana, Burkina Faso, Mali, and Niger.

Executive summary

In the face of the deteriorating hydro climatic context, the West African countries have opted for the construction of dams as a logical solution to increase water storage capacity and regulation of water courses to meet the challenge of extreme weather variations, thereby contributing significantly to the economic development of the countries of the sub region. However, the construction of these dams has often led to the complex and difficult displacement and relocation of populations, often affecting thousands of people: 80 000 people in Akossombo-Ghana, 75 000 people in Kossou in Ivory Coast.

Until 1980, the norms applied to the displacement of the people affected were more concerned with the national legislation that upheld the interests of the State rather than those of the displaced people. In the late 1980's and early 1990's, the World Bank set up the first guidelines for the social impact of development projects. Operational guideline 4.30 of June 19, 1990 on the displacement and relocation of populations strongly recommended development programs that could noticeably improve their incomes and living conditions. Moreover, in 2000, the World Commission for Dams (WCD) described the rights of the displaced people and recommended that they should be the primary beneficiaries from dam projects.

There have only been a handful of publicly available assessments made of relocation projects concerning the 150 big dams already constructed in West Africa. It is legitimate to doubt whether training programs have been carried out at the regional level in order to successfully bolster future projects. In some countries dams are scarce or even inexistent, which means that national knowledge and experience is often limited. That is why the Niger Basin Authority's development plan for the construction of 26 new dams could benefit from the regional experience.

Undoubtedly, the population displacement / relocation process has not been altogether satisfactory. Positive short-term results have been reached. The planners and decision-makers involved in dam construction have provided the displaced people with infrastructure and the means instrumental in alleviating the short-term consequences of displacement. Indeed, the displaced populations have had access to drinking water and health; education has been significantly improved. However, countless flaws have been observed, the relocation project managers' sheer lack of socio-anthropological sensitivity has been found accountable for most of those failures. In addition, the compensation paid has not often met the displaced populations' expectations. The delayed payment processes have had a negative impact on the process of resettlement and development of the relocation zones. Consequently, the living conditions of the displaced and of the host populations deteriorated some years after their reinstallation. This situation poses an ethical question of fairness, especially when the displaced bear the environmental and social brunt of the dams while other groups (city-dwellers, industrialists, etc.) may receive the benefits.

Today, the stakes are high in terms of development, culture, demographics, land tenure and distribution of wealth. It is therefore paramount to ensure that the reinstalled populations benefit from opportunities generated by the dams in order to improve their living standards in the short and long-term.

Under a favourable political environment for the sharing of benefits, decision-makers sometimes developed strategies to come to terms with those injustices that have been meted out to the displaced populations. Although the principle of leaving people "better off" has often eluded most experts, some river basin authorities have been trying to promote the principle of sharing the profits generated by the hydro electric and irrigation facilities, etc. So, The Senegal River Authority (OMVS in French) is strongly committed to the socio economic development and the protection of the environment of the basin following the construction of major infrastructure for the control of water resources at Diama and Manantali. To compensate for the economic losses and the shock undergone by the populations, the government of Ivory Coast initiated an integrated development project in the lake region, the Bandama Basin Development Project (ABV in French) where 120 new villages were created, and an agricultural development program for intensive farming was launched. The fiduciary fund which was

set up by the Volta River Authority provided the populations displaced from the vicinity of the Akosombo dam with electricity, clean water, and sanitation, education, and road facilities.

Today, the prospects for better living conditions are good with the upcoming relocation projects for future dams (Kandadji, Sambagalou) that already anticipate on benefit-sharing issues by setting up local development plans. But the challenge will be to ensure that these programs are sustainable and that they will persist over the entire lifetime of the dam.

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List of acronyms and abbreviations

ABV: The Volta Basin Authority

CIDA: Canadian International Development Agency

GWh: Giga watt hour

GW: Global Water Initiative

CAEA: Canadian Act on Environmental Assessment

MW: Megawatt

OMVG: The Gambia River Authority

OMVS: The Senegal River Basin Authority

PAP: Project affected people

PDL: Local Development Plan

PGIRE: Integrated Water Management Program (OMVS)

RP: Relocation Plan

MRP: Manantali relocation project

PDIAM: Downstream Manantali Integrated Farming Project

USAID: United States Agency for International Development

WCD: World Commission on Dams

Introduction

The construction of big dams in West Africa is, among others, a government response to the challenges of water, of the needs for irrigation or for electricity. However, their construction has often generated major socio economic and environmental impacts that require heavy investments to mitigate them.

The case of displaced populations still remains a major issue that decision-makers and planners must address. Directly impacted by the construction of the dams, they remain vulnerable to poverty, considering the economic limits that the relocation areas offer (shortage of arable land, absence of income generating activities, etc.). In short, these populations benefit less from the dams than others who have not suffered any direct impacts.

The debate hinges around the recognition of rights of those affected and the sharing of the benefits. It means that the dam promoters, the entrepreneurs and the regulators must initiate actions to support the development and the well-being of the local and regional communities impacted by dams.

In this context, the “Global Water Initiative (GWI)” is committed to addressing the issue of equitably sharing the benefits generated by the dams in West Africa. The present document has been drafted on the basis of the current literature. It breaks down into three main parts:

- Large dams and displaced populations West Africa;
- Revisiting the displacement/relocation process;
- Sharing in the benefits generated by large dams.

The study will mainly focus on the displaced people.



Figure 1: Hippopotamus in the Niger River (© Wetlands International)

1. Large dams and displaced populations in West Africa

Human mastery of water resources is at the heart of sustainable development and the well-being of West-African societies. This requirement forced the States of the sub region to erect many dams that brought about, among other impacts, the massive displacement of populations.

This chapter reviews the potentials for water and dams in West Africa and sums up the statistics, as well as the criteria applied during displacement operations.

1.1 Water Resources and large dams in West Africa

West Africa counts 28 cross border river basins that cover 71% of the region (Fig.1). The most important ones are the Niger (shared by 11 countries if one takes into account the non active part of the basin), the Senegal (4 countries), the Volta (6 countries), Lake Chad (8 countries), and the Comoé (4 countries). The sub region also has fresh water reserves, approximating several billions of m³, stored in deep water tables.

Paradoxically, this part of the world is often prone to shortages of this resource whenever it is needed. The unavailability of fresh water in West Africa is all the more acute as it is compounded by sharp variations in rainfall and the climatic conditions. In the absence of adequate infrastructure to control those vagaries, national economies have been buffeted by flooding and droughts at the same time. To face up to the deteriorating hydro climatic context, the construction of dams is a logical solution in order to increase the water storage capacities and the regulation of water flows to contribute significantly to the economic development of the countries of the sub region.

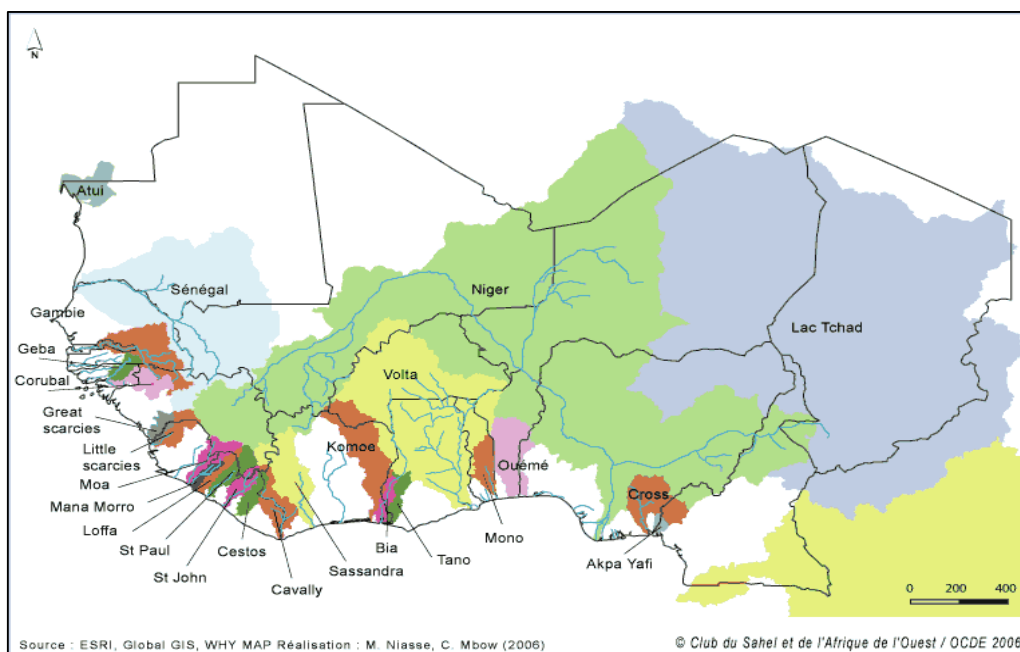


Figure 1: Water resources of West Africa (Source: CEDEAO-CSAO/OCDE, 2006)

In West Africa, the transformation of rivers has a long history (the Kurra dam in Nigeria 1929, the Tougouri dam of Burkina in 1950)¹. However, the emergence of large dams goes back to the early independence years when they were first constructed to generate energy. (Akossombo in the Ghana 1964, Kossou in Ivory Coast 1970, etc.). According to data from FAO's AQUASTAT² data base and on the basis of the definition of big dams by ICOLD, West Africa counts more than 150 big dams out of 1300 throughout the continent and 45 000 throughout the world³.

The map of large dams in West Africa (Fig.2) clearly shows their limited number in comparison with the rest of the world⁴. Two factors account for this situation. On the one hand, the weakness of the economies of the countries of the sub region reduce the funds for such infrastructure; on the other hand, vocal opposition against these works throughout the world has made national and international public opinion, as well as the international institutions, reconsider their support for big dam projects.

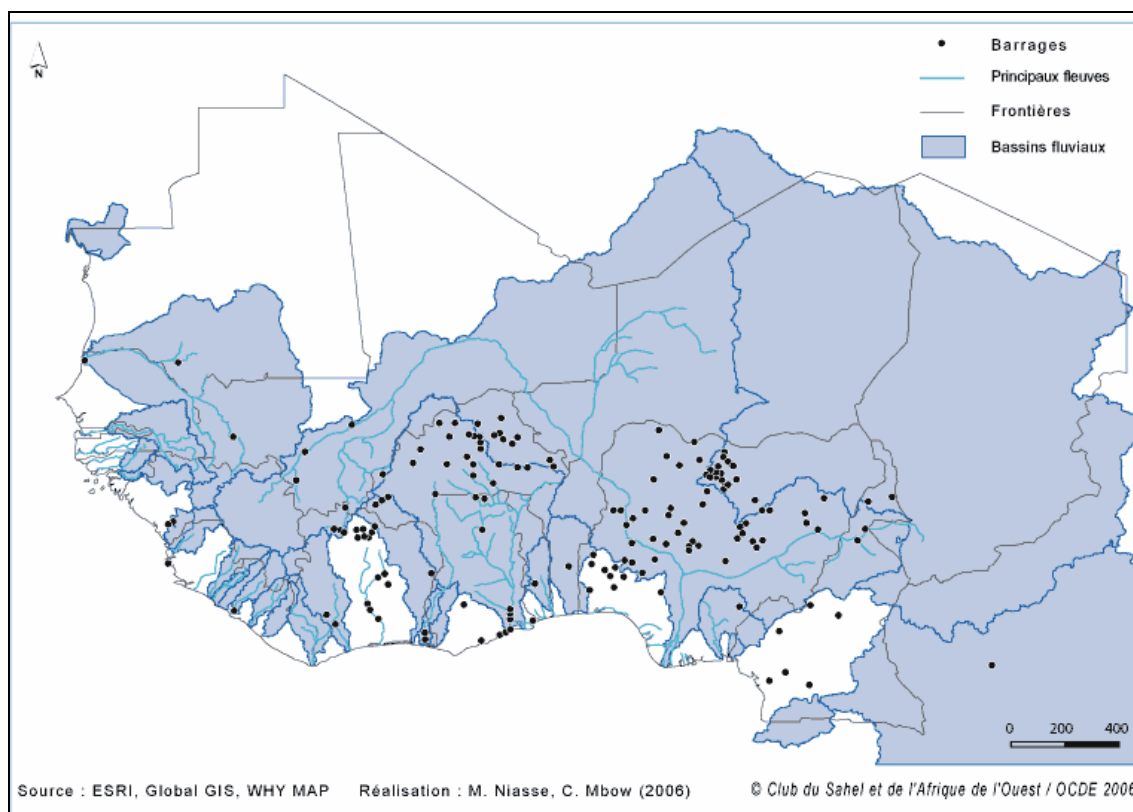


Figure 2: Map of West Africa's dams (Source : CEDEAO-CSAO/OCDE, 2006)

¹ FAO, AQUASTAT

² <http://www.fao.org/nr/water/aquastat/damsafrica/index.stm>

³ A widely accepted definition of large dams is given by the International Commission on Large Dams (ICOLD). It defines large dams as: 'those having a height of 15 meters from the foundation or, if the height is between 5 to 15 meters, having a reservoir capacity of more than 3 million cubic meters'.

⁴ CEDEAO-CSAO/OCDE, 2006 : Les bassins fluviaux transfrontaliers. Atlas régionale de l'Intégration en Afrique de l'Ouest, Série Espaces <http://www.atlas-ouestafrique.org/spip.php?article10>

The two biggest dams of West Africa are: the Akossombo dam on the Volta River in Ghana with a height of 134m (4th in Africa) and 150 billion cubic meter capacity (3rd in Africa) and the dam of Kossou on the Bandama stream in Ivory Coast with a capacity of 28 billion cubic meters (6th in Africa). Annex 1 presents the key features of the big dams of West Africa.

More than 50% of the large dams constructed in West Africa are intended for hydroelectric production. The Niger basin is currently the most exploited in West Africa with more than 2 004 MW of hydroelectric capacity⁵. The dams also allow for the regulation of natural flows, variable according to the seasons and the climate changes, by adapting them to demand for irrigation water, for hydroelectricity, for drinking water, for industrial use, and for navigation. With the construction of these dams, the existing potential for irrigated agriculture constitutes a major asset for the achievement of food self-sufficiency, and to a larger extent, for enhancing development in West Africa.

In addition to the agricultural production recorded in the rainy season, the dams allow for off-season farming all year round because of the permanent availability of water through flood gate operations. At the local level, these second crops are instrumental in improving the livelihood of local people while assuring them year long production. Finally, the dams encourage leisure, tourism, fishing and fish farming, and can sometimes improve environmental conditions.

1.2 Populations displaced from dams and the criteria applied

The construction of dams often brings about complex and difficult operations of displacement and relocation of thousands of people. One case in point in Africa is the Akossombo in Ghana (80 000 displaced; the Kossou in Coast of Ivory (75 000 displaced). Table 1 below illustrates displacements brought about by the construction of the dams.

Tableau 1: Number of persons displaced for several large dams

Name of the dam	Country	Displaced Persons	Date of displacement
Akossombo	Ghana	80 000	1963
Kossou	Cote d'Ivoire	75 000	1970
Kandji	Nigéria	44 000	1967-1968
Sélingué	Mali	15 000	1980
Nangbéto	Togo/Bénin	10 600	1987
Manantali	Mali	10 000	1986-1987
Garafiri	Guinée	2 140	1999

Source : De Wet Chris, 1999; et M. Niasse& Y. Ficatier , 2008

The displacements of people have been carried out in compliance with the environmental and social concerns of the bilateral or multilateral agencies of development. For the displacements undertaken before the first handbook of the World Bank was issued in 1980, the criteria used were inspired by national laws that favoured state interests rather than those of the displaced. Thus, in Akossombo, Ghanaian land laws (Land Act of 1962 and later modifications) upheld the national interest in land acquisition, and the Volta River Development Act of 1961 gives to The Volta River Authority the power to manage the land affected by, and close to the dam (World Bank, 1993:12).

⁵ The Niger River Basin Authority, 2007 : Plan for Sustainable Development Actions in The Niger River Basin (PADD) Phase 2

In the late 1980's and early 1990's, the World Bank played a leadership role in the development of voluntary relocation policy instruments. The Bank designed comprehensive guidelines on the studies of the social impact of development strategies. These policies concerned: operational guideline 4.00 A of October 1989 on impact studies, as well as the Source book on the studies of impacts dated 1991; guideline 4.00 B on environmental policy on dams and reservoirs of April 1989; operational guideline 4.30 of June 19, 1990 on the displacements and relocation of populations⁶. The latter strongly recommended the improvement of their income and livelihood through development programs. To achieve those goals, the guideline lays down a certain number of measures:

- *Avoiding or minimizing the displacement of populations while exploring all possible alternatives in the design of the project considered;*
- *When involuntary displacements are unavoidable, a resettlement plan must be elaborated and implemented. This plan must be conceived as a development plan which will provide the displaced populations with the necessary preparation and assistance so that they can capitalize on the benefits of the dam project.*
- *The losses incurred by the displaced populations must be compensated for according to their actual value;*
- *The populations to be displaced must be attended in the process of displacement and continually assisted in their resettlement sites during the transition phase;*
- *The displaced populations must be assisted in their efforts to improve their livelihood and their levels of incomes and production in relation to what they were before their displacement. For lack of improvement, the previous standard of living of the displaced must be maintained at least.*

Other stakeholders have developed good practices criteria in the management of hydroelectric projects. The Canadian Act on Environmental Assessment (CAEA)⁷ of June 23, 1992 is also used and contains among other requirements: (a) an environmental assessment of the project must be carried out if the Canadian International Development Agency (CIDA) is the promoter and/or is in charge of its implementation, even partially; or (b) provides the funds or a loan guarantee or any other financial help for its realization. Besides, in 2000, the World Commission on Dams (WCD) made strong recommendations advocating the recognition of the displaced people's rights and their share in the benefits of dam projects (Box 1).

Box 1: Recommendation 5 on the Recognition of rights and the sharing of the benefits

The negotiations with displaced persons should be conducive to impact alleviation measures on the basis of common consent. It is then incumbent upon the state or the project promoter to implement those measures. The groups which are affected are considered to be on top of the list of recipients. The benefit sharing procedures are negotiated accordingly.

World Commission on Dams, 2000

In other words, after 50 years of experience in population resettlement, dam promoters, operators and regulators must commit themselves to supporting, during the whole lifespan of the project (50-100 years), the development and the well-being of the local and regional communities impacted by the dam. This consensus also recognizes that the conflicts and the complaints are minimized if the displaced populations become genuine stakeholders in the development process and do not harbour

⁶ <http://www.worldbank.org/html/fpd/em/power/wbpolicy/430OD.stm>

⁷ <http://lois.justice.gc.ca/fr/C-15.2/40574.html>

any feeling of marginalization; that they will actually be “better off” when those policies are carried out, and feel joint ownership of the project.

2. Revisiting the displacement/relocation process in West Africa

The displacement and relocation of people affected by dams have mobilized enormous human and financial efforts. On the basis of current evaluations, the results have been average on account of the factors reviewed in this chapter.

2.1 A truncated relocation process

The classic sequence of displacement and relocation is a four-step process⁸, namely: phase (1) deals with scheduling the relocation operations and the realization of the first infrastructures; Phase (2) the transition phase; (3) phase is concerned about economic and social development; phase (4) is phasing out the aid-project and its incorporation in the regional economic fabric.

In West Africa, most displacement processes and relocation have focused on phase (1), and to a lesser extent on phase (2), considering the financial, human and time constraints (Manantali) and the change of rural development policy (Akosombo). To illustrate, the Manantali Relocation Project (MRP) was not conceived as a development project. USAID, the main creditor had decided that the project would not have an economic development orientation. Consequently, the pre-existing infrastructure was simply rebuilt and the losses beyond retrieval were compensated for⁹. In Ghana, President Kwame Nkrumah perceived the resettlement of the populations affected by the Akosombo dam as a special project with communities acting as "spearheads" of agricultural modernization. Unfortunately, his successor, President Busia, favoured the organization of the farming world, rather than targeted state interventions in the Volta project.



The result was that the displaced populations did not receive adequate assistance, and coincidentally, the resettlement project, which was not implemented as an instrument of development, led to the deterioration of people's living conditions¹⁰. Furthermore, the durability of the projects undertaken in the phase of transition constitutes one of the major problems because funds tend to dry up at the end of phase 2. Therefore, the bottom line seems to

⁸ M. Niasse & Y. Ficatier, 2008 : Volet social et environnemental du barrage de Manantali. Étude prospective. Série Evaluation et Capitalisation. Ex Post no15, Août 2008

⁹ M. Niasse & Y. Ficatier, 2008 : Volet social et environnemental du barrage de Manantali. Étude prospective. Série Evaluation et Capitalisation. Ex Post no15, Août 2008

¹⁰ De Wet Chris, 1999: The Experience with Dams and Resettlement in Africa. Contributing Paper, World Commission on Dams. <http://www.dams.org/docs/kbase/contrib/soc199.pdf>

be that a lasting income must be assured in order to help the displaced people meet their needs gradually.

Conflict outbreaks also constitute major unforeseen hurdles stalling the realization of dams. The multiplication of big dam projects and other water-related amenities, the high degree of interdependence of the West-African countries concerning water, and the considerable reduction of surface water availability may often strain relations between neighbours. Whenever conflicts break out, they disrupt the process of financing these works both at the national and the international levels. And when the conflict is internal or opposes countries involved in the realization of the dam directly, the project is frozen pending a settlement, which may take a long time. During that period, the process of managing the local people affected by the dam project is put on hold. To illustrate, the 15 year-gap between the end of the construction of the Manantali dam (1988) and the beginning of energy production (2003) was due in large part to the strained relations between Mauritania and Senegal, following the 1989 crisis.

2.2 *Mixed displacement/relocation process*

On the whole, the assessments have revealed positive short-term benefits. The displaced populations have benefited from the projects in so far as access to drinking water, to health and to education has distinctly improved. Thus, the Kandji dam in Nigeria has been hailed as an example of successful resettlement¹¹ with broad consultation with the populations during the scheduling process and the flexibility of the proposed amenities that the displaced populations had the liberty to change to suit their needs. The relocation of the populations of the Manantali dam in Mali has been praised as a technical prowess¹². Among the positive aspects of the relocation process, one can note: (i) the compensation payments greatly increased the availability of cash within households; (ii) quality dwellings have been constructed while respecting the local architecture; (iii) quality social infrastructures (schools, modern water facilities, health centres) hitherto unknown have been achieved; (iv) dirt roads and paths have opened up landlocked areas and eased exchanges between villages; (v) finally, some of the resettled populations took jobs on dam construction sites.

However, numerous cases of serious flaws have been observed. These failures are sometimes due to the fact that those who managed the resettlement phase of the dam projects lacked socio-anthropological sensitivity.

This was the case in Garafiri where: (a) the loss of river bank area and rice fields were not taken into account; (d) the techniques of traditional fishing (shallow water fishing, angling or sweep net fishing) were not taken into account as they would be ill adapted to deepening waters all year round¹³. Moreover, the indemnifications did not always meet the displaced populations' expectations. Whatever the compensation policy, payments were generally delayed. In Akossombo, the host villages had not received compensation for the patches of land that they had put at the disposal of the

¹¹ De Wet Chris, 1999: The Experience with Dams and Resettlement in Africa. Contributing Paper, World Commission on Dams. <http://www.dams.org/docs/kbase/contrib/soc199.pdf>

¹² Madiodio Niasse, 2005: Post-évaluation et capitalisation du volet socio-environnemental du barrage de Garafiri (Guinée)

¹³ Madiodio Niasse, 2005: Post-évaluation et capitalisation du volet socio-environnemental du barrage de Garafiri (Guinée)

displaced, which caused land disputes¹⁴. In Nangbeto, the displaced people had to wait for 3 years before they received the final cash payment for their houses.

In Garafiri, the displaced people were provided no awareness building or meaningful training for efficient use of the monetary compensations. There is reason to believe that most of the monetary compensation may have been squandered, a few months or weeks after resettlement. In Sélingué, the displacement of the population (25 000 to 30 000 people) was carried out just before reservoir flooding and in total chaos as the program received no funds other than those from the state of Mali. The indemnifications that were given were not cash compensations but land grants, village reconstruction activities and a few years later, irrigated patches of land. Such delays had a negative impact on the resettlement processes and development of the host areas.



Photo 3 : Child swimming in the Niger River (©Wetlands International)

¹⁴ De Wet Chris, 1999: The Experience with Dams and Resettlement in Africa. Contributing Paper, World Commission on Dams. <http://www.dams.org/docs/kbase/contrib/soc199.pdf>

2.3 *A disappointing “not worse off” policy*

Since the middle of the 1990s, the norms concerning the displacement and relocation of people affected by dam projects have noticeably changed. In order to improve the compensation policies of the 1980's, the decision-makers and planners committed substantial means to shore up the living conditions of the displaced populations or, if necessary, to avoid leaving them worse off than they were before the displacement/resettlement process. However, it has been noticed that the living conditions of the displaced populations and those of their hosts deteriorate a few years after their resettlement. The assessments carried out later on report growing dissatisfaction among the displaced population who continue, in spite of the ongoing assistance, to blame their predicament on their involuntary displacement and the lack of long-term vision in the reinstallation processes. This situation poses an ethical question of fairness, especially when the displaced persons bear the environmental and social brunt of the dams while other groups (city-dwellers, industrialists, etc.) receive the benefits.

Today, the stakes are high in terms of development, culture, demographics, land tenure and distribution of wealth. It is therefore paramount to make sure that the resettled people benefit from opportunities generated by dams in order to improve their living standards in the short and long-term. The following examples demonstrate the urgency in meeting expectations that have been dashed for more than a decade.

- Demographic stakes and land ownership issues

The land ownership constraints on the resettlement sites of the displaced people of Manantali constitute major bones of contention. Indeed, the first socio-economic studies had underestimated the need for land and cattle raising. In addition, the demographic dynamics have not sufficiently been taken in account because the population which was displaced twenty years ago (1986 to 2006) has nearly doubled, growing from 10 000 at the time to 25 000 today. These combined reasons have raised the ante and caused concern in the relocation area of Manantali. Likewise, the fate of the host populations still remains a major stumbling block. The village of Sobéla hosted the relocated villages of Tintila and Koukouding. In spite of the fact that the village benefited from the resettlement program, the village is still confronted with land shortage. According to the village chief, the village is overcrowded and good neighborliness is deteriorating. Their plight seems to be compounded by the periodic arrival of transient populations. This fundamental question seems so serious that the consequence of construction of the Manantali dam is deemed negative by the villagers of Sobéla. In Nangbeto, Togo, the reservoir displaced 10,600 people in 1987. The inward migrations and the natural demographic growth have created today a situation of overpopulation that upsets the traditional system of extensive agriculture with crop rotation. Because their incomes do not allow them to buy fertilizer, improved seeds and the other necessary inputs to protect the soil fertility, the displaced people are often sucked into a downward spiral of falling yields and incomes¹⁵.

¹⁵ Banque Mondiale, 2000 : Déplacements et Réinstallations Involontaires L'Expérience des Grands Barrages. Précis de la Banque Mondiale, Département de l'évaluation des opérations, hiver 2000 numéro 194

- Access to wealth in the Kossou Lake Area

A survey carried out by DFID and FAO¹⁶ on the profile of poverty round the Kossou lake has revealed that, according to the people of the area, the destruction of the coffee and cocoa plantations is primarily accountable for poverty. The flooding of the lake immersed 201,400 hectares of forest, savanna, plantations and villages, representing 5.6% of the total region. By washing away 20,000 ha of coffee and cocoa plantations, the operation dealt a fatal blow to the mentalities and practices that were shaped by those critical cash crops. The population of Kossou Lake had always believed that wealth could not be generated outside coffee and cocoa. To this day, the food crops are consequently destined essentially for home consumption. Hypothetical income generated by the sale of the surplus of food crops is ploughed back into the household. Even when surpluses are generated, the lack of organization and the fragmentation of demand inhibit profits. With rudimentary techniques and the lack of water management expertise, the outputs remain very modest and do not generate enough commercial surpluses. Currently, fishing appears as an important alternative for resource and income generation. For most of the youth who practice it, this activity is novel. They do not know the different techniques and practices adapted to the different water levels and the different fishing seasons. Notwithstanding, youths, including university graduates, take to fishing because of idleness and job scarcity.

- Cultural stakes

The culture issue is often difficult to address. In Garafiri in Guinea, the mosques have been neither rebuilt nor compensated for, which is indicative of a major shortcoming in the resettlement program. Offering a place of worship should have been a matter of course to help the displaced population cope with the trauma of leaving the place where they were born and which bore the ashes of their loved ones and ancestors, now that they live in a completely foreign land that they may believe to be haunted by evil spirits. At Manantali, the problem of flooded cemeteries and the forebears who were buried under water still remains a taboo question. It is one of the most delicate problems to handle throughout the world in involuntary displacement programmes.

It is therefore important to ensure that the resettled people benefit from the opportunities generated by dams in order to improve their livelihoods in the short and long-term. To achieve those goals, long-term 30-50 year development programs which do not depend on hypothetical "projects" must fulfil the classic replacement and compensation measures for lost assets and livelihood resources. All populations that are expected to be negatively affected by the dams must be entitled to the opportunities stemming from the dam: electricity (for hydro agricultural dams) irrigated land (for dams built for agricultural ends), drinking water, fishing, etc. Whenever possible, part of the revenues generated by the dam (for instance, the incomes generated by the sale of electricity produced) must help to support productive activities or to improve livelihood conditions for the people who were moved to allow for the construction of the dam.

¹⁶ Fabio P., Njifonjou O., Assienan J., Kodjo A., Ndia Y., Salvati N., Seghieri C., Profil de pauvreté des communautés riveraines du lac de Kossou en Côte d'Ivoire (novembre 2002). Cotonou, Programme pour des Moyens d'Existence Durables dans la Pêche en Afrique de l'Ouest, 90p. PMEDP/RT/17

3. The experiences of sharing the benefits generated by large dams in West Africa

The “Dams and Development”¹⁷ report has demonstrated that “dams contributed largely to the human development and that their benefits have been considerable.” However, the report mentions that “the resettled populations rarely recovered their means of subsistence, the programs of resettlement being centred on housing problems rather than on economic and social” development. Besides, it noted that the main recipients of the dams’ benefits often live far away from the dam sites. Anyhow, the populations who live in the vicinity of the project and who are affected by the negative effects of the dams often hardly benefit from them.

It is therefore necessary to take innovative measures to indemnify the affected people and to share the economic advantages of the projects. One way of fulfilling this requirement is to share out a part of the benefits generated during the construction and during the exploitation of the dam with these communities. The mechanisms of sharing out the advantages are generally considered to be one of the most efficient means of dealing with the failures of the indemnification in cash or in nature of the people displaced or affected by the project. From the ethical and social justice point of view, it is logical that part of the proceeds return to the local populations affected by the project¹⁸. In order to set in motion this idea, the World Bank drafted an Action Plan for the scheduling and management of dams. Among the projects of this action plan there is a section dedicated to the sharing of the profits generated by the dams¹⁹. Within this same perspective of improving the livelihood conditions of the displaced populations, the Global Water Initiative (GWI) has instigated a debate on the sharing of the advantages generated by dams in West Africa.

This chapter revisits the way that this issue is handled in West Africa while reviewing the achievements and the opportunities offered by benefit sharing.

3.1 Current approaches in benefit sharing

Today, the sharing of the monetary advantages (incomes and proceeds from the project) with the people affected is viewed as an innovative form of sharing of the proceeds generated by dam projects. It is based on the principle that a dam can generate important economic fallouts that the local populations can share in. They are additional profits that exceed the corresponding profit on a regular investment. These benefits stem from the fact that the promoter taps a natural resource whose added value depends on the hydraulic, topographic and geological conditions bound up with the site of the dam. Thus, consumers of electricity generally benefit from the economic fallout of the hydroelectric projects under the guise of reduced rates. In the sectors of irrigation or water supply, the consumers can also bank on subsidized rates²⁰.

¹⁷Commission Mondiale des Barrages, 2000 : Barrages et développement Un nouveau cadre pour la prise de décisions Tour d'horizon.

¹⁸ Mr. Dominique Egré, 2007: Benefit sharing issues. United Nations Environment Programme. Dams and Development Project. Compendium on Relevant Practices - 2nd Stage

¹⁹ World Bank Group, 2002: Benefit Sharing from Dam Projects Phase 1: Desk Study

²⁰ World Bank Group, 2002: Benefit Sharing from Dam Projects Phase 1: Desk Study

But in West Africa, the financial flows, which are the basis of profit sharing, are often not readily available because the state can hardly meet the challenge of servicing the debt incurred for building the infrastructure. Finally, the notion of subsidized electricity rates on behalf of the affected populations may not be considered to be a fair and lasting solution because those costs are somehow supported by others²¹.

Having said that, decision-makers and planners, supported by their partners, have made financial and economic efforts to achieve the processes of displacement with the creation of resettlement sites, through supporting social integration, developing an adequate social habitat and creating a productive environment (electrification of the villages, arable land, etc.). Some decision-makers even had a very advanced vision of displacement: President Kwamé Khroma perceived the resettlement of the populations as a special project in which communities act as "spearheads" of agricultural modernization²². This demonstrates that the intention to allow displaced people to enjoy the advantages of the dams has always existed, but the political and financial means have not always followed.

Whatever the intention, one has to come to the realization that retraining displaced people is the weakest link of resettlement plans (cf. previous chapter). In this situation, some corrective measures are taken by decision-makers to improve the conditions of the populations living in and outside river basins with big dams. The principle of fairness extolled today by a lot of basin operators (OMVS, ABN, etc.) finds its true meaning in the development actions committed to reducing the vulnerability of populations facing poverty and allowing them to enjoy to the fullest extent the advantages created by dams (availability of water and electricity). The following examples demonstrate these efforts.

The Volta Authority Special Allocation Fund for Resettlement

Thirty years after the displacement/relocation, reports have been made on the deterioration of living conditions. The displaced communities estimate that the urban populations and the industries benefited more from the dams in terms of inexpensive electricity while they are confronted with problems of public health and insufficient compensation²³.

Consequently, the Ghanaian Government and the Volta River Authority set up, in 1996, a Special Allocation Fund for resettlement. With an endowment of \$500,000 USD per year, the objective of the fund is to improve the conditions for the people resettled following the construction of the Akosombo dam. The fund is financed by the Chinese Government. Between 2000 and 2003, the Special Allocation Fund paid for the electrification of the resettlement villages, the setting-up of modern water and sanitation facilities, and supported improved education and health, and the rehabilitation of paths and access roads

²¹ Communication from the Cellule OMVS/OMVG Sénégal

²² De Wet Chris, 1999: The Experience with Dams and Resettlement in Africa. Contributing Paper, World Commission on Dams. <http://www.dams.org/docs/kbase/contrib/soc199.pdf>

²³ E. A. K. Kalitsi, 2004: *Social Aspects of Hydropower Development Perspectives and Experiences*: Hydropower development and Resettlement (Ghana). United Nations Symposium on hydropower and sustainable development Beijing International Convention Centre 27-29 October, 2004, Beijing, China

A policy of “better off” through development programmes

To meet the challenges of displacement, some decision-makers have set more ambitious objectives that consist in making the displaced people better off. One way of achieving this objective consists in including in dam projects a support component on behalf of the displaced people. This component is conceived as a development programme which is committed to ensuring that the project is a development opportunity for the affected people.

Thus, the Senegal River Basin Authority (OMVS in French) invested in the socio economic development and the protection of the environment of the basin following the construction of big infrastructure for the regulation of water resources (Diama and Manantali dams). In addition to these macro economic programs, OMVS included in its strategy actions targeting the improvement of the standard of living, incomes and productivity of the local people. Thus, the people already benefit from the potential for water supply and energy generated by the dams. Supplementary measures are undertaken through: (i) the electrification of the Manantali zone (the location for the resettlement villages), (ii) implementation of a rural electrification program for the main villages neighbouring the basin (10 villages per country); (iii) launching income generating activities supported by micro subsidies in order to reinforce the dynamics of poverty reduction.

Today, The Senegal River Basin Authority (OMVS) wants to go farther with the Program of Integrated Management of Water Resources (PGIRE, in French) that is expected to improve the living conditions of the residents of the basin through the development of the multiple uses of water on pilot sites (small and medium size irrigation, fishing, agro forestry in the low-lying areas, rehabilitation of the flood zones, etc.) and the implementation of a health program (the fight against bilharzia, malaria and improved sanitation). The Program of Integrated Management of Water Resources in downstream Manantali (PDIAM in French) is going to contribute to the improvement of the conditions of life of the affected communities also. Its main objective is food self-sufficiency through the fight against poverty, the improvement of the environment of the populations and especially the preparation of 1600 hectares of farming land. The Project must also contribute to the protection of the ecosystem through better integration of agriculture and cattle breeding, and to a balanced trade balance through the intensification of the agricultural activity on the Malian side of the valley. Villages hosting displaced persons are going to benefit from this project, namely Bamafélé, Mahina, and Jokeli. The PDIAM benefits from the financial support of the Kuwaiti Fund for Arab Economic Development, of the Saudi Development Fund, of the OPEC Fund for international development, the Islamic Development Bank, and the national budget, to a total of more than CFA 15.3 billion.

The case of Kossou Lake in Ivory Coast. The construction of the Kossou dam also entailed displacing more than 75 000 people and flooding many inhabited sites. For that purpose, one of the first measures taken by the government was the partial down grading of the classified forest of Sassandra, on behalf of resettled people and equipped volunteers who settled in the area. To offset the economic losses and the shock undergone by the population, the government of the Ivory Coast, initiated an integrated development project in the lake area, the Bandama Valley Improvement Project (AVB in French). So under the impulse of the AVB project, 120 new villages were created, and an agricultural development program for intensive farming was put in place.

3.2 Capitalizing on benefit sharing

A policy inspired by fair sharing

The majority of the large dams are located in cross border river basins which are managed today by transnational organizations (ABV, ABN, OMVS, OMVG, etc.) which have designed the political instruments for the fair distribution of the benefits generated.

Thus, with regard to the Authority of the Niger River Basin, the statement of the "Shared Vision" (adopted in May 2005) to orient the strategic development of the Niger Basin demonstrates the solidarity and the community of interest that bind the States sharing this basin in the exercise of their rights and obligations with regard to the use of the surface waters they share. The member States recognize that each one of them must enjoy a reasonable and equitable share of water resources in order to contribute to the reduction of poverty, to food security and to the protection of the environment (Principle 3 of the Declaration of Paris). The sharing of the benefits should be based on a multi-use approach by analyzing the uses that cause water withdrawals (irrigation, cattle raising) while also taking in account non-consumer usage (fishing, navigation, electricity, environment)²⁴.

With regard to the Senegal River, the "Water Charter" adopted in May 2002 is grounded on the principles of fairness, solidarity and preservation of understanding and peaceful relations between countries and peoples sharing the waters of the Senegal River²⁵. The management of the basin thus rests on the principles of rational sharing of the benefits in the exploitation of resources.

A new generation of reinstallation plans

In future dam projects undertaken by some basin agencies (OMVG, ABN, etc.), the resettlement plans include Local Development Plans "so that the affected populations can adapt their economic activities to the new realities and be the main recipients of the opportunities created by the programme"²⁶.

- *The Kandadji Reinstallation Plan*

The Kandadji dam project is considered to be a major program for Niger. The project plans to combine a dam and a hydroelectric power station of 130 megawatts with a yearly energy production of 620 megawatt hours. Besides, the work will permit the storage of 1.6 billion cubic meters of water and exploit 222,000 ha for a yield of 320,000 tons.

As a whole, it is estimated that 5,290 households should be displaced, which represents 34,710 people. Total compensation amounts to FCFA 54.1 billion while including a reserve fund of 8.8 billions in anticipation of rising inflation. Beyond the payment of the compensation, the Reinstallation Plan also contains a Local Development Plan that aims to allow people affected by the project to recover after the displacement a standard of living equivalent or superior to the one that they had before the realization of the program. It includes two components, a short-term program (Phase 1) and a medium-term program (Phase 2).

²⁴ Autorité du Bassin du Niger, 2007 : Plan d'Actions de développement de développement durable du Bassin du Niger (PADD). Phase II : Schéma directeur d'aménagement et de gestion.

²⁵ OMVS : Charte des Eaux, 2002 ; Ould Merzoug et al. 2003 ; Ould Merzoug et al. 2003, cité par Niasse Madiodio, 2008)

²⁶ Autorité du Bassin du Niger, 2007 : Plan d'Actions de développement de développement durable du Bassin du Niger (PADD). Phase II : Schéma directeur d'aménagement et de gestion.

Phase 1, which is 5 years long, aims to support the 3,600 people of the Kandadji dam area who will be displaced to permit the initial construction of the dam. It aims to secure these populations in a relative short period and to allow them to start economically profitable activities and thus contribute to the lasting economic development of their communities.

Phase 2 which is 10 years long, aims at upgrading the available resources in order to increase the capacity of the community for the satisfaction of the needs of people (31,000 people) that will be displaced by the reservoir. It will support the development of the primary sector, mainly (agricultural, livestock, fishing), secondary sector (manufacturing units, handicraft, etc.) and tertiary sector (tourism, etc.) thus opening new development prospects.

The existence of long-term support projects beyond this period will depend on the capacity of the state to put up funds for future projects.

- *The reinstallation plan of the future dam of Sambangalou (Gambia River Basin)*

In order to develop the energy potential of the Gambia river, the Gambia River Basin Authority (OMVG in French) has developed a program for the hydroelectric sites of Sambangalou (120 MW, 400 GWh/year of low energy), and of Kaléta (105 MW, 900 GWh/year low energy).

As the Sambangalou project will involve the expropriation of about 2500 people²⁷, a resettlement plan is under finalization. In addition to the resettlement plan for people affected by the project (PAP), the main complementary initiative will be the Local Development Plan (PLD in French)²⁸. The PLD will aim to improve the resettlement plan and turn its negative impacts, a priori very disruptive, into development opportunities. The local development plan supports the economic transition of the people displaced, not only to restore their standard of living, but to increase it. It will constitute an instrument which is likely to bring concrete answers to the local problems. Its implementation should be closely monitored. The local Development Plan is going to take into account the real preoccupations of the local communities in accordance with the process of decentralization in progress in Senegal and in Guinea. The local development initiatives that will be included in the PLD will generate additional economic activity that will benefit the people directly affected by the project as well as the populations of the region. The Sambangalou PLD is consistent with the objective of poverty reduction that the governments of Senegal and Guinea have set.

The development of fishing and agriculture as opportunities for the improvement of the livelihood of river basin populations

Today, with the departure of the migrant fishermen, the Kossou Lake constitutes an opportunity to diversify activities for the displaced people²⁹. However this is constrained by the non mastery of techniques and the lack of fishing equipment. The training of carpenters in the techniques of carving

²⁷ Banque Africaine de Développement, 2004 : Mémorandum ADF/BD/WP/2004/177.

http://www.afdb.org/pls/portal/docs/PAGE/ADB_ADMIN_PG/DOCUMENTS/OPERATIONSINFORMATION/ADF_BD_WP_2004_177_F.PDF

²⁸ OMVG, 2006: Plan de gestion environnementale et sociale (PGES). Version Provisoire. Septembre 2006

²⁹ Fabio P., Njifonjou O., Assienan J., Kodjo A., Ndia Y., Salvati N., Seghieri C., Profil de pauvreté des communautés riveraines du lac de Kossou en Côte d'Ivoire (novembre 2002). Cotonou, Programme pour des Moyens d'Existence Durables dans la Pêche en Afrique de l'Ouest, 90p. PMEDP/RT/17.

dugouts will help to reduce their dependence on the outside world. The introduction of improved isotherm cases and the support to women for the production of ice will cut the losses on catches and create a few jobs. However this growing interest in fishing must raise awareness about a certain number of future problems capable of compromising the sustainability of the resource. It will be necessary to think about evaluating the load capacity in terms of fishing pressure on the water body, that is to say to estimate the number of fishermen and/or units of fishing that are environmentally sustainable, which constitutes in itself one important instance of planning and co-management.

A 10,000 ha “tidal range” adapted for cash crops exists around the lake from November to July every year. This opportunity can permit irrigated vegetable farming (onions, eggplant, cabbage, etc.) at a low cost, using low-powered hydraulic pumps placed in a medium depth well that can be dug by the farmers themselves. For small fields, watering can sometimes be performed manually with the help of adapted watering-cans. Organizations of women could take on this activity like in the region of the Volta Lake in Koforidua (Ghana) that presents the same features as the Kossou Lake area. Special attention should also be given to the management of the numerous shallow grounds in order to permit the mastery of water and irrigated rice farming in two cycles.

Turning dams into lasting tourism opportunities

Bagré, known for its large hydro agricultural dam, its rice growing plains and its fishing resources, is hosting eco friendly tourist centres³⁰. Due to the presence of about a hundred hippos, forty species of fish, and a variety of bird fauna. The objective of this project is to develop the potential for tourism while developing “eco citizenship”. Thus, the construction works of this eco-tourist centre at Bagré, which is 85% completed, can boast 28 F1 and F4 villas that can accommodate 150 people. These villas will be all air-conditioned. The centre also consists of a restaurant with a bar, a swimming pool, a room for handicraft, and a conference hall for 100 people. The centre also plans to develop an animal park, an arboretum for students and researchers, and a medical centre. The major innovation of the centre is unquestionably the artificial beach that covers 3 km. This unprecedented facility in Burkina will offer floating cabins. Other services are offered on the beach (golf, beach volleyball).

³⁰ Gabriel SAMA/ Sidwaya, http://www.sidwaya.bf/coop-decentr_1.htm

Conclusion: Evaluation and lessons learned

The utility of dams for the development of West Africa is unquestionable. With the support of their partners (World Bank, African Development Bank, USAID, Canadian cooperation, etc.), the decision-makers of the sub region have been involved in the construction of dams for 40 years, which provides today a valuable amount of goods and development opportunities that reduce the vulnerability of the people facing recurrent poverty, notwithstanding the numerous impacts.

Out of the 150 big dams already constructed in West Africa, there are very few resettlement assessments in the public domain, maybe about ten. It is legitimate to wonder if training programs at the regional level have been held in order to improve the chances of success for future projects. Some countries have very few dams, or even none, and have therefore little experience in the domain. Yet, the Niger River Authority's development plan is considering the construction of 26 new dams for which this experience would be relevant. Although the processes of displacement / reinstallation of displaced people has not been totally satisfactory, decision-makers and planners of the dams could provide them with infrastructure and the means to allow them to mitigate the short-term consequences of displacement.

However, one must recognize that in the absence of resources and long-term development plans, the displaced people find it difficult to cope, not to mention the psychological shock of having forsaken a part of their soul drowned by the reservoirs. Many displaced people experience the deterioration of livelihoods over time, after the lavish period of compensation payments. Land shortage, growing demography, the absence of income generating activities and the conflicts with the host communities constitute as many obstacles against their development. The displaced people have the feeling of being left on the wayside, of being sacrificial lambs for development; they do not often share in the advantages of dams whose construction has exacted such a heavy toll on them.

Thanks to a political environment favourable to the sharing of benefits, decision-makers have sought to develop strategies to curb the injustice done to the displaced people. Development programs have been set in motion to endow the communities impacted by the dams with a favourable productive environment, thanks to the availability of water and electricity. Although it is hard to lay down a failsafe instrument for implementing the "better off" principle, some basin agencies are trying to promote the principle of sharing the benefits of hydro electricity, irrigation, etc. Bearing in mind the mistakes of the past, the resettlement plans for future dams already anticipate these issues by designing local development plans. The challenge to meet is ensuring that these programs will survive the lifespan of the dam.

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Annexe 1 : The dams of West Africa

Source : FAO, AQUASTAT (<http://www.fao.org/nr/water/aquastat/damsafrica/index.stm>)

Nom du barrage	Pays	Bassin	Fini ou opérationnel depuis	Hauteur	Capacité du réservoir	Irrigation	AEP	Contrôle inondation	Hydroélectricité	Navigation	Récréation	Contrôle de la pollution	Élevage	Autres
Ilaouko	Benin	Oueme	1979	22,00	23 500		x							
Lac dem	Burkina Faso	Nakambe	1950	-999	4 000	x	x						x	
Samou	Burkina Faso	Faga	1962	-999	5 000		x						x	x
Badadougou	Burkina Faso	Comoe	1977	-999	6 000		x							
Dablo	Burkina Faso	Faga	1977	-999	6 000	x	x						x	
Tougouri	Burkina Faso	Faga	1950	-999	6 000	x	x						x	x
Tougouri	Burkina Faso	Nakambe	1987	-999	6 000		x						x	
Sitenga	Burkina Faso	Gorouol	1978	-999	10 000		x						x	
Yalgo	Burkina Faso	Faga	1954	-999	10 000		x						x	x
Lac Bam	Burkina Faso	Nakambe	-999	-999	31 000		x							x
Loumbila	Burkina Faso	Nakambe	1947	-999	35 000	x	x						x	x
Douna	Burkina Faso	Leraba	1987	-999	50 000	x							x	
Toussiana	Burkina Faso	Comoe	1982	-999	6 100		x							
Boudieri	Burkina Faso	Niger	1963	-999	4 159	x							x	x
Louda	Burkina Faso	Nakambe	1958	-999	3 200	x	x						x	
Boura	Burkina Faso	Mouhoun	1983	-999	4 200	x							x	
Koubry II (Nayarle)	Burkina Faso	Nakambe	1972	-999	7 200	x	x						x	
Lery	Burkina Faso	Mouhoun	1976	-999	250 000	x							x	
Tougou	Burkina Faso	Nakambe	1962	-999	4 254	x	x						x	
Thiou	Burkina Faso	Sourou	1981	-999	4 300	x							x	
Itengué	Burkina Faso	Nakambe	1987	-999	3 350	x	x						x	
Bazega	Burkina Faso	Nakambe	1961	-999	5 350	x	x						x	x
Kompienga	Burkina Faso	Oti	1984	-999	1 400 000				x					
Sambissogo	Burkina Faso	Mouhoun	1961	-999	3 400	x	x						x	
Liptougou	Burkina Faso	Faga	1962	-999	7 423		x						x	x
Bagre	Burkina Faso	Nakambe	1980	-999	3 500	x							x	
Tamassogo	Burkina Faso	Nakambe	1978	-999	3 500	x							x	
Dakiri	Burkina Faso	Faga	1960	-999	10 500		x						x	x
Tapoa	Burkina Faso	Niger	1950	-999	5 510	x								x
Fada I	Burkina Faso	Niger	1951	-999	4 613		x						x	
Titao	Burkina Faso	Nakambe	1951	-999	3 700	x	x						x	x
Monkuy	Burkina Faso	Mouhoun	1965	-999	8 763									
Karamassaso	Burkina Faso	Ngora Laka	1958	-999	11 800	x								
Korsimoro	Burkina Faso	Nakambe	1984	-999	4 900	x	x						x	
Tingrela	Côte d'Ivoire	Bagoe	-999	17,00	3 000	x								
		Bandama												
Nouple	Côte d'Ivoire	Blanc	1976	13,00	4 000	x								
Yabra	Côte d'Ivoire	Bandama	1974	13,00	4 000	x								
Nabyon	Côte d'Ivoire	Nzi	1982	17,00	14 000	x								
Koua	Côte d'Ivoire	Ba	1979	23,00	17 000	x								

Nom du barrage	Pays	Bassin	Fini ou opérationnel depuis	Hauteur	Capacité du réservoir	Irrigation	AEP	Contrôle inondation	Hydroélectricité	Navigation	Récréation	Contrôle de la pollution	Élevage	Autres	Utilisation		
															(m)	(x1000 mc)	
Gbemou	Côte d'Ivoire	Bagoé	1979	14,00	18 000												
San Pedro	Côte d'Ivoire	Sassandra	1980	15,00	25 000	x			x								
Nafoun	Côte d'Ivoire	Bagoé	1976	15,00	60 000	x											
Ayme II	Côte d'Ivoire	Comoe	1964	35,00	69 000					x							
Taabo	Côte d'Ivoire	Bandama	1979	34,00	69 000							x					
Nindio	Côte d'Ivoire	Blanc	1975	13,00	3 100												
Buyo	Côte d'Ivoire	Sassandra Bandama	1980	37,00	8 300 000					x							
Solo Mougou	Côte d'Ivoire	Blanc	1974	15,00	14 300	x											
Loka	Côte d'Ivoire	Nzi Bandama	-999	23,00	22 300	x											
Lataha	Côte d'Ivoire	Blanc Bandama	1973	13,00	3 400	x											
Dekokaha	Côte d'Ivoire	Blanc Bandama	1973	13,00	3 600	x											
Natiokobadara	Côte d'Ivoire	Blanc	1974	14,00	3 600	x											
Gbon	Côte d'Ivoire	Bagoé	1976	12,00	7 700	x											
Ayme I	Côte d'Ivoire	Bia	1959	30,00	900 000					x							
Kossou	Côte d'Ivoire	Bandama	1972	58,00	27 675 400							x					
Tchimbele	Gabon	Komo	1980	36,00	220 000							x					
Kpong dam / Dikes	Ghana	Volta	1981	20,00	-999	x						x					
Barekese	Ghana	Pra	-999	-999	34 000		x										
Weija	Ghana	Densu	1978	16,00	139 000	x	x										
Ashaman	Ghana	Densu	-999	-999	6 200												
Veá	Ghana	Nakambe	-999	-999	17 300												
Kwanyaku	Ghana	Densu	1969	-999	1 360												
Bontanga	Ghana	Nakambe	-999	-999	25 350												
Afife	Ghana	Volta	-999	-999	29 450												
Tono	Ghana	Nakambe	1977	19,00	76 537	x	x										
Mankessim	Ghana	Densu	-999	-999	5 670												
Inchaban	Ghana	Ankobra	-999	-999	1 800												
Dawhenya	Ghana	Densu	-999	-999	5 800												
Akosombo (main)	Ghana	Volta	1965	134,00	147 960 000							x					
Kale	Guinea	Konkoure	1963	20,00	14 000							x					
Banieya	Guinea	Konkoure	1969	30,00	223 000							x					
Selingue	Mali	Sankarani	1982	23,00	2 170 000	x		x		x	x						
Markala	Mali	Niger	1947	8,00	175 000	x											
Manantali	Mali	Bafing	1988	70,00	11 270 000	x					x						
Foum Gleita	Mauritania	Senegal	1988	38,00	500 000	x											
Gusau	Nigeria	Sokoto	-999	22,00	3 000	x	x										
Bokkos	Nigeria	Benue	-999	15,00	5 000	x	x										
Pankshin	Nigeria	Benue	-999	31,00	5 000			x									
Swashi	Nigeria	Niger	1992	9,00	5 000	x											
Jabi	Nigeria	Gurara	1982	15,00	6 000							x					
Shiroro	Nigeria	Kaduna	1984	125,00	7 000							x					
Pada	Nigeria	Hadedja	1980	14,00	12 000	x	x										x
Kainji	Nigeria	Niger	1968	79,00	15 000 000							x					

Nom du barrage	Pays	Bassin	Fini ou opérationnel depuis	Hauteur	Capacité du réservoir	Utilisation											
						Irrigation	AEP	Contrôle inondation	Hydroélectricité	Navigation	Récréation	Contrôle de la pollution	Élevage	Autres			
Kurra	Nigeria	Gongola	1929	19,00	17 000				x								
Ero	Nigeria	Kampe	1987	22,00	20 000	x	x										
Guzan	Nigeria	Kaduna	-999	-999	20 000	x	x										
Waya	Nigeria	Gongola	-999	23,00	21 000	x	x										
Tugan Kawo	Nigeria		1988	12,00	22 000	x											
Y. Gowon	Nigeria	Gongola	1981	35,00	30 000		x										
Ankwil	Nigeria	Gongola	1964	26,00	31 000				x								
Ruwan Kanya	Nigeria	Hadedja	1976	22,00	33 000	x											x
Asa	Nigeria	Niger	-999	27,00	43 000		x										
Kagara	Nigeria	Kaduna	-999	31,00	43 000		x										
Suleja	Nigeria	Gurara	-999	28,00	52 000	x											
Kubli	Nigeria	Niger	1992	17,00	70 000	x											
Balanga	Nigeria	Gongola	1987	41,00	73 000	x											
Liberty	Nigeria		1973	27,00	77		x										
Erinle	Nigeria	Oshun	1989	27,00	94 000		x										
Ussuman	Nigeria	Gurara	1984	45,00	120 000		x										
Kafin-Chiri	Nigeria	Hadedja	1977	16,00	31 120	x	x										x
Eagauda	Nigeria	Hadedja	1970	20,00	22 140	x	x										x
Tenti	Nigeria		1943	14,00	14 150				x								
Zobe	Nigeria	Bunsuru	1983	19,00	177 000	x	x										
Obudu	Nigeria	Cross	-999	15,00	4 200	x											
Lantang	Nigeria	Benue	1979	19,00	5 200		x										
Oshun	Nigeria	Niger	1977	11,00	8 200		x										
Gari	Nigeria	Hadedja	1980	22,00	214 000	x											x
Karaye	Nigeria	Hadedja	1971	15,00	17 220		x										x
Omi	Nigeria	Kampe	-999	42,00	250 000	x	x										
Ikere Gorge	Nigeria	Ogun	-999	48,00	265 000	x	x		x								
Kangimi	Nigeria	Kaduna	1977	19,00	59 210	x	x										
Oyan	Nigeria	Ogun	1983	30,00	270 000	x	x		x								
Tagwai	Nigeria	Chanchaga	1978	25,00	28 300		x										
Kontagora (2)	Nigeria	Niger	-999	32,00	340 000	x											
Tomas	Nigeria	Hadedja	1976	14,00	60 300	x	x										x
Shen	Nigeria	Benue	1979	-999	3 400		x										
Hadejia	Nigeria		1994	9,00	11 400	x											
Gubi	Nigeria	Gongola	-999	27,00	38 400		x										
Bakolori	Nigeria	Sokoto	1978	48,00	450 000	x											
Bagoma	Nigeria	Kaduna	1974	17,00	5 455	x	x										
Otin	Nigeria		1974	14,00	5 455		x										
Gfant's House	Nigeria		-999	26,00	6 500		x										
Egbe	Nigeria	Osse	1983	22,00	21 500		x										
Jekara	Nigeria	Hadedja	1976	14,00	6 519 000	x											x
Doma	Nigeria	Benue	1988	16,00	37 500	x	x										
Mohammadu																	
Ayuba	Nigeria	Hadedja	1975	16,00	5 535 000	x	x										x
Oba	Nigeria	Oshun	1964	13,00	4 546		x										
Jebba	Nigeria	Niger	1984	40,00	3 600 000				x								

Nom du barrage	Pays	Bassin	Fini ou opérationnel depuis	Hauteur	Capacité du réservoir	Irrigation	AEP	Contrôle inondation	Hydroélectricité	Navigation	Récréation	Contrôle de la pollution	Élevage	Autres	Utilisation	
															(m)	(x1000 mc)
Igbojaiye	Nigeria	Ogun	1991	18,00	5 600	x	x									
Ejigbo	Nigeria		-999	20,00	14 600		x									
Kiri	Nigeria	Gongola	1982	20,00	615 000	x										
Guzu Guzu	Nigeria	Hadedja	1979	17,00	24 600	x										x
Watari	Nigeria	Hadedja	1980	20,00	104 550	x		x								
Faw Faw	Nigeria	Ogun	1967	15,00	668		x									
Magaga	Nigeria	Hadedja	1980	19,00	19 680	x										x
Kafin Zaki	Nigeria	Jamaare	-999	40,00	2 700 000	x										
Ouree	Nigeria		1936	21,00	6 700				x							
Kontagora (1)	Nigeria	Niger	1989	20,00	17 700		x									
Iku	Nigeria	Gurara	-999	28,00	42 700	x										
Ajiwa	Nigeria		1973	14,00	22 730	x	x									
Marashi	Nigeria	Hadedja	1980	11,00	6 770	x										x
Pedan	Nigeria		-999	33,00	5 800		x									
Awon	Nigeria	Ogun	1962	15,00	9 800		x									
Tudun Wada	Nigeria	Hadedja	1977	21,00	20 790	x										x
Jibiya	Nigeria	Bunsuru	1990	22,00	142 700	x	x									
Zuru	Nigeria	Gulbinka	1978	15,00	5 850		x									
Dadin Kowa	Nigeria	Gongola	1988	42,00	2 855 000	x	x		x							
Tiga	Nigeria	Hadedja	1974	48,00	1 874 000	x	x									
Biu	Nigeria	Gongola	-999	-999	11 900	x	x									
Zaria	Nigeria	Kaduna	1975	15,00	15 911		x									
Challawa Gorge Dam	Nigeria	Hadedja	1992	42,00	930 000	x	x									
Goronye	Nigeria	Rima	1983	20,00	942 000	x										
Asejire	Nigeria	Oshun	1969	26,00	32 913		x									
Diana	Senegal	Senegal	1986	18,00	250 000	x										
Nangbeto	Togo	Mono	1987	44,00	1 710 000	x			x							
Kprime	Togo		1963	16,00	900				x							

Annexe 2 : Terms of references of the consultants

Background

The construction of dams is usually one dimension of a government's response to water management pressures, responding to a need for irrigation or drinking water or hydropower for energy generation.

The River Niger and its tributaries currently have few large dams compared to other major river systems globally, however there are proposals for the construction of at least 65 large dams within the two main river basins concerning the Global Water Initiative (GWI). These present both opportunities and impacts for local people, and the way in which decisions are taken around such infrastructure is illustrative of water governance related issues. Dams impact the rural poor in several ways; they may cause them to relocate from their homes and land and affect their livelihood base; they may provide new water-related benefits from the new reservoirs that are constructed, or they may provide livelihood opportunities through irrigation and power generation. The way in which dam projects are designed and implemented has been shown to be significant in ensuring that benefits from such large and expensive infrastructure does not result in the poor losing out. Dams need to meet the needs of urbanised communities (water, energy and food), as well as rural smallholders.

The World Commission on Dams and the World Bank have demonstrated that it is feasible to manage the distribution of the benefits of dam projects in an equitable manner, thinking well beyond the usual basket of benefits that are too often only valued in cubic metres of irrigation water, or KWh of electricity generation. These bodies have demonstrated that a more equitable outcome is often attainable while also meeting urban development goals. While dams are a powerful tool for meeting national development objectives; they can also work effectively in favour of the needs of the rural poor if their needs inform the design of water use and distribution.

The greatest challenge is to help water resource managers recognise the wider benefits accruing from water and to ask how these benefits should be shared between different beneficiaries. Dam projects can create poverty and conflict when benefits previously accruing to one (or several) groups are diverted to other purposes and groups without adequate replacement or compensation.

There is an urgent need to review the status of benefit sharing mechanisms used around the world and to make that information available to a largely French speaking audience in West Africa.

Tasks to be completed

The consultant will draft an overview report on benefit sharing for affected communities in West Africa experience that covers the following

- Review nature of local community impacts of dams
- Characterise the challenges facing communities and developers around large dams in West Africa.
- Review resettlement experience through the lens of “ how have those affected benefited - are they better off ?”
- discuss challenges related to time bound funding in project cycle.
- Is there a perception that development opportunities were missed?
- What has been the West African experience of benefit sharing ?

- can benefit sharing support the development aims in western Africa and its broader policy approach.

Illustrate with specific examples (Manantali, Selingué, Bagré, Kainji etc), proposals for Fomi, Taoussa, Kandadji (if known ?). Refer to the transboundary nature of some dam impacts.

The consultant shall be responsible for the following :

- Drafting the report of 25-30 pages, with appropriate annexes, in French
- Providing an English translation once the French version of the report is agreed by IIED
- Commenting and filling gaps in other parts of the final text (including sections by LH) where necessary for editorial purposes.
- Proof reading the final French version of the text of the final report (including sections by LH)
- Participating in the regional workshop to be held in Niger in March 2008 and assisting in mobilising participants as required.