



## **INDEPENDENT REVIEW PANEL**

### **COMPLIANCE REVIEW REPORT ON THE BUJAGALI HYDROPOWER AND INTERCONNECTION PROJECTS**

**June 20, 2008**



## **ACKNOWLEDGEMENTS**

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## ACCRONYM

ADB	African Development Bank
ADF	African Development Fund
AESNP	AES Nile Power
AFD	Agence Française de Développement (French Development Agency)
APRAP	Assessment of Past Resettlement Activities and Action Plan
BEL	Bujagali Energy Ltd
BHP	Bujagali Hydropower Project
BHP-IP	BHP Investment Proposal
BHS	Bujagali Hydropower Station
BIP	Bujagali Interconnection Project
BIU	Bujagali Implementation Unit
BOOT	Build-Own-Operate-Transfer
BP	(The World Bank) Bank Procedures
CFR	Central Forest Reserves
CRMU	Compliance Review and Mediation Unit
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EPC	Engineering Procurement and Contract
ERM	Environmental Resources Management
ESA	Environmental and Social Assessments
ESAPs	Environmental and Social Assessment Procedures
ESIA	Environmental and Social Impact Assessment
GOU	Government of Uganda
IDB	Inter-American Development Bank
IESIAGs	Integrated Environmental and Social Impact Assessment Guidelines
IFC	International Finance Corporation
IRM	The Independent Review Mechanism
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management Policy
JBIC	Japan Bank for International Cooperation
MDBs	Multilateral Development Banks
MW	Megawatts
NaFIRRI	National Fisheries Resources Research Institute
NEMA	National Environmental Management Authority
NFA	National Forestry Authority
NPV	Net Present Value
OM	Operations Manual
OP	(The World Bank) Operational Policies
PAPs	Project Affected Peoples
PPA	Power Planning Associates
RCDAP	Resettlement and Community Development Action Plan
RMCs	Regional Member Countries
SEA	Social and Environment Assessment
SIAG	Strategic Impact Assessment Guidelines
SSEA	Strategic/Sectoral Environmental Assessment for the Nile Equatorial Lakes
UA	Unit of Account
USD	United States Dollars
WB	World Bank
WREM	Water Resources and Energy Management International Inc

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## **I. EXECUTIVE SUMMARY**

In 1999, the Government of Uganda (GOU), in order to address the national energy shortage, commissioned AES Nile Power (AESNP) to construct and operate the Bujagali hydropower plant and the related transmission line. In 2001, AESNP withdrew from the project before commencing construction of the dam, but after undertaking some preparatory environmental activities and involuntary resettlement of people directly affected by the dam.

In 2005, the GOU restarted the project, dividing it into the Bujagali Hydropower Project (BHP), commissioning BEL (Bujagali Energy Ltd.) to construct and operate the dam and power plant; and the Bujagali Interconnection Project (BIP), for which Uganda Electricity Transmission Company Ltd. (UETCL), a state-owned enterprise, assumed responsibility. The African Development Bank (ADB), the World Bank and other lenders finance the BHP, while the African Development Fund and the Japanese Bank for International Cooperation finance the BIP.

In May 2006, the Compliance Review and Mediation Unit (CRMU) received a Request from Ugandan NGOs and individuals to conduct a compliance review of BHP and BIP. The Requesters allege that the projects failed to comply with a number of the ADB's applicable policies and procedures. In particular, they claim that the appraisal of the projects was based on inadequate economic analysis and assessment of hydrological risks and dam safety, and that the projects' resettlement and compensation plans, and treatment of environmental, cultural and spiritual issues were deficient. The CRMU notified ADB's Management and received its response to the Request in July 2007. Based on the Request, the Management response, and a fact finding mission to Uganda, the Director of CRMU recommended a compliance review to the ADB Group's Boards of Directors, which they approved in September, 2007.

A Compliance Review Panel (the Panel) consisting of two members of the IRM Roster of Experts and the Director of CRMU was authorized to conduct the compliance review of the Bujagali projects. In conducting the review, the Panel undertook a field visit, reviewed relevant project documents, consulted with and interviewed the Bank Management and staff and other interested parties in Uganda and at the Bank's Headquarters. This Executive Summary is a brief overview of the findings and recommendations of the Compliance Review.

### ***Social and Cultural Issues***

The Requesters raise six concerns relating to the social aspects of the project.

First, they claim that there are unresolved resettlement and compensation issues relating to BHP and BIP. These issues, some of which are outstanding issues from the time of AESNP's involvement in the project, include loss of livelihoods, under-compensation, inability to obtain secure land titles, lack of adequate consultation, and requests to share in

project benefits, including access to electricity. The Management responded to these concerns by noting that BEL has agreed to address all the outstanding issues, and has appointed an NGO to act as a witness to the resettlement process and to assist it in mediating all grievances. The Panel determined that the Bank policies applicable to this issue, include the Policy on Involuntary Resettlement, which key principles of meaningful consultations, equitable treatment, and sharing of benefits are repeated in the Integrated Environment and Social Impact Assessment Guidelines; Policy on Integrated Water Resources Management; Environmental Review Procedures for Private Sector Operations; OM600 in the Operations Manual; and the Policies on Gender and Poverty Reduction. Based on these policies and its investigations, the Panel concludes that:

- **The failure to resolve all legacy issues prior to the commencement of project activities and the resulting uncertainty that this has created, especially for those people to be involuntarily resettled for the BIP, constitutes non-compliance with the requirements of the Policy on Involuntary Resettlement.**
- **The perfunctory references to the gender dimensions of this project in the Bank documents constitute non-compliance with the requirements of both OM 600 and the Policy on Gender.**
- **The shortage of systematically collected data about the situation of the project affected people before the commencement of the projects makes it difficult to confidently establish if the resettlement plan meets all the requirements of the applicable policies. As a result the Panel finds that the Bank has failed to comply with the Policies on Involuntary Resettlement, Gender, and Poverty Reduction.**

Second, the Requesters complain about the unfair treatment of the Basoga people, who they argue should be treated as indigenous people. The Panel, noting that the ADB has no specific policy dealing with indigenous people, finds that the Basoga people are one of Uganda's largest ethnic groups and are not subjected to any special discrimination. Consequently, it concludes that:

- **The Bank Management's treatment of the Basoga was appropriate, and that it had complied with all applicable Bank policies.**

Third, the Requesters argue that the Bank staff failed to pay sufficient regard to the cultural and spiritual significance of the Bujagali Falls and decided to proceed with the project without adequate consultations with all the relevant spiritual leaders of the Basoga. The Management countered that the Bank does not have a policy on physical cultural resources but is committed to respecting the World Bank's policy on physical cultural resources. The Panel, noting that the ADB has no policy on physical cultural resources, finds that references to cultural and spiritual property are included in the Policy on Involuntary Resettlement, and the Integrated Environment and Social Impact Assessment Guidelines, which need to be interpreted in light of the Bank's requirements for "meaningful

consultations” as set out in a number of Bank policies. Based on these policies, the Panel concludes that:

- **The admonition to avoid destroying cultural and religious sites and the particular emphasis on consultation and participation in ADB policies imposes on the Bank Management and staff an obligation to ensure that due diligence, including meaningfully consultation with all stakeholders, is fully observed in regard to any cultural or spiritual site that may be damaged by a Bank-funded project.**
- **The stipulation in the Policy on Involuntary Resettlement that particular attention be paid to “disadvantaged groups”, which it defines to include religious minorities, means that the Bank should have paid particular attention to those Basoga, consisting of the Nabamba Bujagali and his followers, who expressed concern that the destruction of the Bujagali Falls was proceeding without proper attention to all the necessary religious rituals and procedures. This obligation on the Bank is particularly relevant in this case because of the stipulation in the Environmental Review Procedures for Public Sector Operations and the Policy on Good Governance that the Bank ensure that the projects it finances comply with the international agreements ratified by the borrowing country, which in the case of Uganda include a number of conventions guaranteeing its citizens the freedom to practice their religion.**
- **The Bank appraisal of the BHP should have determined if there had been meaningful consultations between the sponsor of BHP and the Nabamba Bujagali and the Management’s failure to do so amounts to non-compliance with the applicable policies.**
- **The applicable Bank policies only require that the Bank ensure that the project sponsors engage in meaningful consultations with all the stakeholders in this issue and do not require the ADB to give any one of them a veto over the project.**
- **The appropriate manifestation of compliance with the requirements relating to cultural property and consultation in Bank policies would have been a section in the project appraisal report indicating that the Bank staff had recognized the profound significance of this issue and appraised the consultations that had taken place, and explaining why they believed the issue had been adequately and appropriately addressed and all stakeholders interests respected. The fact that the appraisal report does not contain such a section amounts to an instance of Bank Management and staff non-compliance.**

Fourth, the Requesters expressed concern about the independence of the Witness NGO and its roles in both the consultations about resettlement packages and in the mediation of grievances related to those packages. The Panel notes that the Policy on Involuntary

Resettlement requires an independent party to monitor the resettlement and that there be a grievance mechanism. It concludes that:

- **The appointment of one Witness NGO to be both the independent monitor of the resettlement and a participant in the decision making process that deals with grievances arising from the resettlement fails to comply with the applicable policy requirements.**

Fifth, the Requesters alleged that they had been given limited access to the projects' documents. Although the Panel found that many stakeholders lacked information about the ADB's role in the Bujagali projects, it concludes that:

- **Bank staff properly disclosed all Bank documents required by the applicable provisions in the Policy on Information Disclosure.**

Sixth, the Requesters complained that there had not been adequate consultation with all stakeholders in this project. The Panel notes that consultation is discussed in many different Bank policies. It interprets these policies to mean that Management has an obligation to assess the adequacy of the consultations undertaken by the project sponsor or the implementing agency in its appraisal report. While the Panel is aware that the projects' sponsors made considerable effort to consult with project stakeholders, it also met with a number of stakeholders in the project, including some who supported the project, who felt that they had not been adequately consulted. The Panel finds that:

- **While it is not clear that the deficiencies in consultation in these projects amount to an event of non-compliance, the Panel is concerned about the Bank Management's failure to include an assessment of the adequacy of the consultation in the BHP and BIP appraisal reports.**

### *Environmental Issues*

The Requesters raised six environmental issues.

First, the Requesters claim that the cumulative impacts of a cascade of dams including Bujagali on the River Nile have not been adequately addressed in the BEL's social and environmental assessment document (SEA). Although the analysis of cumulative impacts is a best practice in environmental risk management, the Panel notes that the Bank's applicable environmental guidelines do not cover this subject. Consequently, the Panel concludes that:

- **The Bank Management and staff are not at fault for not providing analysis of the cumulative impacts in its appraisal and, therefore, this issue is not a case of non-compliance with the Bank's policies and procedures.**

Second, the Requesters claim that, despite applicable Bank policies the SEA does not adequately discuss the potential impact of the Bujagali dam on the long term health of Lake

Victoria. There are two dimensions to the claim: (a) the impact of the dam on Lake water level; and, (b) the linkages between the dropping of the Lake water levels and its ecological functions. With regard to the first aspect, the Bank Management and the project preparation documents (PPA Study, SEA) agree with Requesters that water withdrawals from existing dams have in recent years exceeded the limits allowed under the Agreed Curve (a mathematical formula to regulate water release agreed upon by Uganda and Egypt). The Management is correct in pointing out that the Bujagali dam, by re-using the water flowing from existing dams will help increase the amount of electricity generated from the same amount of water. Despite this, the Panel is of the view that the new dam will increase the incentive for GOU to extract more water to generate as much power as possible. This is because the BHP is governed by a capacity-based power purchase agreement, and the only way for GOU to avoid paying for electricity not generated is to ensure that as much water as needed is made available to the dam, including in driest years. On the second aspect, the Panel could not detect, within the ranges of hydrological variations experienced since the early 1900s, evidence of a causal relationship between the water level in Lake Victoria and its ecological functions. Accordingly, the Panel concludes that:

- **Although there is a risk that the Bujagali dam could increase water drainage from the Lake, water withdrawals as a result of the dams are unlikely to be the main cause of the shrinking of the Lake to levels where its ecological functions could be severely affected.**

Third, the Requesters challenge the reliability of the data used to assess the impacts of the Project on flora and fauna (in particular, the fisheries). The Panel observes that the extreme complexity of ichthyology in the Victoria Nile and in the Lake is illustrated not only in project studies but also in other recent studies and surveys, like the ones by IUCN. Significant efforts are however being made by the Project to study fish populations, and in particular endemic species, in the Victoria Nile reach. Ugandan National Fisheries Resources Research Institute (NaFIRRI), a competent national research institution, conducts quarterly monitoring studies which it reports to BEL. In the Panel's opinion:

- **The Bank Management and staff exercised due diligence in accepting the findings of these studies and has complied with the applicable Bank environmental policies and guidelines.**

Fourth, the Requesters question the enforceability of the GOU's commitment to preserve the Kalagala Falls as an offset to the losses resulting from the Bujagali project. Even though the establishment of the Kalagala offset was in response to requirement of a World Bank policy, the Panel finds that:

- **The ecological and socioeconomic purposes of the Kalagala offset are consistent with ADB social and environmental policies. However, given the fact that GOU acceded to the request to preserve the Kalagala site as an offset to the ecological, economic and socio-cultural losses caused by the Bujagali dam, the Panel is concerned that there is no long term management plan for**

**ensuring that the offset sustainably achieves its environmental and socio-economic mitigation functions.**

Fifth, the Requesters believe that the SEA fails to address dam safety which, in their view, violates ABD policies. The Panel finds that:

- **The Bank does not have an explicit policy on dam safety, and**
- **It was reasonable for the ADB Management and staff to rely on the World Bank's findings with respect to dam safety.**

Sixth, the Requesters complained during the CRMU fact-finding mission that the SEA did not adequately assess the environmental impacts of the re-routing of the transmission line (T-Line). In the Panel's view, the re-routing in the suburbs of Kampala will help in minimizing the impact on both human settlements and the Lubigi wetlands. However, in the areas where the T-Line crosses the Mabira, Namyoya and Kifu Central Forest Reserves, the Panel could not find evidence that the option of overlapping the existing and the new transmission lines, which could have helped reduce the width of the wayleave to be deforested, was considered. The Panel finds that:

- **The failure to consider the possibility of overlapping the two transmission lines is an instance of non-compliance with the Bank's environmental policy.**

### ***Hydrological Issues***

The Requesters challenge the adequacy of the hydrological studies that were undertaken as part of the planning of the Bujagali project. The Panel finds that detailed peer-reviewed hydrological studies were carried out as part of the preparation for the Bujagali project, but it notes that three critical planning documents use them differently. The project SEA is based on the standard interpretation of the Agreed Curve, while the Economic and Financial Study (PPA study) utilizes the Constant Release, a new interpretation of the Agreed Curve in assessing the projects' feasibility. The BHP Investment Proposal does not clarify how it resolved the differences in interpretations of the operating rule of the Lake. Since the Agreed Curve and the Constant Release can result in different amounts of water being released from the Lake, different hydrological consequences are likely to follow from the adoption of one interpretation or the other. The Panel concludes that:

- **The fact that the BHP-IP does not clarify how it resolved the discrepancy in the interpretation of the Agreed Curve between the SEA and the PPA Study, while not strictly inconsistent with Bank policies, is a failure of the Bank Management and staff, particularly given the significant efforts made in the hydrological studies undertaken as part of the planning process for this project.**

The Requesters also challenge the approach used in assessing the hydrological risk, i.e. the hydrological context under which the planned dam will operate. The Panel finds that the PPA Study used all available time series data (i.e., from 1900 to 2005). On the basis of patterns of hydrological variations observed during this period, high and low flow scenarios (with respectively 21% and 79% of occurrence) are predicted for the 20 next years. The Panel concludes that:

- **The approach used in the PPA Study is consistent with other hydrological studies conducted for similar projects.**

As part of their claim that hydrological risk analysis was not properly assessed, the Requesters complain that climate change has not been given attention in the project appraisal documents. The Panel notes that several studies targeting the project area address this issue. However, there is no evidence that these studies informed the analysis undertaken as part of the projects' planning. Given the unfavorable hydrological conditions that prevailed in 2000-2005 and the increasing global evidence of the impact of climate change on water resources, the Panel believes that Bank Management and staff should have paid special attention to the hydrological/climate change risks in the project appraisal. However, the Panel concludes that:

- **In the absence of a specific ADB Policy requiring staff to examine such risks, it cannot make a finding of non-compliance.**

### *Economics Issues*

The Requesters raise six concerns relating to the economics of the projects.

First, the Requesters claim that the economic analysis in the PPA Study does not adequately address the project's economic viability in relation to the hydrological risk. The Panel finds that the Bank's Environmental Review Procedures for Public Sector Operations include a list of the issues to be considered in environmental and social assessments and that the Operations Manual in OM600 addresses the issue of economic analyses. Based on these policies and its investigations, the Panel concludes that:

- **While the hydrology issues were addressed in the PPA Study, the Bank Management and staff are not in compliance with the applicable policies because they did not include adequate information in the Bank's own appraisal documents on hydrological sustainability and related economic impacts.**
- **The novel interpretation of the existing international agreements dealing with water release from Lake Victoria adopted by the PPA Study is inconsistent with the standard interpretation cited in the BHP-IP. Since the application of these different interpretations could affect the overall result of the economic analysis, the Bank Management should have explained, in the project documents, the possible impact of the different interpretations of the Agreed**

**Curve on the economic and financial viability of the project. This is particularly relevant because applicable Bank policies specifically instruct Bank staff to ensure that the Bank-financed projects comply with the international agreements ratified by the borrowing country.**

Second, the Requesters claim that because the social and environmental damages attributed to the Bujagali project were not monetized, and the discount rate used in the economic analysis is too high, the Bank studies underestimate the total costs of the Bujagali projects. The Panel finds, based on the applicable policies—the Policy on Involuntary Resettlement and OM 600—that:

- **The Bank Management and staff have not fully complied with the Resettlement Policy because they did not include all resettlement costs in their economic analysis of the project.**
- **While it is generally preferred (as a best practice) to put a value on all environmental and social costs, in the Bank’s appraisal process, including the PPA Study, the Bank’s Management and staff have complied with OM600 because they identified the most relevant externalities at least in qualitative terms.**
- **The discount rate used by the Bank staff complied with the Bank’s requirements.**

Third, the Requesters contend that alternative energy options have not been sufficiently studied to conclude that the Bujagali project is the least-cost option. The Panel agrees with the Requesters that more detailed analysis of the potential alternatives should have been made in the Bank’s project appraisal documents, as well as in the PPA Study. However, the Panel considers that:

- **The Bank staff has not failed to comply with applicable Bank policies or procedures since the existing policies and procedures do not provide clear guidance on how to conduct an economic analysis of alternatives.**

Fourth, the Requesters claim that Bujagali is an economically risky project because of its high costs. The Panel is concerned about the different costs used in the Bank’s appraisal documents and the PPA Study, and finds it unsatisfactory that the project documents presented to the Boards of Directors some months after the completion of the PPA Study neither comment on the differential in capital costs between the PPA Study and the project appraisal documents, nor provides any explanations on how these differences could affect the result of the financial and economic analysis. Consequently, the Panel concludes that:

- **The Bank failed to comply with the applicable policies which require Bank staff to provide full explanations and justifications in the Bank’s appraisal documents for the selection of Bujagali.**

Fifth, the Requesters' concern about the high cost of the Project leads them to express doubts about the citizens' ability to afford the resulting tariffs. The Panel finds no reason to disagree with the Management's views that the recent increases in electricity tariffs are a result of the investments in short term thermal generation capacity, and that future tariffs are likely to decline when the thermal power plants are replaced by the Bujagali power. However, the Panel is aware that other project risks, including the high technical and commercial losses in the electricity transmission and distribution network, could affect the tariff structure. In its opinion the Bank Management and staff should have ensured that the assumptions about these technical and commercial losses were varied as part of the testing of the capacity of the system to cover the cost of the Bujagali power or to reduce the Government subsidies to the energy sector. On the basis of these findings, the Panel concludes that:

- **There is no basis for holding that the Bank failed to comply with the applicable policies on the issue of future tariffs.**
- **The Bank Management and staff have not complied with OM600 on project sustainability and risk and sensitivity analysis.**

Sixth, the Requesters claim that the Bujagali dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid. The Panel agrees with both the Requesters and the Management that the Bujagali projects cannot solve the energy needs of the majority of Ugandans, especially those living in rural areas. It is also a concern for the Panel that, despite the requirements of OM600 and the Policy on Poverty Reduction, there was very little discussion of the economic impact of the project on low income households in either the Bank's projects documents or the PPA Study. Accordingly, the Panel concludes that:

- **The Bank Management and staff have not complied with those applicable policies which require the Bank to pay particular attention to poverty issues in its project appraisals.**

### ***Recommendations***

The objective of the Compliance Review Panel's recommendations to the Boards of Directors and the Bank's Management is to contribute to lesson-learning in order to improve the Bank's policies, procedures and operational systems. Accordingly, the Panel recommends that:

- **The Bank should streamline and systematize its policies and procedures so that they become easily accessible to the staff and the public, in line with the Bank's Policy on Information Disclosure.**
- **The Bank should include specific references to policies and procedures in project appraisal documents to indicate how they have complied with them.**

- **The Bank should include adequate information in appraisal documents to justify their conclusions and recommendations.**
- **The Bank should review the adequacy of the number and specialization of staff and consultants required for complex projects in order to ensure that they fulfill institutional needs in multidisciplinary areas.**
- **The Bank should take appropriate action to ensure that the Bank staff has an adequate knowledge of the Bank's policies and how they are applied in its operations, including in co-financed operations.**
- **The Bank should review its data storage system to ensure that project documents become more easily available to staff involved in the Bank's operations as well as those working on project evaluation and accountability functions.**
- **The Boards of Directors should appoint an IRM Expert and the Director of CRMU to conduct the annual reviews of the implementation of the Boards of Directors' decisions based on this report.**

## II. INTRODUCTION: BUJAGALI PROJECTS BACKGROUND

In 1999, the Government of Uganda (GOU), in an effort to address its serious energy problems, contracted with Nile Power (AESNP), a privately owned consortium, to construct and operate two inter-linked projects: the Bujagali Hydropower Station, a 250-MW run-of-the-river power plant, and Bujagali Interconnection Project, a power-transmission line linking the power plant to the national grid. In December 2001, the African Development Bank's Board approved a private sector loan of US\$ 55 million to finance the construction of the project.

The loan was cancelled when AESNP withdrew from the project before construction began but after it had completed economic, social and environmental assessments of the project; the Environmental and Social Action plan; the Resettlement and Community Development Action Plan for the hydropower portion of the project; and the Resettlement Action Plan for the transmission line. In addition, approximately 8,700 people (about 1,288 households) had either been resettled or had lost assets for which they were entitled to compensation because of the project<sup>1</sup>. Some of these people were fully compensated. Others still had unresolved resettlement and compensation issues. AESNP had also begun establishing the area at the Kalagala Falls as an offset for some of the environmental and social consequences of the project.

AESNP's social and environmental implementation unit was reconstituted as the Bujagali Implementation Unit (BIU) with the capacity and the responsibility to deal with the issues relating to the Kalagala offset and to resettlement that remained unresolved after the withdrawal of AESNP from the project. The BIU reports to the Uganda Electricity Transmission Company Ltd. (UETCL). Until the implementation of the current Bujagali project, BIU monitored the situation of the affected people and at the Kalagala Falls but did not actually either resettle new people or deal with the legacy issues.

Following the withdrawal of AESNP, the GOU decided to split the project into two separately funded but connected projects. In 2005, it awarded a BOOT (Build-Own-Operate-Transfer) contract for the hydropower project (BHP) to Bujagali Energy Ltd (BEL), which is a Ugandan company, established as a special purpose consortium by Sithe Global Power; Industrial Promotion Services (Kenya); Jubilee Investment Co.; and the Aga Khan Fund for Economic Development.<sup>2</sup> BEL submitted an application to the African Development Bank (the private sector window) for partial funding for the BHP.

The GOU and BEL signed a Power Purchase Agreement and an Implementation Agreement. Pursuant to Article II Section 2.1 (b) of the former agreement, BEL was

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<sup>1</sup> Bujagali Hydropower Project, Assessment of Past Resettlement Activities and Action Plan (APRAP) included in Appendix I, of Vol. II of BEL Social and Environmental Assessment (SEA) prepared by R. J. Burnside, International Ltd. Guelph, Canada, and Frederic Giovannetti, Consultant, France, Rev. 5 (5 December, 2006), p.4, [hereinafter, "BHP-SEA"]. It should also be noted that Burnside prepared another social and environmental assessment for the Bujagali Interconnection Project.

<sup>2</sup> GOU also has an equity stake in BEL although it will have no representation in the governance of the company and will not receive any dividends until the debt is fully paid back.

required to update the Resettlement Action Plan, the Resettlement and Community Action Plan and the Environmental Impact Assessment prepared by AESNP. BEL hired a consultant, Burnside, to prepare the Social and Environmental Assessment Study (SEA) for the BHP.<sup>3</sup> This also resulted in the preparation of other key documents and plans required by the Bank's policies and procedures, including the "Assessment of Past Resettlement Activities and Action Plan" (APRAP) that deals with the outstanding resettlement and compensation issues from the first project and other resettlement and compensation issues that may arise from the BHP, the Summary SEA, and the Resettlement and Community Development Action Plan (RCDAP).

The GOU assigned the implementation of the Bujagali Interconnection Project (BIP) to Uganda Electricity Transmission Company Ltd. (UETCL), a state-owned enterprise. The objective of BIP is to provide the transmission infrastructure to evacuate power from the BHP to the distribution companies. It will be implemented by UETCL, and the GOU will be the guarantor. Burnside has also prepared the SEA of BIP for UETCL. BEL will act as an agent of UETCL, helping it oversee the implementation of the project. The GOU requested partial funding for BIP from the African Development Fund (the public sector window).

The Summary of the SEA together with the APRAP and the RCDAP for the BIP, were published by the Bank's Public Information Centre, posted on the Bank's website on 21 December 2006 and submitted to the Bank Group's Boards of Directors on 23 January 2007. They were also presented in public meetings organized in April 2007 by the Ugandan Ministry of Energy and Mineral Development and the National Environmental Management Authority (NEMA).

The resettlement and compensation for the affected people was expected to be completed by December 2007, which was before any construction was supposed to have begun on the transmission line. However, at the time of the Panel's visit to Uganda neither the resettlement nor the construction of the BIP had begun. Pursuant to the agreements governing these projects, BEL appointed a witness NGO, Inter-Aid, to observe the resettlement and compensation process. In addition, the sponsors established a grievance mechanism, in which Inter-Aid participates in the decision-making procedure, to deal with issues arising during the resettlement and compensation process.

### **1. The Bujagali Hydroelectric Power Project (BHP)**

The African Development Bank (hereafter referred to as ADB or the Bank) reconsidered BHP in 2005. In August 2006, it conducted a joint appraisal mission with the other lenders. The Investment Proposal [hereinafter, "BHP-IP"] was reviewed by the Bank's Private Sector Operations Committee, the Private Sector Investment Committee and the Senior Management Committee. BHP is comprised of: (a) a 30 meter high dam with a small reservoir (388 ha); (b) a main spillway gate and an auxiliary siphon spillway; (c) a powerhouse with a total installed capacity of 250 MW (five units of 50 MW turbines);, and,

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<sup>3</sup> BHP-SEA, *supra* note 1.

(d) a switchyard.<sup>4</sup> BHP's total cost at the time of appraisal was estimated at US\$ 735.5 million of which the ADB loan of US\$ 110 million constitutes approximately 15%. The ADB Group approved the project on 2 May 2007 and signed its Loan Agreement with BEL on December 14, 2007.

### ***BHP Development Impact***

The BHP-IP<sup>5</sup> states that the development impacts of the project will include (i) producing least-cost power for domestic use and export to neighboring countries; (ii) enhancing the efficiency of Uganda's power sector through an increased role for the private sector; (iii) increasing rural households access to electricity; (iv) creating jobs and business opportunities for local enterprises; (v) upgrading community<sup>6</sup> social services, boreholes, clinics, and schools;<sup>7</sup> and (v) contributing to GOU revenues--at present the subsidized tariff is 17.2 US cents per unit (compared to an average unit cost of 22 US cents) - with the commissioning of BHP and phasing out of the costly emergency thermal generators the average unit cost will drop to 15 US cents.

## **2. The Bujagali Interconnection Project (BIP)**

The GOU requested the African Development Fund (ADF) to finance the BIP in August 2006. The BIP comprises: (i) 75 km of 220 kV double circuit line from BHS to Kawanda substation, (ii) 15 km of 132 kV double circuit line from Kawanda to the existing Mutundwe substation, (iii) 8 km of 132 kV double circuit line to Nalubaale substation, (iv) 5 km of 132 kV double circuit line to link BHS to the existing line to Tororo substation, (v) a new 132 kV substation at Kawanda, and (vi) extension of 132 kV from Mutundwe substation<sup>8</sup>. The BIP is expected to cost UA 50.13 million of which the ADF loan of UA 19.21 million constitutes approximately 38.3%. The ADF will finance: the transmission lines; the substations; and the audit of project accounts. The additional funding is being provided by the Japan Bank for International Cooperation (JBIC) and UETCL/GOU, which will also bear the cost of resettlement/compensation.

### ***BIP Development Impact***

The appraisal report lists the following BIP development impacts: (i) restoring reliable electricity supply; (ii) contributing to poverty reduction by increasing the population's access to electricity - the project is expected to result in the power distribution company,

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<sup>4</sup> ADB: Uganda: BHP Investment Proposal of US\$110 million to Finance the Bujagali Hydroelectric Power Project (ADB/BD/WP/2007/39) (13 April 2007), p. 12 [hereinafter, "BHP-IP"].

<sup>5</sup> Ibid., p.8.

<sup>6</sup> The eligible villages under this Plan are: four on the west bank of the Nile (Mukono District): Naminya, Buloba, Malindi, Kikubamutwe; and four on the east bank (Jinja District): Bujagali, Ivunamba, Kyabirwa and Namizi.

<sup>7</sup> An estimated US\$1.5 million will finance these services over the life of the project.

<sup>8</sup> ADB: Uganda: Proposal for an ADF Loan of UA 19.21 Million to Finance the Bujagali Power Interconnection Project, (ADB/BD/WP/2007/37), (30 May, 2007) [hereinafter, "BIP Appraisal Proposal"], p. vii.

UMEME, distributing power to an additional 60,000 consumers by 2012 and the Rural Electrification Authority having the resources to connect some 220,000 new rural consumers; (iv) enhancing energy trade cooperation between Uganda, Kenya, Tanzania and Rwanda; and (v) providing alternative energy to reduce carbon dioxide emissions from the use of biomass and fuel wood.

### **3. Compliance Review Proceedings**

#### ***Request and Management Response***

On 16 May 2007, the Compliance Review and Mediation Unit (CRMU) received a request from the National Association of Professional Environmentalists (NAPE) and other NGOs and individuals to conduct a compliance review of BHP and BIP.<sup>9</sup> The Requesters' concerns related to the projects' assessment of: hydrology; dam safety; social and environmental issues; information disclosure, reliability of data used, economic analysis, comprehensive options assessment, and affordability. Under the IRM Operating Rules and Procedures [hereinafter, "*IRM Rules*"],<sup>10</sup> the CRMU notified the Management and received its response on July 6, 2007.<sup>11</sup>

#### ***Eligibility Review***

To assess the eligibility of a request, the *IRM Rules* authorize the Director of the CRMU to determine if there is *prima facie* evidence of harm or threat of harm caused by acts or omissions of the Bank Group's Management and staff constituting non-compliance with the Bank Group's applicable policies and procedures. The CRMU conducted a mission to Uganda from July 16 – 23, 2007 to interview stakeholders and to collect the information needed to assess the eligibility of the Request.

Under paragraph 44 of the *IRM Rules*, the Director of the CRMU prepared an Eligibility Report and recommended to the Boards of Directors of the Bank Group that they authorize a compliance review of the Bujagali projects. The Boards of Directors approved the compliance review of the Bujagali projects on September 7, 2007 on a lapse of time basis.

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<sup>9</sup> The Request of National Association of Professional Environmentalists Ltd. (NAPE), (5<sup>th</sup> May, 2007) received by CRMU on May 16<sup>th</sup>, 2007, [hereinafter, "the Request"].

<sup>10</sup> The Independent Review Mechanism (IRM) established by the Boards of Directors of the African Development Bank and the African Development Fund pursuant to Resolution B/BD/2004/9-F/BD/2004/7 and B/BD/2004/10 adopted by the Boards of Directors on 30<sup>th</sup> June 2004. The IRM Operating Rules and Procedures were approved by the Boards of Directors in 2006.

<sup>11</sup> African Development Bank Management Response to NAPE Request for Compliance Review of the Uganda: Bujagali Hydropower Project (Private Sector) and Bujagali Interconnection Project (Public Sector), June 2007, [hereinafter, "Management Response"].

### ***The Compliance Review***

Under Paragraphs 52 of the *IRM Rules*, the Boards of Directors appointed a Compliance Review Panel (consisting of Professor Daniel Bradlow, chair, Dr. Madiodio Niasse and Mr. Per Eldar Sovik) to conduct the compliance review.

Pursuant to Paragraph 52 of the *IRM Rules*, the Panel's role is to assess whether or not any act or omission of the Management and staff of the Bank Group, constitutes material non-compliance with applicable Bank Group policies and procedures. On the basis of its findings, the Panel, pursuant to Paragraph 52(c), may provide the Bank Group with recommendations on (i) "any remedial changes to systems or procedures to avoid the recurrence of similar violations", (ii) "any remedial changes in the scope or implementation of the Bank Group-financed project", and (iii) "any steps to be taken to monitor the implementation" of the recommended changes.

The Panel commenced its investigation on October 29, 2007 at the Bank's Temporary Relocation Agency in Tunis by meeting Bank staff who worked on either BHP or BIP and conducting a desk review of project-related documents. The Panel, jointly with the World Bank Inspection Panel and a team of specialist consultants, undertook a site visit to Uganda from November 26-December 8, 2007,<sup>12</sup> and revisited issues with the Bank's Management and staff in Tunis during December 10-14, 2007.

The Panel notes that the same public and private sector entities are involved in the sponsorship and oversights of both the BHP and the BIP, even though the former is primarily a private sector project and the latter is primarily a public sector project. Given the "public-private-partnership" character of both projects, the Panel has decided for the purposes of this report to look at the projects together. The report will however make reference to each specific project where necessary either because a particular issue or point is only relevant for one project or in the interests of clarity.

The issues raised by the Requesters are each addressed in the following sections.

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<sup>12</sup> The IRM Panel and the World Bank Inspection Panel coordinated their field investigations of the Bujagali projects and shared consultants and technical information during this investigation in order to enhance the efficiency and cost effectiveness of each of their investigations. While this collaboration between the Panel and the World Bank Inspection Panel worked to the mutual benefit of both parties, each Panel focused its compliance review on its own Bank's policies and procedures and each Panel has made its own independent judgments about the compliance of its Management and staff with its Bank's policies and procedures. Accordingly, while there may be common elements in their respective reports, the IRM Panel's findings and recommendations in this report are based on the independent judgment of the IRM Panel and exclusively on the ADB's policies and procedures.

### **III. SOCIAL ISSUES**

#### **A. Resettlement and Compensation**

##### *The Request and Management Response*

The Requesters claim the BHP resettlement is not complete and that there are still outstanding issues, including loss of livelihoods, under-compensation, inability to obtain secure land titles, lack of adequate consultation, and requests to share in project benefits. They believe that the existing compensation and resettlement framework is outdated and does not reflect the current economic conditions. Furthermore, they ask that the social costs and benefits of the compensation and resettlement program be re-assessed.

The Requesters also raise specific issues related to compensation for the people moved to the Naminya resettlement site. These issues include the quality of the houses received, lack of land title deeds given as compensation, and unfulfilled promises to provide the community with a primary school, community center, health center, a road connecting the community to the main road, and a market and other employment and income generating opportunities. In addition, this group of resettlers claims that they were promised access to electricity by AESNP, the sponsor of the first Bujagali project.

Management contends, in its response to the Request, that BEL, has agreed to resolve all the outstanding resettlement and compensation issues remaining from the first Bujagali project. For example, BEL has stated that it will help arrange land titling and complete, *inter alia*, upgrading the existing school, building a kindergarten, improving two health centers, addressing concerns about the quality of the housing provided to the resettled community, and creating employment and income generating opportunities for the resettled community during the construction and operation of the dam. Management also points out that BEL has addressed the issue of complaints about the resettlement by appointing a witness NGO, Inter-Aid, to observe the resettlement and compensation process and to mediate any grievances arising from the process. In addition, while disputing that AESNP had agreed to provide the resettled communities with electricity, Management states that BEL agreed to study the feasibility of providing resettlers with access to electricity.

##### *Applicable Policies*

The Bank has a Policy on Involuntary Resettlement (November, 2003) [hereinafter, "*Resettlement Policy*"]. Paragraph 3.1 of this policy requires that any people involuntarily resettled because of an ADB funded project must be treated "equitably" and must "share in the benefits" of the project. Paragraph 3.2 of the policy states that one key objective is to ensure that the "...standards of living, income earning capacity and production levels..." of displaced people "are improved." Paragraph 3.3(a) stipulates as one of this policy's guiding principles that the resettlement plan "should be conceived and executed as part of a development program with displaced persons provided sufficient resources and opportunities to share in project benefits." Finally, Paragraph 3.3 (e) of this policy mandates that compensation be provided at "...'full replacement' cost prior to their actual

move or before taking of land and related assets or commencement of project activities, whichever, occurs first”.

Paragraph 3.3(a) of the *Resettlement Policy* also states that any resettlement plan should ensure that “affected communities give their demonstrable acceptance to the resettlement plan and the development program, and that any necessary displacement is done in the context of negotiated settlements with the affected communities”. Paragraph 3.3(b) states that the displaced persons and the host communities should be “meaningfully consulted” regarding the resettlement plan. This Paragraph helps define “meaningfully consulted” when it states that the displaced persons should “be informed about their options and rights pertaining to resettlement. They should be given genuine choices among technically and economically feasible resettlement alternatives”. Paragraph 3.3(b) of the policy also stipulates that information about the proposed project and the resettlement and rehabilitation plans must be made available to both local people and national civil society organizations in “a timely manner and in a form and manner that is appropriate and understandable to local people” with attention being paid to levels of literacy and networking, which “may differ along gender lines”. In addition, this Paragraph stipulates that “careful attention” should be given to the organization of meetings, including the feasibility of holding separate women’s meetings and ensuring fair representation of female heads of households. Paragraph 3.3(c) of the same Policy adds that “particular attention should be paid to the needs of disadvantaged groups, which it defines to include “those below the poverty line, the landless, the elderly, women and children, and ethnic, religious and linguistic minorities; including those without legal title to assets, and female headed households.”

These principles are also cited in other Bank policies and guidelines. The Integrated Environment and Social Impact Assessment Guidelines (2003) [hereinafter “*IESAGs*”] in its appendices on hydropower (Appendix 8) and on dams and reservoirs (Appendix 9); and the Policy on Integrated Water Resources Management (April 2000) [hereinafter, “*IWRM*”], in Paragraph 3.5.5, state that the principles of meaningful consultations, equitable treatment and sharing of benefits are applicable to projects covered by these policies. The Environmental Review Procedures for Private Sector Operations (May 2000) [hereinafter, “*Environmental Procedures for Private Sector*”] require the ADB to make sure the project sponsor is “aware of Bank guidelines on involuntary displacement and resettlement”.

In addition, there are a number of cross cutting policies and procedures which provide guidance in interpreting the *Resettlement Policy*. They include *OM600* in the *Operations Manual*, which states in Paragraph 7 that “The appraisal team should pay particular attention to issues related to poverty, gender, population and participation”;<sup>13</sup> the *Policy on Poverty Reduction* (February 2004), in Paragraph 5.5.2.3 states that the Bank “will promote access of the poor to efficient, safe and affordable infrastructure services”; and Paragraph 5.4 of the *Gender Policy* (June 2001) which requires staff to incorporate gender analysis as an integral part of all Bank’s policies, programs and projects.

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<sup>13</sup> ADB, Operations Manual, Chapt. 6 on Project Appraisal (June, 1999), [hereinafter, “OM”].

## ***Discussion***

According to the Panel's calculations, the two Bujagali projects, based on their appraisal documents, will displace an estimated 13,760 individuals (3,190 households), meaning that they will lose some assets, of which 953 individuals (205 households) will be physically displaced, losing their domiciles. Due to lack of census data, the numbers of people who will be economically displaced<sup>14</sup> by BHP were not calculated by either the projects' 2001 or 2006 resettlement studies. Most of the people affected by BHP lived in 8 villages—4 on the East Bank and 4 on the West Bank of the Nile River.<sup>15</sup> In the case of BIP, approximately 1902 households are expected to be affected by the project, of which approximately 120 households will be physically displaced. Another 15 households will be able to relocate their residences on their existing plots; 40 households will suffer economic displacement; and the remaining approximately 1700 households will lose assets but not be either physically or economically displaced.

During the Bujagali I project, approximately 8,700 people (about 1,288 households) had either been resettled or had lost assets for which they were entitled to compensation. Neither all of these people nor all of the affected villages have yet received all the compensation that they were promised by AESNP. These legacy issues include, at the time construction of the BHP project commenced, loss of livelihood, under-compensation, inability to obtain secure land titles, and requests to share in project benefits, particularly electricity, delivery of benefits such as a primary school, community center, health center, a market and other employment and income generating opportunities.<sup>16</sup>

### **Bujagali Hydropower Project**

Not all people who have been resettled as a result of BHP believe that, as required by paragraph 3.2 of the *Resettlement Policy*, "their standards of living, income earning capacity and production levels" have been improved or that pursuant to Paragraph 3.3(a) of this Policy, their resettlement has been executed as a development project allowing them to share in the project benefits.<sup>17</sup> For example, in the Panel's meeting with the Naminya resettlement community, people complained that they do not have as full a range of cash crops as they used to, and that they have reduced access to the main roads making it harder to take advantage of income generating opportunities and to get their crops to market. In

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<sup>14</sup> Economically displaced persons are: "Those displaced persons who do not reside within the land acquisition area but have to relocate because they are affected by such a loss of assets that the remaining assets are not economically viable." Bujagali Interconnection Project, Resettlement and Community Development Action Plan, included in Appendix G, Executive Summary, P. IV incorporated in UETCL Social and Environmental Assessment (SEA) prepared by R. J. Burnside, International Ltd. Guelph, Canada, and Frederic Giovannetti, Consultant, France, Rev. 3 (5 December, 2006), [hereinafter, "BIP-SEA"].

<sup>15</sup> The four villages on the west bank of the Nile (Mukono District) are Naminya, Buloba, Malindi, Kikubamutwe; and the four on the east bank (Jinja District) are Bujagali, Ivunamba, Kyabirwa and Namizi. In addition, some of the affected people were relocated to Naminya Resettlement Village.

<sup>16</sup> The Panel has received information suggesting that at least some of these legacy issues may have been resolved after the Panel's visit to Uganda.

<sup>17</sup> The fact that the BHP resettlement plan is entitled, the "Resettlement and Community Development Action Plan", suggests that the project sponsors were aware of the need to ensure that resettled people shared in the project's benefits.

addition, some of the men in the community, who used to earn a portion of their livelihoods as fisherman, do not have access to their former fishing areas on the Nile, or to substitute fishing areas. Some community members claim that they do not yet have secure title to their lands and that, five years after their resettlement, the government is still surveying their land. They are concerned that this will lead to changes in the boundaries of their lands with resulting crop losses. Even though the project sponsors and representatives of the government argued that there were good reasons for these additional surveys and the delays in awarding land titles—for example, confusion over the location of the boundaries between certain plots, and the impact of the new transmission line passing close to the community -- the resettled individuals who do not know these reasons, are not being unreasonable in being concerned about the security of their land tenure.<sup>18</sup>

The Naminya community also claims that they were promised and have not yet received a primary school, community center, health center, and a market and other employment and income generating opportunities.<sup>19</sup> In addition, they claim that they were promised access to electricity by AESNP. Similarly some resettlers in the community at Nansana felt that AESNP had promised them a school, a health facility, improved roads, a 30% disturbance allowance, and secure titles, all of which they have not received.<sup>20</sup>

While the Panel has received information indicating that BEL has begun addressing these issues, the fact remains that they were not fully resolved when project activities began. **The failure to resolve all legacy issues prior to the commencement of project activities, despite the Project sponsor’s commitment to resolving these issues, does not comply with the requirement set out in Paragraph 3.3(e) of the *Resettlement Policy* that “displaced persons should be compensated for their losses at ‘full replacement’ cost prior to their actual move or ... commencement of project activities, whichever occurs first”. In addition, the failure to resolve these outstanding legacy issues in a timely manner does not comply with the requirement of Paragraph 3.1 of the Bank’s *Resettlement Policy*, to ensure that resettlers are treated “equitably” and are receiving a “share of the benefits” of the project. This situation, in which the resettlers, have less cash crops, and less access to revenue generating opportunities than they had prior to their involuntary resettlement, even if they have received some compensation, does not comply with the requirements of *OM 600* cited above: “The appraisal team should pay particular attention to issues related to poverty, gender, population and participation”. In this regard it is important to note that the Panel’s investigations were only able to find perfunctory references to the gender dimensions of this project in the Bank documents, despite the above cited requirements of *OM 600* and the *Gender Policy*.**

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<sup>18</sup> While not all resettled people may have had title to land before their move, it is clear that their failure to obtain title after resettlement can generate uncertainty about the security of their tenure and resulting in them feeling less secure than before their involuntary resettlement.

<sup>19</sup> BEL converted one house into a school and another into a clinic. However, the Requesters do not consider these to be adequate facilities because of the number of resettled people, needed resources and, in the case of the clinic, due to the limited hours of operation.

<sup>20</sup> BHP-SEA, Assessment of Past Resettlement Activities and Action Plan, Volume II, *supra* note 1, p. 16.

One particularly troubling issue in regard to compliance is the resettlers' belief that they have been promised and have not yet received any assurance that they will be given access to electricity. Their expectation is based on a document that they were given by AESNP. During the Panel's visit to Naminya, a woman handed the Panel a weathered copy of the Bujagali Power Project newsletter<sup>21</sup> that she felt supported the promise of electricity. The text states "AES Nile Power is committed to provide step-down transformers in eight villages in the affected area and in the new resettlement land allowing for access to power by residents who have never had the opportunity." This document is not a contract and so does not create a binding, enforceable legal commitment on BEL. However, it is sufficient to create expectations in the minds of the resettlers who are not legal experts sensitized to the technicalities of contract law. **It is also enough to have imposed an obligation on Bank staff to carefully investigate the matter in their appraisal of the project<sup>22</sup>. This is particularly the case given the meaningful consultation requirements in Paragraph 3.3(b) of the *Resettlement Policy* and that Paragraph 3.1, of the same policy, stipulates that resettlers should share in the benefits of the project for which they are being resettled—with electricity being the most obvious benefit of a hydropower project. Also relevant in this regard is Paragraph 5.5 of the *Policy on Poverty Reduction* which specifically promises that the Bank "will promote access of the poor to efficient, safe, and affordable infrastructure services".**

The Panel is aware that distribution is the responsibility of UMEME and not of BEL, which generates but does not distribute electricity, or UETCL, which is responsible for the transmission of electricity. **However, the complexities that this divided responsibility creates does not absolve the Bank Management and staff of the responsibility to make sure that the resettled communities are able to share in the benefits of the project.**

The Panel notes that determining the adequacy of the compensation received by the project affected people has been complicated by a methodological problem. There appears to be a shortage of systematically collected data about the situation of the project affected people before the commencement of BHP. This has made it difficult to determine the accuracy of the Naminya resettled people's claims about the quality of their houses, boreholes, latrines etc. or of the project sponsor's claims that people will be adequately compensated. **It also means that the Bank Management and staff cannot confidently establish if the resettlement plan meets all the requirements of the *Resettlement Policy*. As a result the Panel finds that the Bank has failed to comply with the *Resettlement Policy* in regard to BHP.**

**In addition, the lack of available data raises questions about the ability of the Bank staff to comply with Paragraph 5.4 of the *Gender Policy* which requires staff to incorporate gender analysis and gender considerations into all Bank operations. While it appears that some attention was paid to gender issues—for example efforts were made to pay compensation in a way that protected the interests of husbands and**

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<sup>21</sup> Bujagali Power Project Newsletter of 2001, Volume 1, Issue 3, p. 7.

<sup>22</sup> Information received by the Panel subsequent to its visit to Uganda indicates that the affected villages may receive access to electricity through an independent project. However, this information does not alter the Panel's concern with the Bank's failure to address the issue in its appraisal report.

wives—it does not appear that there was adequate consultation with affected women or that all their concerns have been adequately addressed in the resettlement and compensation plans. Based on this finding, the Panel concludes that the Bank has failed to comply with the *Gender Policy*.

### **Bujagali Inter-Connection Project**

The Panel’s investigation found that the people, who will either be physically or economically displaced by the transmission line and sub-stations to be constructed during this project, know that they will be resettled but, at the time of the Panel’s field visit, they did not yet know when or what compensation they would be offered. Moreover, many of them have had to live with the knowledge that they may be involuntarily resettled ever since the first Bujagali project was announced. The resulting uncertainty has costs for the affected people. For example, some displaced people claim they were told by AESNP, the previous sponsor, not to improve or use their land after the original valuation.<sup>23</sup>

While there may be good reasons for this situation in terms of the implementation schedule for the project, it raises problems for Bank compliance with the applicable policies. **First, the long period of uncertainty which the resettlers have had to endure, even after the commencement of the BHP made their ultimate resettlement inevitable, and the harm that this has caused some of them does not comply with the equitable treatment required by Paragraph 3.1 of the *Resettlement Policy*. Second, it does not comply with the consultation requirement set out in Paragraph 3.3(b) of the *Resettlement Policy* for BHP, a closely associated project, to have commenced even before the affected people were informed about their compensation package. At a minimum, pursuant to Paragraph 3.3(e) of the *Resettlement Policy*, these project affected people should have been informed and offered a chance to engage in meaningful consultations with the BIP project sponsor, UETCL, and its agent, BEL, about their compensation and the schedule of their resettlement before the commencement of the BHP, which is when the fact of their resettlement ripened into a certainty. The Panel therefore finds that the Bank Management and staff have failed to comply with the *Resettlement Policy* in regard to the resettlement of people affected by BIP.**

### **B. Cultural and Spiritual Issues**

#### ***The Request and Management Response***

The Requesters have made two allegations related to cultural and spiritual issues. First the Requesters claim that the Basoga should be treated as indigenous people pursuant to the policies of the Bank. Second they argue that the Bank staff failed to pay sufficient regard to the cultural and spiritual significance of the Bujagali Falls and decided to proceed with the project without adequate consultations with the relevant spiritual leaders of the Basoga. The Requesters also call for “an effective consultation process involving all clans that are culturally and spiritually attached to Bujagali Falls followed by a public hearing.”<sup>24</sup>

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<sup>23</sup> BIP-SEA, Public Consultation and Disclosure Plan, Volume II, *supra* note 14, p. 48.

<sup>24</sup> The Request, *supra* note 9, paragraph 2.5.0, p. 11.

The Management in its response notes that the Bank has no policy on indigenous people. In addition, it disputes the Requester's claim that the Basoga should be granted the special treatment that "indigenous people" receive pursuant to the applicable policies at other multilateral development banks. It argues that the Basoga are only 1 of the 55 groups mentioned as "indigenous" in the Ugandan Constitution and that none of these groups are entitled to special treatment under the Constitution. Moreover, it contends that the Basoga are not under-represented in Ugandan political and economic life and do not suffer any particular social discrimination nor are they in need of any particular affirmative action. Finally, Management points out that the World Bank Inspection Panel, in its first report in 2001 on the Bujagali project, did not view the Basoga as "indigenous people" requiring the special attention mandated by the World Bank's policy on indigenous people.

The Management, in addressing the Requesters' second concern, notes that the Bank does not have a policy on physical cultural resources. Nevertheless, they claimed that the ADB is committed to respecting the World Bank's policy on physical cultural resources, OP/BP 4.11, in regard to the Bujagali Falls and any other cultural property affected by this project. It also claims that the witness NGO, Inter-Aid, has been mandated to monitor the cultural and spiritual issues that arise in the project.

### **Issue 1: The Basoga as Indigenous People**

#### ***Applicable Policies***

While the Bank does not have a policy dealing explicitly with indigenous people, it does refer in some of its policies to "disadvantaged groups" who should receive special attention in Bank-funded projects. For example, this concern is stipulated in Paragraph 3.3(c) of the *Resettlement Policy* which states that "particular attention should be paid to the needs of disadvantaged groups" which include ethnic and religious minorities.

#### ***Discussion***

The Basoga as a group do not qualify as a disadvantaged group in regard to the BHP and the BIP. They are one of the largest ethnic groups in Uganda. They are not subject to any particular discrimination and have a traditional governmental structure that is recognized by the GOU. **Consequently, the Panel concludes that the Bank Management and staff complied with their obligations under applicable Bank policies by treating the Basoga as neither indigenous people nor a disadvantaged group.**

### **Issue 2: The Cultural and Spiritual Significance of the Bujagali Falls**

#### ***Applicable Policies***

While the Bank does not have a policy that deals specifically with cultural and spiritual matters, there are a number of Bank policies and procedures that refer to this issue. The *Resettlement Policy* states in paragraph 4.1.2 that "... as far as possible, the project should

avoid the destruction of cultural, religious...sites ...”. It adds that if destruction of such sites occurs “all attempts should be made to reconstruct them...”. In addition, both Appendix 8 (hydropower) and Appendix 9 (dams and reservoirs) of the “*IESIAGs*” identify cultural property as a major issue in dams or hydropower projects. Appendix 9 specifically states that the Bank should consider negotiating with traditional authorities about the “preservation of important cultural, religious, historic ...sites and agree on potential compensation to the community”.

In interpreting these policy stipulations, it is important to keep in mind that three other Bank policies require consultation before the ADB takes actions that could adversely affect a particular group. First, Paragraph 3.3(a) of the *Resettlement Policy* states that “Any resettlement plan should ensure that” affected communities give their “demonstrable acceptance” to the resettlement plan and the development program and that any necessary displacement is “done in the context of negotiated settlements with the affected communities”. Paragraph 3.3(b) of the same Policy also states that the displaced people and the host communities should be “meaningfully consulted” regarding the resettlement plan<sup>25</sup>. Second, the *Environmental Procedures for Private Sector* states in Paragraph 28 that, during the environmental assessment process for Category 1 projects, the “project sponsor is required to conduct meaningful consultations with relevant stakeholders including affected groups, civil society organizations and local authorities about the project’s environmental and social aspects and take their views into account...”. Paragraph 30 of these Procedures, incorporating a similar view of consultations to the *Resettlement Policy*, states that “After public consultations, project sponsor supplements EIA report with details on the consultations including its responses to concerns raised by the stakeholders and the measure taken to incorporate these concerns into project design and implementation.” Third, the *Environmental Procedures for Public Sector Operations* (June 2001) [hereinafter, “*Environmental Procedures for Public Sector*”] states in Paragraph 5.2 that “...meaningful consultations should be initiated as early as possible...”

### ***Discussion***

The cultural and spiritual issue raised by the fact that the BHP will result in the permanent inundation of the Bujagali Falls is profound and complex. The centrality of the Bujagali Falls to the cosmology and religious beliefs of at least some of the Basoga people means that the failure to satisfactorily resolve this issue could permanently and irreversibly undermine the social integrity of this group of Basoga and their religion. At this time, there is not enough information available to estimate what proportion of the Basoga may be adversely affected by this issue. However, the number of adversely affected people could be substantial.

The sponsors of both the first and second Bujagali projects were, and are, aware of the importance of this issue. During the first project, AESNP conferred with all the affected spiritual leaders that they could identify and sponsored a ceremony at which the spirits associated with the Bujagali Falls could be consulted about the project. Unfortunately, this

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<sup>25</sup> See discussion on “meaningful consultations” in this report section on “Applicable Policies” discussing “Resettlement and Compensation” *supra*.

ceremony did not satisfy all the stakeholders in this important issue. One reason was that only 9 of the 11 cultural leaders participated in the meeting, even though the sponsors were told that the attendance of all 11 was needed for effective consultation.<sup>26</sup> As a result, one of the major spiritual leaders, Nabamba Bujagali (also known as Jaja Bujagali), maintains that the profound religious issues raised by the flooding of the Falls have not been resolved.<sup>27</sup> Consequently, he remains opposed to the project, always noting that his opposition could change if the appropriate religious consultations indicate that the project can proceed.

BEL has made an effort to resolve the matter. It has consulted with another important spiritual leader, Lubaale Nfuudu, and the traditional Basoga political cultural leadership, represented by the cabinet of the Kyabazinga, and has sponsored a ceremony which satisfied these leaders that the project could proceed. The ceremony did not however satisfy the Nabamba Bujagali and his followers, with whom BEL has not consulted.

The net effect of BEL's and AESNP's efforts, and the failure of the Bank Management and staff to adequately address this issue in its appraisal of the project, is that there are now two distinct and opposing views on the matter. On the one side is the Lubaale Nfuudu, and the traditional cultural leadership of the Basoga who believe that the issue has been satisfactorily addressed and the project can proceed. On the other side is the Nabamba Bujagali and his followers who contend that that the spiritual issues raised by the flooding of the Falls are unresolved. Not surprisingly, BEL and all the lenders, including the ADB, have followed the first group's advice that the cultural and spiritual issues raised by Bujagali Falls have been adequately addressed and the project can proceed.

The Panel is faced with a difficult challenge in determining if the Bank Management and staff have complied with all applicable policies and procedures in regard to this matter. First, as indicated above, there is no ADB policy that specifically deals with these matters. The few references in Bank policies to property of cultural and religious significance merely require Bank staff to avoid the destruction of such property and, where this is unavoidable, to negotiate with the relevant authorities regarding the appropriate compensation for such sites. They neither unambiguously stipulate how the Bank staff should decide if it has consulted with all the relevant traditional leaders nor clearly define what would qualify as "adequate" consultation in these situations.

Second, the Management response that it is committed to respecting the World Bank policy on physical and cultural resources, OP/BP 4.11 does not resolve the matter. The only ADB policy that sanctions reliance on the policies of another institution is the *Environmental and Social Auditing Guidelines* (June, 2000) which, in Volume 3, authorizes the Bank to utilize the policies of other Multinational Financing Institution in developing audit criteria.<sup>28</sup> This stipulation merely allows the Bank to use the other policies as models in developing its

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<sup>26</sup> BHP- SEA, supra note 1, Appendix H, Public Consultation and Disclosure Plan, p.35, (summarizing meeting of August 18, 2006).

<sup>27</sup> See *Traditional Religion and Clans Among the Basoga*, Volume 1, Richard Kayaga Gonza, (ed.) (Cultural Resource Centre, Jinja, Uganda, 2002) p. 10, 114, 149 (discussing the status of the Nabamba Bujagali and the importance of the Nabamba Budhagali Spirit to traditional Basoga beliefs).

<sup>28</sup> *Environmental and Social Auditing Guidelines*, (June, 2000), Vol. III, Box 5, p.8.

own audit criteria. This is not the same as sanctioning an ADB commitment to follow another MDB's decisions regarding its own policies.

This precedent means that, in regard to physical cultural property, the ADB is free to refer to other international standards, including World Bank Policies, in determining how it will deal with physical cultural resources in its own operations but it must decide for itself what standards to apply in dealing with this issue and how they will be interpreted. Anything else—for example, deciding to merely follow the World Bank's policies -- would amount to the ADB delegating to another organization its responsibility to decide how the ADB should deal with such a complex issue as the treatment of important cultural resources in its borrowing member countries.

It is important to note that there is other support for the Panel's view on the ADB's responsibility to decide these matters for itself. For example, the ongoing efforts to harmonize standards across different multilateral and bilateral development funding organizations do not involve delegating to one organization the authority to determine the standards to be applied by all other development funding organizations.<sup>29</sup> Similarly, in the Common Terms Agreement associated with the BHP,<sup>30</sup> each funding agency utilizes its own policies and makes its own determination on compliance with its policy requirements.

Third, it appears that the Bank Management and staff, at least implicitly, have based their decision on this issue on their view of whose claim to be the spiritual leader capable of resolving the religious issues raised by the flooding of the Bujagali Falls is either more convincing or more useful to the Bank. Even if the Bank Management and staff could be shown to have had adequate expertise in this regard, their reliance on one rival religious leader over another raises concerns about the appropriateness of the Bank's intervention in the internal cultural and religious affairs of its borrowers.

**The Panel finds that there is no basis in the Bank's policies and procedures for requiring the Bank Management and staff to determine which spiritual claimant is the "true" spiritual authority on the issue of the spiritual and cultural issues relating to the Bujagali Falls. However it finds that the admonition in Paragraph 4.1.2 of the *Resettlement Policy* to avoid destroying cultural and religious sites and the stipulation in the *IESIAGs* that environment includes cultural heritage<sup>31</sup> imposes on the Bank Management and staff an obligation to ensure that due diligence is fully observed in regard to any cultural or spiritual site that may be damaged by a Bank-funded project. In this regard, the Panel places particular emphasis on the consultation requirements set out in Paragraphs 3.3(a) and (b) of the *Resettlement Policy*; Paragraphs 28 and 30 of the *Environmental Procedures for Private Sector*; and on the emphasis given to participation in Paragraph 7 of *OM 600* and finds that these provisions in the Bank policies and procedures impose on the Bank Management and**

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<sup>29</sup>See Paris Declaration on Aid Effectiveness (Paris, Feb.28-March 2, 2005) posted on [www.oecd.org/document](http://www.oecd.org/document) (visited by IRM Panel on April 30, 2008).

<sup>30</sup> The Common Terms Agreement is part of the loan documentation for BHP. It seeks to harmonize the requirements and different applicable standards of all the lenders to BHP.

<sup>31</sup> See p.5 and *IESIAGs* Appendices 8 and 9.

**staff an obligation to establish that the project sponsors have meaningfully consulted with all stakeholders in this issue.**

In deciding if the Bank Management and staff complied with this obligation, the Panel needs to address two questions. First, pursuant to the applicable policies, was the Bank staff required to consult with the Nabamba Bujagali in its appraisal of this project? Second, do the applicable Bank policies require that all the religious leaders and their followers affected by this project acquiesce in the project?

In addressing these questions, the Panel, in addition to the Bank policies cited above, has been guided by the Bank's explicit concern with ensuring that the interest of disadvantaged people are taken into account in Bank funded projects. Such concern is expressed in Paragraph 3.3(c) of the *Resettlement Policy* which stipulates that particular attention should be paid to "disadvantaged groups", which it defines to include religious minorities. **The Panel's opinion is that the Nabamba Bujagali and his followers, given that they are a religious minority in Uganda, and the powerful forces in both Basoga society and in the larger Ugandan society arrayed against them on this issue, should be viewed as a disadvantaged group, within the specific context of the Bujagali project.**

The Panel has also taken into account Paragraph 2.5 of the *Environmental Procedures for Public Sector* which requires the ADB to ensure that projects financed by the Bank "...comply with ...international agreements ratified by the borrowing country" and Paragraph 5.5 of the *Policy on Good Governance* (1999), which states that "an expansive interpretation of "the Bank's mandate to contribute to economic development and social progress in RMCs ... justifies a consideration of human rights practices among the criteria for granting assistance". These policy provisions are of particular importance in regard to the inundation of Bujagali Falls, which by impacting the ability of at least some of the Basoga to practice their religion, could affect their right to religious freedom. It is important to note that Uganda has ratified three international agreements that recognize the right to religious freedom. They are the International Convention on Civil and Political Rights, the African Charter on Human and People's Rights, and the International Convention on the Elimination of All Forms of Racial Discrimination.<sup>32</sup>

**Based on these policy considerations, the Panel determines, first, that the Bank was required to establish in its appraisal of the BHP that there were meaningful consultations between the sponsor of BHP and the Nabamba Bujagali and that Management's failure to do so amounts to non-compliance with the policies cited**

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<sup>32</sup> See, Article 18(1), International Covenant on Civil and Political Rights, December 16, 1966, 999 U.N.T.S. 171 (adopted by the U.N. General Assembly, G.A. Res. 2200, December 16, 1966, entered into force on March 23, 1976) states that "Everyone shall have the right to freedom...of religion". Uganda acceded to this Convention on 21 June 1995. Article 8, The African Charter on Human and People's Rights, OAU Doc. CAB/LEG/67/3. rev.5 (1981), available at <http://www1.umn.edu/humanrts/instree/z1afchar.htm> or at 21 I.L.M. 58, (January 1982) guarantees "the free practice of religion". Uganda ratified this Charter in May 1986. Article 5 (c) (vii), International Convention on the Elimination of All Forms of Racial Discrimination, Adopted U.N. General Assembly Resolution 2106 (XX) 21 December 1965, entered into force 4 January 1969, available at [www.unhchr.ch/html/menu3/b/d\\_icerd.htm](http://www.unhchr.ch/html/menu3/b/d_icerd.htm) guarantees to each individual the right to "freedom of ...religion". Uganda acceded to this Convention on 21 December 1980.

above. This failure is significant since, under the Bank's policies, the Nabamba Bujagali and his followers were entitled to particular attention because of the profound importance of the Bujagali Falls as a religious site; the enormity of their potential loss when the Falls are flooded; the impact of this loss on their beliefs and religion, and because of their disadvantaged position in the specific context of this project. In addition, as noted above, this failure is problematic because no effort has been made to determine how much support the Nabamba Bujagali's position has in the Basoga society.

Second, the Panel concludes that the Bank policies do not require that all the religious leaders and their followers affected by this project acquiesce in the project. Based on the Bank's policies cited above, the Bank is only required to ensure that project sponsors engaged in meaningful consultations with the stakeholders in this religious issue, which include all the spiritual and cultural leaders who have an interest in the matter. In other words, the ADB is not required to give the Nabamba Bujagali and his followers or any other stakeholder in this particular issue a veto over the project. In this regard, it is relevant to note that the World Bank Group, which has specific policies on cultural and religious property do not give veto power to any affected groups regarding cultural property.<sup>33</sup>

The Panel therefore concludes that the appropriate manifestation of compliance with the requirements relating to cultural property and consultation in Bank policies would have been a section in the project appraisal report indicating that the Bank staff had recognized the profound significance of this issue and appraised the consultations that had taken place on this issue, and explaining why they believed the issue had been adequately and appropriately addressed and all stakeholders interests respected. The fact that the appraisal report does not contain such a section amounts to an instance of Bank Management and staff non-compliance with the *Resettlement Policy*; the *IESAGs*; *Environmental Procedures for Private Sector*; *Environmental Procedures for Public Sector*; and *OM 600*.

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<sup>33</sup> See *WB Policy on Cultural Property, OP.411*, Paragraph 11 (requiring a consultative process that includes "...relevant project affected groups, concerned government authorities and relevant non governmental organizations in...assessing potential impacts, exploring avoidance and mitigation options."); IFC *Performance Standard 8: Cultural Heritage*, Paragraph 6 (requiring consultation with affected communities about cultural heritage, and the incorporation of the views of affected communities into the decision-making process). Some other regional development banks address the issue of cultural property in their environmental policies. See, for example, the Inter-American Development Bank, *Environmental and Safeguards Compliance Policy* Paragraph B.9 (stating that in the EA process, the IDB will "identify and assess impacts on critical cultural sites" and will not support projects that damage critical cultural sites, which include natural sites that are valued for their spiritual significance); and European Bank for Reconstruction and Development, *Environmental Policy (2003)* Paragraph 21 (stating that its policies will be structured to meet IFC Safeguard Policies on cultural property.) and Annex 2, Paragraph 2 (requiring "meaningful consultation").

## **C. Grievance Mechanism**

### ***Request and Management Response***

The Requesters did not specifically raise in their complaint any concerns about the grievance mechanism, which was created by BEL to resolve the resettlement and compensation issues, but they questioned the independence of this mechanism during the Panel's field investigations. Given the importance of the resettlement and compensation matters to the success of the Bujagali projects, the Panel decided to undertake a compliance review of this mechanism.

The grievance mechanism is briefly discussed in the Management Response which mentions that any grievances that individuals might have regarding compensation can be referred to the NGO engaged to independently review claims brought by individuals regarding the proposed and agreed packages, or any related matters regarding inequitable implementation.<sup>34</sup>

### ***Applicable Policies***

The *Resettlement Policy* in paragraph 4.1.11 states that "An independent third party should monitor large resettlement plan implementation with regular feedback from the affected people". Furthermore, it requires that the monitoring activities should include a review of the grievance mechanism to ensure both that there is an adequate channel for affected people to express concerns and that the concerns are addressed in a timely manner.

### ***Discussion***

BEL has established a grievance mechanism that consists of two parts. First, it has appointed an NGO, Inter-Aid, to act as the Witness NGO for both BHP and BIP. The primary function of this NGO is to monitor the implementation of the resettlement and compensation plans and other social aspects of these projects. This NGO was slated to perform a similar role during the Bujagali I project and so has a detailed knowledge about the projects and their related resettlement and compensation plans.

Second, the mechanism includes a grievance procedure in which Inter-Aid together with other actors hears grievances arising from the resettlement process and seeks to resolve the grievance.

During its field investigation, the Panel met with Inter-Aid and was impressed with its personnel's professionalism and their knowledge about the project. However, the Panel has two concerns about this witness NGO. The first relates to the relationship between Inter-Aid and BEL. Given that Inter-Aid has been hired by BEL and is paid by BEL, it is difficult to avoid the conclusion that Inter-Aid is not a fully "independent third party" despite the obvious professionalism of its staff. This concern gains greater urgency when it is noted that the selection of Inter-Aid was not based on a truly open and competitive hiring

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<sup>34</sup> Management Response, *supra* note 11, 6D, p. 37.

process. It was, instead, premised, at least in part, on the role that Inter-Aid had played in the first Bujagali project and its relationship with the holdovers from that project.

Second, the Panel is concerned about the role that Inter-Aid will play in the grievance procedure because it is difficult to see how it can be a fully independent disinterested participant in this process, given its other role as a witness of the resettlement process. Consequently, the Panel notes that there is a significant risk that it will be required in its role as a participant in the grievance procedure to comment on and even defend its own conclusions as a witness.

**Based on these observations, the Panel concludes that the appointment of Inter-Aid as both the Witness NGO and as a participant in the decision making process of the Grievance Mechanism fails to comply with the requirement of Paragraph 4.1.11 of the *Resettlement Policy* that an “independent” third party monitor the resettlement program in this project.**

#### **D. Consultation and Disclosure**

##### ***Request and Management Response***

The Requesters acknowledge that the project sponsors did engage in consultation with stakeholders. However, they argue that the form of the consultation was inadequate because the stakeholders were not offered true participation in the decision-making process. They also contend that the consultations that BEL claimed took place with the 240 clans of the Basoga and the 52 clans of the Buganda did not in fact take place. In addition, they allege that the failure of the Bank to ensure that the concerns raised in the consultations were addressed is inconsistent with applicable Bank policies. Finally, they allege that the Bank failed to disclose some relevant studies, such as studies on hydrology, the economic study and the Power Purchase Agreement.

The Management, in its response, maintains that there has been consultation with all necessary parties. It also maintains that the Requesters have been given copies of all relevant information. The Management states in Response 3A of the Annex to its response that the hydrology studies were discussed in a series of meetings with stakeholders in the Ugandan power sector and that the conclusions regarding hydrology in the economic study were publicly disclosed in February 2007. It also contends that the Power Purchase Agreement has been publicly released by the GOU.

##### ***Applicable Policies***

##### ***Disclosure of Information***

Information disclosure at the ADB is governed by “The African Development Bank Group Policy on Disclosure of Information” (2005) [hereinafter, “*Disclosure Policy*”]. Pursuant to Paragraph 3.2 of this Policy, the Bank is enjoined to “disclose all documents on its

operations and its activities unless there are compelling reasons not to do so". It is important to note that this policy is limited in scope to documents prepared by the Bank.

### ***Consultations***

There are a number of Bank policies that deal with the issue of consultation. First, Paragraph 3.3(a) of the *Resettlement Policy* states that "Any resettlement plan should ensure that" affected communities give their "demonstrable acceptance" to the resettlement plan and the development program and that any necessary displacement is "done in the context of negotiated settlements with the affected communities". Paragraph 3.3(b) of this Policy also states that the displaced people and the host communities should be "meaningfully consulted" regarding the resettlement plan. The paragraph helps define "meaningfully consulted" when it states that the "displaced persons should "be informed about their options and rights pertaining to resettlement. They should be given genuine choices among technically and economically feasible resettlement alternatives". Second, the *Environmental Procedures for Private Sector* state in Paragraph 28 that during the environmental assessment process for Category 1 projects, the "project sponsor is required to conduct meaningful consultations with relevant stakeholders including affected groups, Civil Society Organizations and local authorities about the project's environmental and social aspects and take their views into account...". It adds in Paragraph 30 that "After public consultations, project sponsor supplements EIA report with details on the consultations including its responses to concerns raised by the stakeholders and the measure taken to incorporate these concerns into project design and implementation." Third, the *Environmental Procedures for Public Sector* states in Paragraph 5.2 that "...meaningful consultations should be initiated as early as possible...".

Similar concerns are expressed in the *Good Governance Policy*, which states in Paragraph 6.30 that "Particular attention will be given to expanding participation in project design, implementation and evaluation to include women and most importantly to groups that represent them credibly" and in Paragraph 7 of *OM 600* which stipulates that "The appraisal team should pay particular attention to issues related ... participation".

The Bank's policies also seek to ensure that women are included in these consultations. First, the *Gender Policy* stipulates in Paragraph 6.1.9 that "Since women's viewpoints may not always be adequately taken into account, Bank programme/project missions will ... take special measures to ensure women's full participation in these processes." Second, the *IESAGs* in its Appendices on hydropower (Appendix 8) and on dams and reservoirs (Appendix 9) includes participation of women and affected people in consultations and decision-making in the list of major issues to be taken into account by the Bank in these operations.

## *Discussion*

### *Disclosure of Information*

The Requesters raise an important issue when they contend that they have not been given access to all the key documents relevant to this project. However, the documents to which they refer are not documents prepared by the ADB and so they do not fall within the Bank's information disclosure policy. **Consequently, the Panel finds that the Bank has complied with all its information disclosure obligations in regard to the specific issues raised by the Requesters.**

The Panel is concerned that the affected people with whom it met during its visit to Uganda did not know much about the Bank's engagement in the Bujagali project (which is usually perceived as a World Bank project). This is particularly worrying given the importance of affected people having access to the Bank to discuss their concerns or to complain if they experience problems during the project's preparation and implementation.

### *Consultation*

The fact that consultation is discussed in so many different Bank policies underscores the importance of meaningful consultation to the Bank. **The Panel interprets these policies to mean that Management has an obligation to assess the adequacy of the consultations undertaken by the project sponsor or the implementing agency in its appraisal report. The appropriate manifestation of this assessment should be a section in the project appraisal report detailing the steps the Bank has taken to appraise the adequacy of the consultations, and explaining why they have concluded that the Bank's policies on this issue have been complied with, and that the interests of all parties who could be affected by the project have been respected.**

**During its investigation, the Panel met with a number of stakeholders in the project, including some who supported the project, who felt that they had not been adequately consulted and that their views, even though they were being affected by the project, had not been taken sufficiently into account in the planning of the project. While it is not clear that this lack of consultation amounts to an event of non-compliance, particularly given that it is clear that the sponsors of the project made considerable effort to consult with project stakeholders, the Panel is concerned about the Bank Management's failure to include an assessment of the adequacy of the consultation undertaken in the case of both the BHP and the BIP in the project appraisal reports. It is also concerned that some project affected groups seemed to know very little about the Bank's consultation requirements.**

## IV. ENVIRONMENTAL ISSUES

The concerns raised by the Requesters about the environmental aspects of the BHP and BIP relate to (a) the adequacy of the social and environmental studies done regarding the assessment of cumulative impacts; (b) the linkages between water abstractions for electricity production, Lake water levels and the long-term health of Lake Victoria; (c) the impact of the projects on fish life in the Lake and the River Nile; (d) the GOU's commitment to preserving the Kalagala Falls as an offset for some of the BHP's impacts; (d) the impacts of the BIP on sensitive ecosystems; and (e) dam safety.

### Cumulative Impacts

#### *Request and Management Response*

The Requesters allege that the cumulative impacts of existing and planned dams (including the Bujagali Hydropower Project) have not been assessed. They did not refer in their Request to a particular Bank policy dealing with this issue.

The Management Response refers to a World Bank funded study, The Strategic/Sectoral Environmental Assessment for the Nile Equatorial Lakes (2007)<sup>35</sup> (Nile SSEA), that assessed the cumulative impact of existing and several planned hydropower development alternatives on the Victoria Nile. The Nile SSEA, which was undertaken in response to the first World Bank Inspection Panel's report on the Bujagali project, concludes that developing Bujagali and other sites in the Victoria Nile Basin (excluding Kalagala) would not have significant cumulative environmental impacts. In addition, Management points out that the SEA for the BHP assessed the cumulative impacts of existing dams (Nalubaale and Kiira) and planned dams (Bujagali and Karuma). The Management Response does not mention specific ADB policies applicable to the assessment of cumulative impacts.

#### *Applicable Policies*

Cumulative impacts are mentioned in two ADB policies. First, Annex C of the *Strategic Impact Assessment Guidelines* (2003) (*SIAG*) requires staff to identify and assess the likely significant project impacts including "cumulative impacts", which are defined in the policy document as "ancillary impacts of large-scale schemes (e.g. infrastructure development) or incremental effects of numerous small-scale actions of a similar type". It should be noted that the status of the *SIAG* is unclear. It is a report authored by the consultant ERM (Environmental Resources Management) that, as far as the Panel knows, has not yet been approved by the ADB as a formal Bank policy.

Second, the *Environmental Procedures for Public Sector* addresses cumulative impact, although more extensively in connection with sectoral and regional programs and plans than with project interventions. The policy requires sectoral, regional and strategic impact assessments to consider "more far-ranging and cumulative impacts and broader types of

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<sup>35</sup> Prepared by SNC Lavalin International, February 2007.

alternatives than provided by project-specific ESA [Environmental and Social Assessments]”.<sup>36</sup> At the project level, this policy states: “cumulative effects shall be addressed taking into account other projects or actions planned in the study area.”<sup>37</sup> The Bank’s *Environmental Procedures for Private Sector* does not discuss cumulative impacts.

### ***Discussion***

The Panel finds that the Bujagali SEA only makes passing references<sup>38</sup> to the Nile SSEA, which was completed two months after the Bujagali SEA. The Nile SSEA makes no reference to the Bujagali SEA. Despite this lack of cross-referencing, the Management Response cites the Nile SSEA report as evidence that cumulative impacts have been analyzed in the Bujagali project.

**The Panel therefore finds that the cumulative effects of the cascade of dams of which Bujagali project will be part have not been adequately addressed in the project’s SEA. However, it also finds that the Bank’s *Environmental Procedures for Private Sector* do not address cumulative impacts and that the Bank’s only formal policy which does deal explicitly with project-level cumulative impacts (*Environmental Procedures for Public Sector*) is not applicable to the BHP, which the Bank has treated as a private sector project. The *SIAG* deals only with cumulative impact assessment at the sector/regional level (instead of project level). In addition it is unclear whether this document (not formally approved as a policy to the best knowledge of the Panel) is applicable. Consequently, the Panel does not find the failure to study cumulative impacts to be an instance of non-compliance, although it believes that analysis of cumulative impacts is a best practice in environmental risk management.**

### **Long Term Health of the Victoria Lake**

#### ***Request and Management Response***

The Requesters, while not citing any ADB policies, claim that the SEA prepared by BEL does not adequately discuss the potential impact of the Bujagali dam on the long term health of Lake Victoria.<sup>39</sup> According to the Requesters, the SEA merely asserts that the project will lead to more sustainable flows from the Lake because it will use the same water as the existing upstream power plants/dams (Nalubaale and Kiira). They contend that the Project Economic and Financial Analysis uses a new interpretation of the Agreed Curve<sup>40</sup>, known as the “Constant Release”, as its operating rule and that this will lead to

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<sup>36</sup> Box 1-D-1, the Environmental and Social Assessment Procedures for African Development Bank’s Public Sector Operations (2001).

<sup>37</sup> Annex 10, Part B, Typical Contents of an Environmental and Social Impact Assessment Report, section v.

<sup>38</sup> See BHP- SEA, Volume I, *supra* note 1, pp. 153 and 436.

<sup>39</sup> The Request, *supra* note 9, paragraph 2.1.4, p. 3.

<sup>40</sup> The Agreed Curve refers to a mathematical relationship, under pre-dam natural conditions, between the water level in the Lake Victoria (measured by a gauge at Jinja) and the amount of water flowing out of the Lake to the Victoria Nile River. The Agreed Curve which was developed between United Kingdom and Egypt prior to the construction of the Owen Falls Dam (now Nalubaale Dam) requires that the dam be operated in a way that ensures that water releases from the Victoria Lake mimic pre-dam natural conditions.

over-draining of the Lake. They also believe that changes in the water temperature of the Lake and its geomorphology resulting from the use of the “Constant Release” operating rule will affect ecosystem functions, fisheries, livelihoods, ecotourism recreational opportunities and electricity generation capacity.<sup>41</sup>

The Management Response, while also not referring to any specific Bank policies, stresses the complexity of factors that influence the Lake hydrology including the interactions between rainfall and evaporation processes. Management adds that, while during 2003-2005 water extraction from the Lake exceeded the GOU’s commitment to the Agreed Curve, efforts have been made since 2005 to conform to the Agreed Curve. Management also stressed that by generating more electricity from the same Lake water released through Nalubaale and Kiira, the Bujagali project could have a positive impact on the Lake in the current context of low water availability.

### ***Applicable Policies***

The Panel believes that any policy dealing with the protection of natural ecosystems in general (and aquatic ecosystems in particular) is relevant to the issue of the long term health of Lake Victoria. Therefore, while all the Bank’s environmental policies and guidelines are applicable to this issue, the following are of particular relevance: the *IWRM*, which stipulates that the Bank should protect “aquatic ecosystems”, “water-based ecosystems”<sup>42</sup> and “improve the health of fresh water ecosystems”<sup>43</sup> and the *Policy on the Environment* (2004) which requires the Bank to pay special attention to the need to ensure the maintenance of the “ecological regenerative and assimilative capacity of the natural ecosystems”<sup>44</sup>, and to reduce the threat to these ecosystems.<sup>45</sup> These policies neither define ecosystem health, nor specify Bank policy requirements for dealing with specific threats to ecosystems.

### ***Discussion***

There are two aspects to the Requesters’ claim: the first relates to the impacts of the existing and planned dams on the Lake level; the second deals with the linkages between the Lake level and its long term health.

In regard to the first issue, both the Management Response and the Project preparation document (see below in the hydrology section) agree with the fact that water withdrawals in recent years have exceeded the limits allowed under the Agreed Curve. The Bujagali promoters are right in arguing that the new dam, by re-using the water flowing through the existing dams, will help increase the amount of electricity generated from the same amount of water released from the Lake. However, as indicated by the Panel in the hydrology section, the existence of the Bujagali dam will create an additional incentive for GOU to

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<sup>41</sup> The Request, *supra* note 9, paragraph 2.1.8 ii, p. 4.

<sup>42</sup> *IWRM Policy* (2000), paragraph 6 under section on “Institutional Issues”.

<sup>43</sup> *Ibid.*, paragraph 1.2.10.

<sup>44</sup> *Policy on the Environment* (2004), paragraph 5.4.2.

<sup>45</sup> *Ibid.*, paragraph 5.4.19.

ensure that as much water as possible is made available for this dam to generate electricity, including during dry years. In other words, the risk that the new dam can lead to draining more water than allowed by the Agreed Curve cannot be ruled out.

The argument made by the Requesters<sup>46</sup> regarding the second issue, is not clear. The exact processes linking decreasing Lake levels and changes in water temperature, the geomorphology of the Lake and its biodiversity are not explained by the Requesters. The Panel has reviewed a number of documents which either identify major threats facing Lake Victoria and/or suggest measures for restoring its health.<sup>47</sup> None of these documents identify hydropower generation as being responsible for the problems that the Lake is facing. It is worth adding that the water level in Lake Victoria has always fluctuated, including in the pre-dam period when sharp decreases in water levels did occur, as was the case in the mid-1920s and in the mid-1940s when recorded Lake levels went even below the levels noted in the 2001-2005 period. To the knowledge of the Panel, no report has been made referring to ecological functions of the Lake that could have been affected by these pre-dam water level decreases. **Consequently, within the ranges of hydrological variations experienced since the early 1900s, the Panel could not detect evidence of a causal relationship between the water level in Lake Victoria and its ecological functions.**<sup>48</sup>

It remains valid, though, that declining Lake levels have direct impacts on socioeconomic activities on the Lake shoreline (hydraulic infrastructures for irrigation and water support facilities, docking facilities at Jinja and fish landing areas along the Lake shore). But the main cause of loss of water from the Lake (loss of water leading to decreased Lake level) is evaporation rather than outflow from the Lake. Even in the 2001-2004 period (during which water releases from the dam often exceeded amounts prescribed by the Agreed Curve), outflow from the Lake only represented 26.5% of Lake water loss against 73.5% of the loss caused by evaporation.<sup>49</sup> Outflows due to dam operation (as opposed to the flow under natural conditions) represent even a smaller share of the total Lake water losses. Therefore, although there could be an incentive in dry years to over-abstain water to allow the Bujagali dam to generate as much electricity as possible, the loss of water from the Lake attributable to this cause will be small compared to other factors, such as evaporation and natural outflows that would take place even without dams. **Consequently, any negative socioeconomic impacts related to declining Lake levels that could occur in**

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<sup>46</sup> The Request, *supra* note 9, paragraph 2.1.18 ii.

<sup>47</sup> Documents consulted include: Lehman J T (Ed) 1998, *Environmental Change and Response in East African Lakes*, Kluwer Academic Publishers, 260p; Nzomo, R. 2005. Sustainable Development of African Lakes - The Case of Lake Victoria. In *Living Lakes African Regional Conference*, Kisumu, Kenya; Kayambo, S.; Jorgensen, S.E. 2006. Lake Victoria- Experience and Lessons Learned Brief in Annex to ILEC. 2005. *Managing Lakes and their Basins for Sustainable Use: A Report for the Lake Basin Managers and Stakeholders*. International Lake Environment Committee Foundation. Kusatsu (Japan), Pp 431-446, ([http://www.ilec.or.jp/eg/lbmi/reports/27\\_Lake\\_Victoria\\_27February2006.pdf](http://www.ilec.or.jp/eg/lbmi/reports/27_Lake_Victoria_27February2006.pdf)).

<sup>48</sup> It is clear that if the Lake dramatically shrinks or totally dries out its functions as a natural habitat for aquatic species would be severely affected. If this happens, it will be unlikely that the existing and planned hydropower dams would be the main causes as they can only drain the live storage portion of the Lake.

<sup>49</sup> Table 2 of the *Special Report on the Declining of Water Levels of Lake Victoria*, East African Community, Lake Victoria Basin Commission, (April 2006).

**the future cannot be primarily attributed to the dams and to the Bujagali project in particular.**

### **Old and Inconsistent Data on Fauna (Terrestrial and Aquatic)**

#### ***Request and Management Response***

The Requesters contend that the fisheries studies used in the Project's social and environmental assessments are based on old and inconsistent data. In their view, the fisheries studies conducted as part of the BEL SEA are based on data collected for the first Bujagali project, and that insufficient time periods were utilized in updating this information. They also challenge the reliability of the surveys' data, particularly relating to the endemic fish (haplochromine cichlids) in the sections of the Nile affected by the Bujagali hydropower project. They do not cite any Bank policies in making these claims.

The Management Response, while also not referring to any specific Bank policies, maintains that the current Bujagali project has benefited from the social and environmental studies undertaken for the first Bujagali project. On the fisheries studies in particular, Management maintains that the Fisheries Resources Research Institute (FIRRI) —now NaFIRRI— completed 4 quarterly surveys in 2000 for the first Bujagali project. This institute was asked, in 2006, to undertake the fisheries studies for the BEL SEA, and used the same locations and survey periods as the 2000 studies.

#### ***Applicable Policies***

The issue of biodiversity information/data quality is discussed in a number of the Bank's environmental policies and guidelines. In Paragraph 3.3.4, Box 2 of the *IWRM*, the Bank promotes the development of "quality data management" and emphasizes the importance of collection of data on natural, environmental and other factors that are necessary for achieving sustainable development and management of water resources. Paragraph 26 of the Bank's *Environmental Procedures for Private Sector* states that, at the project appraisal stage, responsible Bank units should identify "data gaps or other deficiencies" in the project sponsor's environmental assessment, and should in consultation with the Bank environmental and social development specialists contact the project sponsor to seek clarifications or additional information.

#### ***Discussion***

The haplochromine cichlids (estimated at about 500 species) are endemic to the Eastern Africa Lakes Region. They are found in Lake Victoria as well as in the Victoria Nile. They use rocky shores of the Lake and rocky rapids in the Victoria Nile as refuges to escape predation by the Nile Perch. During the planning of the Bujagali project by AESNP in the late 1990s-early 2000s, concerns about these endemic species led NEMA to require studies on the aquatic ecosystem and fisheries population as part of the Environmental Assessment

of the project. In 2000, WS Atkins in collaboration with FIRI<sup>50</sup> carried out the studies, focusing on water quality, aquatic plants, invertebrate animals and fish. Twenty sampling sites were used for the quarterly surveys. One of the conclusions of this study was that none of the haplochromine cichlid species identified in the upper Victoria Nile (the reach to be affected by the Bujagali reservoir) were listed as threatened on the IUCN Red List of Threatened Species for Uganda. Another conclusion was that the first Bujagali dam project would not have had a significantly negative impact on the haplochromine species.<sup>51</sup> The additional surveys carried out by NaFIRRI since 2006, as part of the preparation of BHP under BEL sponsorship, lead to a similar conclusion. One of the arguments supporting this view is that the Upper Nile river reach is naturally fragmented by water falls (Rippon Falls, Owen Fall, Bujagali Falls, Kalagala Falls) which limit or even prevent fish migration. This particular configuration of the river reach was one of the reasons why NaFIRRI did not recommend including a fish pass in the design of the Bujagali Dam.<sup>52</sup> On the other hand the natural flow velocity in this reach of the river creates an unfavorable environment for fish species. By reducing this flow velocity the proposed Bujagali dam is even expected to lead to increased haplochromine populations between the Dam and the Lake. In any case, the fact that species considered as previously extinct in the 2003 IUCN Red List are identified in recent surveys (including IUCN's own 2005 *Status and Distribution of Freshwater Biodiversity in Eastern Africa*<sup>53</sup>) shows the extreme complexity of the ichthyology in the Victoria Nile and in the Lake itself. As a result, significant efforts are being made to study fish populations, and in particular endemic species, in the Victoria Nile reach. NaFIRRI conducts quarterly monitoring studies which it reports to BEL. **The Panel concludes that the Bank Management and staff exercised due diligence in accepting the findings of these studies and has complied with the applicable Bank environmental policies and guidelines relating to assessment of fisheries and aquatic ecosystems.**

## Kalagala Offset

### *Request and Management Response*

The Requestors question the validity and enforceability of GOU's commitment to preserve and manage the Kalagala Falls as an offset to the losses resulting from the Bujagali project.

The Management Response states that it supports the steps taken by the World Bank and the GOU to ensure the maintenance of the Kalagala Falls offset in perpetuity. Management stresses the fact that the protection of the Kalagala Falls as an offset to the impacts of the Bujagali project is a necessary condition of the ADB Group's participation in the Bujagali project. It does not refer to any particular ADB policy requirements in its Response.

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<sup>50</sup> The Fisheries Research Institute (FIRI) became the Fisheries Resources Research Institute (FIRRI) in 2000 and in 2005 its name changed again to the National Fisheries Resources Research Institute (NaFIRRI).

<sup>51</sup> WS Atkins and FIRRI. 2001. Haplochromine Habitat Study. Report No. AF6097/70/dg/1215 Rev. 2.0.

<sup>52</sup> The Director of NaFIRRI, Dr. John Balirwa, was interviewed by the Panel on December 4, 2007 during its mission in Uganda.

<sup>53</sup> Darwall, W., Smith, K., Lowe, T. and Vié, J.-C (2005). *The Status and Distribution of Freshwater Biodiversity in Eastern Africa*. IUCN SSC Freshwater Biodiversity Assessment Programme. IUCN, Gland, Switzerland and Cambridge, UK. pp16-17.

### ***Applicable Policies***

The Panel did not find any ADB policy explicitly dealing with the establishment of offsets to compensate for the loss of forests or aquatic ecosystems. Such compensatory measures, however, are addressed within the broad context of the mitigation of environmental and social impacts in Bank environmental policies and guidelines. For example, the *Environmental Procedures for Private Sectors*, the *Environmental Procedures for the Public Sector*, and the *Environmental Policy*, all stipulate that the following actions are required in addressing and managing potentially adverse environmental impacts: (a) prevention; (b) minimization; (c) mitigation; and (d) compensation. The requisite mitigation and/or compensation measures for adverse environmental impacts on ecosystems could include offsets, although they are not explicitly mentioned in the Bank's environmental policies. It is also noteworthy that Paragraph 3.2. of the *Resettlement Policy* requires that particular attention "be given to socio-cultural considerations, such as cultural or religious significance of land, the vulnerability of the affected population, or the availability of in-kind replacement for assets, especially when they have important intangible implications" (*emphasis added*). The underlined reference to "in-kind replacement" for lost assets would include measures such as offsets for lost assets of cultural or religious significance.

### ***Discussion***

It is important to recall that the decision to establish the Kalagala offset was motivated by the need to comply with the applicable World Bank policy, which requires that irreversible impacts on natural riverine forests and aquatic habitats be mitigated by establishing and maintaining an ecologically similar area, known as an "offset". This suggests that the purpose of the Kalagala offset is to compensate for the riverbank portions of the Jinja Wildlife Sanctuary and Nile Bank Central Forest Reserve, and the islands between the sections of Bujagali rapids that will be inundated by the reservoir of the Bujagali dam.

During Panel interviews with Bank staff, GOU officials, and the Bujagali project sponsors it was evident that the "Kalagala Offset" has come to be accepted as a site that "replaces" a variety of the features that will be lost due to the inundation of the Bujagali Falls. Interviewed people for instance mentioned recreation, tourism, and aesthetic and spiritual values as issues that could be mitigated by the offset.<sup>54</sup> However, there was almost no mention of the offset serving to conserve natural habitats which is the primary purpose of the World Bank policy. As part of the preparation of Bujagali I under AESNP, the World Bank indeed requested that that the Kalagala site be "conserved in perpetuity for its spiritual, natural habitats, environmental, tourism and cultural values"<sup>55</sup>. The GOU

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<sup>54</sup> As indicated in the section on religious and spiritual issues, *supra*, the Panel cannot understand how the Kalagala Offset can serve to offset the cultural and spiritual loss suffered as a result of the inundation of the Bujagali Falls.

<sup>55</sup> World Bank Group's Letter to Ugandan Minister of Energy and Mineral Development entitled "Bujagali Hydropower Project – World Bank Group's Requirement of an Offset at the Kalagala Falls", (April 25, 2001) Included in Annex D.1 of BHP –SEA, *supra* note 1.

response to this request, reaffirmed in 2007<sup>56</sup>, is interpreted by Management as an acceptance to preserve the site in perpetuity<sup>57</sup>. In this exchange of letters on the Kalagala site, the notion of offset is conceived as a means of achieving multiple objectives. This flexible multi-purpose approach seems to be confirmed by the new AFD<sup>58</sup> USD750,000 grant to Uganda for the management of the Kalagala offset.<sup>59</sup> This grant will support both the afforestation of a 100 m strip along the Nile river between the Bujagali dam site and Kalagala Falls and ecotourism around the Kalagala Falls, including the transfer of some of the community-based tourism activities along the Bujagali Falls to the Kalagala Falls.

**The Panel finds that the current commitments and initiatives planned for managing the Kalagala offset are consistent with applicable ADB environmental and social policies so far as the ecological and socioeconomic objectives of the offset remain compatible with each other. However, given the fact that GOU acceded to the request to preserve the Kalagala site as an offset to the ecological, economic and socio-cultural losses caused by the Bujagali dam, the Panel is concerned that there is no long term management plan for ensuring that the offset sustainably achieves its environmental and socio-economic mitigation functions.**

## **Dam safety**

### ***Request and Management Response***

Requesters claim that the Bujagali dam design does not adequately address existing dam safety problems regarding the old Owen Falls Dam (now called Nalubaale) where large cracks have been observed in the powerhouse and in the bridge. They contend that, as a result, it is unclear if the planned Bujagali dam will be able to survive a collapse of the Owen Falls dam. Requesters believe that the project SEA's failure to address the dam safety issues violates the *Environmental and Social Auditing Guideline* (June, 2001) and the *IESAGs*.

In its response, Management points out that, although dam safety concerns are an integral part of the review of any hydropower development, ADB does not have a policy which explicitly requires evaluation of dam safety. Management adds that in this case the Bank relied on the assessments of the Dam Safety Panel established by the World Bank.

### ***Applicable Policies***

The Panel finds that the only specific reference to dam safety in ADB policies is found in the Appendix 9 on Dams and Reservoirs of the *IESAGs* which stipulate that the issue of "security and protection measures" includes "dam security". The same Appendix states that

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<sup>56</sup> Letter by GOU Minister of Finance, Planning and Economic Development to World Bank dated April 2007 annexed to ADB Management Response)

<sup>57</sup> Management Response paragraph 29

<sup>58</sup> AFD = Agence Française de Développement (French Development Agency).

<sup>59</sup> AFD Kalagala Offset Feasibility Study – Bujagali Dam/Republic of Uganda. AFD Soft Loan for Environmental and Social Additional Measures, (April 2007).

the appropriate risk management measures associated with a dam should include means for dealing with a dam rupture. The policy does not however detail other issues relating to dam safety.

### *Discussion*

The Panel observes that the World Bank previously provided funds to bring the Nalubaale dam up to modern safety standards.<sup>60</sup> In addition, in 2001 the World Bank Inspection Panel found that the Bujagali I project fully complied with the World Bank safeguard requirements on dam safety.

The Panel visited the old Owen Falls (Nalubaale) dam and saw the cracks in the powerhouse and the dam wall. The Panel has noted that monitoring devices are installed along the cracks, which seems to confirm that the problem is being monitored, as indicated by the managers of the dam. With regard to the BHP, the lenders appointed their own expert advisors who concluded that “the situation at Owen Falls does not pose an unusual risk to the Bujagali project.”<sup>61</sup> The lenders’ experts also reviewed preliminary dam design, including an evaluation of flood risks in the event of catastrophic failures, and found that the design of Bujagali is consistent with industry design practice. Nevertheless, they recommended that further studies be conducted to determine whether any human settlements would be affected by flood waters if there was a catastrophic dam failure or a sudden increase in the river flow that may occur when the siphon spillway operates. **In the absence of a policy providing specific guidance on this technical issue, the Panel finds that it was reasonable for the ADB Management and staff to rely on the World Bank’s findings with respect to dam safety. The Panel supports the recommendation made by the lenders’ appointed advisors to conduct further studies on the potential impacts of possible catastrophic dam failure.**

### **Management of the Environment Impact of the Interconnection Project**

#### *Issue Raised After Submission of the Request*

The Request does not discuss the environmental impacts of the transmission line. However, the Requesters raised this issue in July 2007 during the CRMU’s field visit to Uganda to assess the eligibility of the Request. At that time the Requesters expressed concern that the transmission line’s new route was adjacent to a sensitive wetland area.<sup>62</sup> In their view the environmental impacts associated with this new routing should have been assessed as part of the new SEA. The CRMU eligibility report recommended that the Panel should verify whether or not the SEA has assessed the impact of the change in routing and, if so, whether it complies with the relevant Bank policies. This issue is not covered in the Management Response, which predated the CRMU eligibility field visit.

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<sup>60</sup>Supplemental Credit to Uganda Power III Project.

<sup>61</sup> Colenco Power Engineering Report, (February 2007).

<sup>62</sup> The route had been altered in order to avoid crossing some densely populated areas.

### *Applicable policies*

The BIP is a public sector category 1 project. Applicable Bank environmental policies include the general provisions of the *Environment Policy*, and the specific conditions of the *ESAG*, the *IESAGs*, and the *Environmental Procedures for Public Sector*.

Annex 10<sup>63</sup> of the *Environmental Procedures for Public Sector* requires that a chapter of the ESA report be devoted to the analysis of project alternatives. This chapter should identify, describe and compare the feasible alternatives on the basis of their potential environmental and social impacts and the likelihood of mitigating these impacts. It also requires that the assessment of alternatives take into consideration project location, sizing, technological specifications, layout, etc.

### *Discussion*

In this report, the Panel discusses three aspects related to the environmental impacts of the transmission line (T-line): the potential impact of the T-line on the Lubigi wetlands; the assessment of alternatives for minimizing the impacts of the T-line on the central forest reserves of Mabira and Kifu; and measures for mitigating the forest loss due to the T-lines.

### **Impact of the New Routing of the T- Line on the Lubigi Wetlands**

#### *Discussion*

The BIP SEA assesses the value of the Lubigi wetlands and describes the extent to which it will be affected by the T-Line (sections 3.5.4 and 7.3.3 of the SEA) and proposes a series of mitigation measures for the identified impacts (section 7.3.3). The Panel found on the basis of on-site inspections and discussions with both the Requesters and NEMA that the selected route is almost entirely on disturbed wetland margins. NEMA requires that construction works (of towers in particular) in the wetlands should take place in the dry season and that no new permanent access routes may be constructed through the wetlands. **In compliance with this requirement, the current line routing near wetlands has been designed to both minimize human resettlement and avoid significant impacts on wetland systems. As a result, the Panel finds that there is insufficient evidence to conclude that there has been non-compliance with applicable Bank policy requirements dealing with impact analysis and mitigation.**

### **Assessment of Alternatives for Minimizing the Impacts of the T- Line on the Central Forest Reserves**

#### *Discussion*

During its field visit to the Mabira forest, the Panel investigated whether all possibilities have been explored for minimizing adverse impacts on the forest, including alternative

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<sup>63</sup> Annex on “Generic Contents of Terms of Reference and Typical Contents of an Environmental and Social Impact Assessment Report”.

routing and sizing of the width of the wayleave of the T-Line. The current plan is that in the Mabira forest the routing of the new BIP Transmission line will be parallel to the existing line. **The Panel finds that BIP’s SEA did assess various options regarding the design specifications (chapter 4), the sizing of the width of the wayleave and the routing of the T-Line.** For example, the SEA opted for the reduction of the width of BIP’s Transmission line crossing the Mabira Central Forest Reserve to 35 meters (against 40 meters under Ugandan norms for 220 kV T-Lines) as a means of mitigating impacts on fauna and flora (chapter 4 and section 7.3.2 of BIP’s SEA).

Although a number of options for the routing of the T-Line are discussed in Chapter 4 of the SEA there appears to have been no consideration of the option of accommodating the existing 132 kV T- Line and the new BIP’s 220 kV transmission line in a single wayleave. According to an expert from Dillon Consulting Ltd (one of the firms which assisted R.J. Burnside International Ltd in the preparation of BIP’s SEA) the option of overlapping the existing and the new wayleaves in the Mabira and Kifu forest reserves was indeed discussed during the SEA preparation process but was not carried forward because UETCL indicated that its engineering standards do not allow for overlapping of the wayleaves. **The Panel could not find in the SEA any reference to the discussions of this option, and did not investigate further if the engineering standards in question are internationally accepted norms or are only UETCL’s own standards. In any case, given that overlapping the wayleaves of the existing and new transmission line could result in a significant decrease in the total area of the forest reserve affected by the BIP T-Line and has not been demonstrated to be infeasible, the Panel considers the failure to document that this option has been considered and the basis of its rejection to be a serious deficiency. Consequently, the Panel concludes that the Bank Management and staff are not in compliance with requirement of Annex 10 of ADB *Environmental Procedures for Public Sector*.**

## **Mitigation Measures for Lost Forest Habitats**

### ***Discussion***

The BIP’s SEA describes a plan to offset the biodiversity loss in the Mabira, Namyoya and Kifu Central Forest Reserves (CFR) caused by the wayleave of the BIP T-Line through “enrichment and regeneration planting”.<sup>64</sup> This plan is part of an improved management and protection strategy for the whole of the Mabira CFR. The SEA also asserts that “A mitigation plan has been developed as a component of the Forest Economic Assessment”<sup>65</sup>. Unfortunately, this ‘Mitigation Section’ is a mere two-page list outlining the roles and responsibilities of various stakeholders. No details are given and it is unclear how the enrichment plantings will be carried out. **Based on documents reviewed and interviews in the field, the Panel concludes that the proposed plan to offset habitat and biodiversity lost due to the BIP is too vaguely stated and poorly developed to constitute an adequate mitigation or environmental management plan. However, the Panel cannot find any specific policy provisions with which the Bank has failed to**

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<sup>64</sup> BHP-SEA, *supra* note 1, Section 7.3.2.3, p. 245.

<sup>65</sup> *Ibid.*, Section 7.3.2.3 p. 245.

comply. Nevertheless, the Panel believes that the best practice indicates that the Bank Management and staff should have taken the necessary actions to ensure that an appropriate plan was developed and actually implemented.<sup>66</sup>

## V. HYDROLOGY

### *Request and Management Response*

The Requesters claim that the SEA did not adequately address the impacts of hydrological changes on power production at Nalubaale, Kiira, and the proposed Bujagali dam. Two aspects are implicit in the Requestors' claim. First, the effects of existing dams (especially the Kiira dam) on the hydrology were not acknowledged and properly factored into the planning of Bujagali. Second, the impacts of hydrological changes (including climate change) on power production from the existing (Nalubaale and Kiira) dams and the planned Bujagali dam were not adequately analyzed and taken into account. The Requesters have not referred to any particular Bank policy in their claim.

The Management emphasizes that, given its importance to the Bujagali project, special attention has been paid to hydrology. It argues that this subject was addressed in the PPA Study which "complements the SEA".<sup>67</sup> The PPA Study includes a comprehensive analysis of the Lake's hydrology and its impact on power generation at Nalubaale, Kiira and Bujagali<sup>68</sup>. The hydrology sections of the PPA Study are based on a study carried out by Coyne et Bellier which was peer reviewed by an independent hydrologist from the University of Arizona. With regard to climate change considerations, the Management refers to the Nile SSEA which predicts rising temperatures but also precipitation and run-off in the Lake and Nile Victoria region. The only Bank policy to which Management refers in its response, although without citing to any specific provisions, is the Environmental and Social Assessment Procedures (2001) (*ESAP*).

### *Applicable Policies*

The Bank's policies applicable to this issue are those policies and procedures dealing with risk analysis and management, as well as those policies specifically addressing hydrological issues. This is because a good understanding of the hydrological aspects of a project, like the Bujagali Project, is key to assessing and mitigating its potential impacts. Consequently, the applicable policies are all those that require the Bank to understand and mitigate a project's environmental and social impacts. First, Chapter 5 of *OM500* (1999) requires that risk analysis be carried out to assess the viability and sustainability of the project. This should be interpreted to include hydrological risks. Second, the *Environmental Procedures for Private Sector* requires an analysis of positive and negative impacts of the

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<sup>66</sup> The Panel has learned that some progress has been made recently due to the signed agreement between UETCL and NFA.

<sup>67</sup> Management Response, Box 1A.6, *supra* note 11, p.20.

<sup>68</sup> Power Planning Associates Inc. Lake Victoria Hydrology, Bujagali II – Economic and Financial Evaluation Study, Annex 3, (Feb. 2007), [hereinafter, "PPA Study"].

project components on the physical, biological and socio-cultural environment. This analysis is expected to consist of “evaluation of all impacts on land, water and bio-diversity (for example, waste water, solid wastes, atmospheric emissions, soil erosion, deforestation, over-exploitation of natural resources); estimation of positive and negative environmental impacts with an indication of their extent and intensity, and an estimation of the cost of prevention and remedial measures.”<sup>69</sup> Third, the *IWRM* stipulates in the first paragraph of the “Technical Issues” section that “Knowledge of available resources, of their quality and variability over time and the state of other physical and socioeconomic conditions are a fundamental prerequisite of sound planning and design of sustainable, economically efficient water projects.” In Box 2 that is associated with this paragraph, the Bank is required to “[s]tress, in the course of its interventions, the importance of water resources quantity and quality assessment and monitoring and collection of data on other natural, environmental, economic, social and technical factors necessary for water resources development and management.” Fourth, Appendix 9 of the *IESIAGs* require that “anticipated hydrological changes...” and “management and operation of the dam (water flow, minimum flow requirement...)” should be among the elements discussed in the description and justification of a hydropower project.

### ***Discussion***

The Panel discusses the issues raised by the Requesters and the responses provided by the Management from the following perspectives: (a) the adequacy of the hydrological studies that were conducted; (b) the potential role of the Bujagali project in the dropping of the lake level; (c) the potential impacts of the natural variability of hydrological conditions on the planned dam; and (d) climate change and its impacts in the planning of the Bujagali Dam.

### **Adequacy of Hydrological Studies Carried Out in the Project Analysis**

#### ***Discussion***

The Panel finds that various hydrological studies evaluating the water levels and water balance of the Lake Victoria have been conducted since 2001. The most relevant to the Bujagali project are the studies by Colenco (2007) which was a review of previous studies of the hydrology of the Lake, and the PPA Study which was based on a hydrology study conducted with the support of Coyne et Bellier (France) and ECON (Norway). This latter study took into account recent hydrological studies such as WREM (2005)<sup>70</sup> and DWD (2005)<sup>71</sup>. It is not clear how, if at all, the PPA Study was incorporated into the Bujagali planning process. The SEA, which was completed in December 2006 when the PPA Study

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<sup>69</sup> ADB Environmental Review Procedures for Private Sector Operations (2000), section xix.c.

<sup>70</sup> Water Resources and Energy Management International Inc., Study on Water Management of Lake Victoria (June, 2005).

<sup>71</sup> Dropping Water Levels of Lake Victoria: Causes, Effects and Solutions, Water Resources Management Department Directorate of Water Development Ministry of Water, Lands and Environment, (2005), p.64 .

was still under preparation, does not refer to the PPA Study.<sup>72</sup> In fact, among the above-mentioned hydrological studies, the SEA only referred to the WREM (2005) study. In addition the SEA and the BHP-IP base their hydrological calculations on the Agreed Curve<sup>73</sup>, while the PPA Study utilizes a new concept of “Constant Release”.<sup>74</sup>

In the current situation three critical planning documents use different interpretations of the operational rule for use of the Lake water. First, the SEA is based on the assumption that the Agreed Curve as commonly understood (as a moving reference) will be complied with, and it does not therefore assess potential environment and social impacts that could be associated with the management of the Lake waters on the basis of the new interpretation of the Agreed Curve (the Constant Release regime). The economic and financial analysis of the Project (PPA Study) based its calculation on the Constant Release regime while the Bank’s BHP-IP maintains the traditional interpretation of the Agreed Curve (see section on Economics). For a water-based project like the BHP, hydrology, and in particular the way available waters will be managed, are of critical importance.

Since the Agreed Curve and the Constant Release can result in different amounts of water being released from the Lake, different hydrological consequences are likely to follow from the adoption of one interpretation or the other. **The fact that the BHP-IP does not clarify how it resolved the discrepancy in the interpretation of the Agreed Curve between the SEA and the PPA Study, while not strictly inconsistent with Bank policies, is a failure of the Bank Management and staff, particularly given the significant efforts made in the hydrological studies undertaken as part of the planning process for this project.**

## **Potential Impact of the Bujagali Project on the Declining Level of Victoria Lake**

### *Discussion*

The PPA Study confirms that during the 2003-2005 period there were water releases from the Lake that were not consistent with the Agreed Curve. The PPA Study notes that the 2003-2005 period was exceptionally dry with mean net basin inflow only representing 46% of the long term average net inflow (1900-2005), and only 60% of the mean net inflow of the low hydrology scenario (1900-1960). According to the PPA Study, this low inflow is the main cause of the falling Lake level in the last few years. However, it acknowledges that the release for power generation went beyond the requirements of the Agreed Curve, and resulted in a further drop in the Lake level. The Management response also agrees that since 2003 the GOU over-abstracted water from Lake Victoria for power generation. There is, therefore, no disagreement with the Requester’s claim that “...Kiira has contributed substantially to the over-draining of Lake Victoria”, and that “... the Agreed Curve was no

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<sup>72</sup> Except when discussing alternative hydropower development sites in the Victoria Nile preliminary results of the PPA Study (dated Feb 2006) were briefly mentioned. (BHP-SEA, *supra* note 1, section 4.3.4 p. 184).

<sup>73</sup> See, description of the Agreed Curve, *supra*, note 40.

<sup>74</sup> The “Constant Release” is based on a new interpretation of the agreements between Uganda and Egypt regarding the supply of water to the Naalubale and Kiira dams. This new interpretation would enable Uganda to allow a constant release of water from the Lake whenever the Lake level fluctuates within a certain range and for different constant releases within different ranges. This approach allows more flexibility than that the Agreed Curve’s mathematical formula would allow.

longer being respected” in the 2003-2005 period. The Requesters, further contend that the failure to respect the Agreed Curve was the primary cause of the drop in Lake level while the Management, in its response, and the project sponsor are of the view that the primary cause was the unfavorable climate conditions that were prevailing during the period considered.

**The Panel agrees with the view expressed in the Project preparation documents (SEA report, PPA Study and BHP-IP) that the Bujagali hydropower facility, by using the same waters turbined by existing dams, will ease the pressure on Victoria Lake waters and lead to more sustainable flows from the Lake. However, the Panel also finds that the Requesters are not wrong when they state that the new dam will “provide more incentive to release higher flows, in order to maximize electricity sales”. Indeed, given that BHP will be governed by a capacity-based Power Purchase Agreement,<sup>75</sup> the GOU, despite its concerted current efforts to comply with the Agreed Curve, will have an incentive to minimize any payments for electricity not actually generated by the Bujagali dam, by making as much water as needed available for the Bujagali dam, especially during the driest years.**

## **Potential Impacts of Variations in Hydrological Conditions on the Power Production**

### *Discussion*

The PPA Study used all available hydrological time series data for the Victoria Nile, which covers the period 1900-2005, after comparing this data with information collected in neighboring river systems with similar patterns of variations, and concluding that the 1900-2005 hydrological data was reliable. Within the 1900-2005 time span, three relatively homogeneous periods were identified: 1900-1959, 1960-1999 and 2000-2005. The first two periods were considered long and homogenous enough to be used as representative of the low and high flow scenarios for assessing the hydrological conditions that will prevail when the project will be in operation (the first 20 years following 2010). The PPA Study assigned the low flow scenario, i.e., the average annual conditions for the 1900-1959 period a 79% likelihood of occurrence, while assigning a 21% probability to the high flow scenario (1960-1999). **In the Panel’s opinion, the approach used to select the reference time series data and the flow scenarios is consistent with standard approaches in hydrological studies for similar projects.**

## **Climate Change Impacts on the Hydrology**

### *Discussion*

Although the Bank does not have an explicit policy on climate change, there are references that are applicable to this issue in the *IWRM* and the *IESIAGs*. The first paragraph of the Technical Issues section of the *IWRM* states “Knowledge of available resources, of their

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<sup>75</sup> Capacity charge is based on the 250MW production capacity and will be the same irrespective of the actual production output (low or high hydrology and demand).

quality and variability over time and the state of other physical and socioeconomic conditions are a fundamental prerequisite of sound planning and design of sustainable, economically efficient water projects.” The *IESIAGs* Appendix 9 on dams and reservoirs requires that “anticipated hydrological changes” be taken into consideration in the justifications of hydropower projects.

Both these policies refer more to the natural variability of the climate and its impact on water resources than to climate change, which links the longer term trend in climate variation to human-induced global warming. In any case, even without explicit reference to climate change, the Bank policies can be interpreted as requiring that possible impacts of climate variations on the feasibility of planned projects be assessed during project preparation regardless of whether they result from natural variability of climate conditions or from climate change.

There are a series of recent studies on the basin that address the climate change issue. One of these is the WREM study quoted by the Requesters as predicting hotter, drier conditions, lower Lake levels and lower inflows in the Victoria Nile system. This study reviewed three Global Circulation Models (GCMs) models and selected the HadCM3 (Hadley Center for Climate Prediction and Research) model as the most appropriate one. WREM used baseline data for the 1960-1980 period, which is a high flow period compared to the 1900-1960 period. Another study is the Nile SSEA,<sup>76</sup> which the Management Response cites to illustrate that due consideration was paid to climate change in the Bujagali Project preparation. This study examined sixteen Global Circulation Models (GCMs) from which they selected seven as being the most appropriate for the Nile region.

The Nile SSEA predicts that the Northern and Central West regions of the Nile Equatorial Lakes (including the Nile Victoria Region) have a high probability of experiencing increased runoffs compared to the reviewed historic flow data.

However, as discussed above, it is not clear if the Nile SSEA study (which was undertaken for the Nile Basin Initiative and is not specifically cited in regard to climate change in this project’s documents) should be considered as part of the Bujagali project documentation. **Thus, although the possible effect of climate change has been considered in the studies discussed above, the Requesters are justified in their complaint that climate change has not been given attention in the Bujagali documentation (and in particular the project SEA and Investment Proposal). However, there are no ADB policies that explicitly require studies of climate change (i.e. human-induced change as opposed to the natural variability of the climate). In addition, there is no commonly accepted prediction of a climate change risk of a magnitude that could have seriously affected the validity of the low and high hydrological scenarios on which the project feasibility analysis is based. Thus, the Panel finds that, in the absence of a specific requirement for ADB staff to identify climate change risks, it cannot make a finding of non-compliance. Nevertheless the unusually unfavorable hydrological conditions that prevailed in the 2000-2005 period and the increasing global evidence of climate change impacts on water resources should have led Management to devote special**

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<sup>76</sup> Study cited at *supra* note 35.

**attention to investigating hydrological risks related to climate change and to reflecting the results of such assessment in the Project Appraisal.**

## **VI. ECONOMIC ISSUES: COMPREHENSIVE OPTIONS AND AFFORDABILITY ASSESSMENT**

The Requesters claim that “the absence of an adequate and comprehensive economic and alternative (options) assessment of the Bujagali dam Project violates the African Development Bank’s Policies on Economic Evaluation of Investment Operations, Poverty Reduction, among others, which requires the evaluation of projects to ensure that they meet development goals.”<sup>77</sup>

Management in their response challenge these allegations, arguing that “the AfDB Management firmly believes that this project has been well prepared in accordance with all the applicable Bank policies, and that it will significantly benefit Uganda’s development and drive for poverty alleviation.”<sup>78</sup>

The Panel has analyzed six issues raised by the Requesters with regard to the Bank’s economics, comprehensive options and affordability assessments. In the following subsections the Panel addresses these issues.

### **Hydrological Risks, Climate Change**

#### ***Request and Management Response***

The Requesters claim that the economic analysis in the PPA Study<sup>79</sup>, on which the Bank relies, does not adequately address the project’s economic viability in relation to hydrological risk, and social and environmental impacts.<sup>80</sup> As discussed above, the Requesters argue that the substantially lower water levels of Lake Victoria during the period 2003 – 2005 make the project “economically risky”.

Referring to the PPA Study, the Management in its Response states that “[t]he key elements assessed in the economic study analysis include: (i) the impact of the current power crisis conditions on the sector and the need for emergency thermal power; (ii) the demand forecast [...]; (iii) the level of electricity tariffs; (iv) the hydrology of Lake Victoria and its impact on hydropower generation; (v) the supply alternatives and their costs; (vi) the environmental and social costs of Bujagali and its main alternatives; and (vii) the economic value of electricity to consumers, the end-user tariff path and its affordability.”<sup>81</sup> Furthermore, Management claims that the economic study “Assessed the

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<sup>77</sup> The Request, *supra* note 9, paragraph 2.2.9, p. 10.

<sup>78</sup> Management Response, *supra* note 11, paragraph 52, p. 18.

<sup>79</sup> PPA Study, *supra* note 66.

<sup>80</sup> The Request, *supra* note 9, paragraph 2.2.2, p. 5.

<sup>81</sup> Management Response, *supra* note 11, paragraph 2A, p. 10.

impacts of both low and high hydrology scenarios, and separately determined that climate change is not predicted to have a negative impact on water availability”.<sup>82</sup>

### ***Applicable Policies***

Annex 2 of the Bank’s *Environmental Procedures for Public Sector* include a list of the issues to be considered in environmental and social assessments, which *inter alia* covers “seasonal atmospheric perturbations and bad weather risks (e.g. sand and dust storms, torrential rain, barometric depression, cyclones, floods, drought, etc.)”. Paragraph 2.5 of this policy also states that “The projects financed by the Bank shall comply with the RMC’s (Regional Member Countries) environmental and social legislation, policies and guidelines, with local and national requirements on public consultations and disclosure, as well as with international agreements ratified by the borrowing country.”

Section 6.3 of Annex 1 of *OM600*, discussing the items to be included in an appraisal document, specifies that it should “State any assumptions made about external factors or conditions that will affect achievement of the sector goal, the project objective, outputs, or activities” and “Explain risk factors and what is being done to mitigate those risks. i.e. design features that help address project risks.”

### ***Discussion***

There is limited consideration of the economic impact of the hydrological risk associated with this project in the Bank’s own appraisal documents. The BHP-IP asserts, without reference to any studies, that the hydrological risk “was assessed based on the available historic stream flow records of the Nile River and the power system planning process, which are consistent with the past experience of the Owen Falls.”<sup>83</sup> It deals with the hydrological risk as a financial matter that can be mitigated with the *force majeure* clause of the Power Purchase Agreement.<sup>84</sup> But it does not consider its potential developmental impacts on the project and the affected people and communities. Neither the BHP-IP nor the Bank’s Summary Environmental and Social Impact Assessment (ESIA) discuss the possibility of climate change and its possible effects on the water level of Lake Victoria. The Summary ESIA simply states that the recent reduction in the Lake water level “is due to a combination of factors, including regional drought, abstraction of water, and releases of water from Lake Victoria via the Nalubaale and Kiira power plants.”<sup>85</sup>

The study undertaken by the PPA Study includes hydrological risk factors as discussed in more details in the previous section on hydrology. Utilizing historical water flows, the PPA Study bases its economic analysis of low and high water flow scenarios allocating a 79% probability for low water flows and 21% probability for high water flows. Without detailed discussion, the PPA Study concludes that “possible influence of climate changes was found

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<sup>82</sup> Ibid., paragraph 2A.1 p. 10.

<sup>83</sup> BHP-IP, *supra* note 4, Annex 6.

<sup>84</sup> Power Purchase Agreement between BEL and UETCL.

<sup>85</sup> ADB Executive Summary of BHP SEA presented to the Board on 3 January 2007 (ADB/BD/IF/2007), section 3.2, page 5.

not to be significant enough in the medium term (to 2030) to influence one way or the other hydrological scenarios.”<sup>86</sup> Despite the limited information provided about the economic analysis in the Bank’s project documents, the Bank staff informed the Panel that they had used the hydrological findings of the PPA Study (low and high water flow scenarios and the related probabilities) when developing their own model for testing the financial and economic viability of the project.

**While the Panel finds that the hydrology issues were addressed in the PPA Study , it nevertheless concludes that the Bank Management and staff are not in compliance with OM600 because they did not include adequate information in the Bank’s own appraisal documents on hydrological sustainability and related economic impacts. The failure to do this is particularly noteworthy since more comprehensive analyses were readily available.<sup>87</sup> The Panel’s view is that the Management should have ensured that the economic consequences of a prolonged period of drought, similar to the period 2003 – 2005, were addressed in the BHP-IP, or at a minimum, that reference to relevant studies consulted by the Bank staff on this issue should have been mentioned in the Bank’s appraisal documents.**

Another weakness in the economic analysis relating to hydrological risk is the failure of the Bank Management and staff to clarify the basis on which it has calculated the water releases in its financial and economic models. The Bank’s BHP-IP states that “both the operation of the upstream dams, Nalubaale and Kiira, and the BHP are expected to be based on water releases consistent with the current Lake levels, as determined by the Agreed Curve”.<sup>88</sup> However, the PPA Study relies on a different water release regime, the “Constant Release”, which “allows for a better planning of additional means of power generation in the country.”<sup>89</sup> As discussed above in the hydrology section, the Constant Release is a new interpretation of existing agreements and can result in different water releases from the Lake from the application of the Agreed Curve used in the SEA and the cited in the BHP-IP.

**The Panel finds that the “Constant Release” approach adopted by the PPA Study is inconsistent with the Agreed Curve’s “moving reference” approach cited in the BHP-IP. Since the different approaches could affect the overall result of the economic analysis, the Bank Management, in the project documents, should have explained the possible impact of the different interpretations of the existing international agreements on the economic and financial viability of the project. This is particularly relevant because Paragraph 2.5 of the *Environmental and Social Assessment Procedures for Public Sector Operations*, specifically instructs Bank staff to ensure that Bank-financed projects comply with the international agreements ratified by the borrowing country.<sup>90</sup>**

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<sup>86</sup> PPA Study, *supra* note 66, p. 45.

<sup>87</sup> See the Hydrology section of this report, *supra*, or the PPA Study, *supra* note 66, for more details.

<sup>88</sup> BIP Proposal, *supra* note 8, paragraphs 4.5.23, p.12.

<sup>89</sup> PPA Study, *supra* note 66, p. 47.

<sup>90</sup> The Agreed Curve, *supra* note 40.

## **Social and Environmental Impacts**

### ***Request and Management Response***

The Requesters claim that “The incremental social and environmental costs or damages attributed to Bujagali project were not monetized, consequently allocating a zero monetary value to the environmental damages and social costs by default.” They also claim that the 10% discount rate used in the economic analysis is too high and therefore “underestimates the Bujagali project’s damage costs” and “favors projects that produce short-term benefits against long-term costs”<sup>91</sup>. Furthermore they claim that the PPA Study “only highlight the benefits and not the costs associated with change in water flows and disruption of people’s livelihood of Lake-side dwellers and business”<sup>92</sup>.

Management in their Response argues that the “Economic evaluation of Bujagali takes into consideration environmental and social costs associated with the project”<sup>93</sup> adding that the largest cost is for implementation of the resettlement and community development action plans related to the BHP and the BIP.

### ***Applicable Policies***

In its assessment of compliance, the Panel has considered the Bank’s *Resettlement Policy* and the *OM600*. Paragraph 3.3(f) of the *Resettlement Policy* states: “The total cost of the project ... should include the full cost of all resettlement activities, factoring in the loss of livelihood and earning potential among affected people...This attempt to calculate the ‘total economic costs’ should also factor the social, health, environmental and psychological impacts of the project and the displacement, which may disrupt productivity and social integration.”

The *OM600*, Annex 3 Paragraph 30 stipulates that externalities “need to be considered when adjusting financial flows to reflect economic costs. If they cannot be expressed in monetary terms, they should be discussed qualitatively in the section on project benefits.” *OM600* Appendix 3, Paragraph 39 provides guidelines for choosing an appropriate discount rate, “which can usually be estimated between 10% and 12% (the opportunity cost of capital), unless there are reasons to choose a higher or lower rate.”

### ***Discussion***

The total project costs for both BHP and BIP include direct costs related to the resettlement of affected people. These costs, which include a community development program with a budget of USD 12 million for BHP<sup>94</sup> and USD 16.94 million for BIP<sup>95</sup>, have been included in the Bank’s projections of economic cash flow and are reflected in the ensuing Economic

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<sup>91</sup> The Request, *supra* note 9, paragraph 2.2.3, p. 5.

<sup>92</sup> *Ibid.*, paragraph 2.2.2, p. 5.

<sup>93</sup> Management Response, *supra* note 11, paragraph 2A.2, p. 11.

<sup>94</sup> BHP- IP, *supra* note 4, Annex 4.

<sup>95</sup> BIP Appraisal Proposal, *supra* note 8, Table 4.2, p. 22.

Rate of Return (EIRR). One exception is that while the appraisal document for BIP refers to compensation for damages to the Mabira Forest reservoir it has not included any costs for such compensation in the overall project costs.<sup>96</sup> It should also be noted that the Bank's budgeted costs are slightly higher than the PPA Study, which includes an estimate of total social and environment costs of USD 26 million divided into USD 4.9 million for environmental costs and USD 21.10 million for social costs.<sup>97</sup>

On the other hand, in the opinion of the Panel, the estimated resettlement costs included in the economic analysis or in the Bank's appraisal documents do not necessarily cover all the losses people have suffered since the first Bujagali project, some of which, such as reduced income from fishing and agriculture, are still ongoing. The economic analysis also does not include provisions for unintended socio-economic costs incurred by displaced and "to be displaced" persons because of the stoppage/delay of the Bujagali projects. One such issue, as explained to the Panel by some affected people, and also commented upon in the BHP's SEA,<sup>98</sup> is that the price of land in the area has increased in recent years. It is, however, unclear to the Panel whether the early resettled people who received cash compensation received enough to fully replace their lost land holdings. If not, the consequence could be that the number of landless in the area may increase contrary to the requirement of Paragraph 3.3.(a) of the *Resettlement Policy*, which states that the aim of the resettlement plan "is to improve the displaced persons former living standards, income earning capacity, and production levels."

**The Panel finds that the Bank Management and staff have not fully complied with Paragraph 3.3(f) of the *Resettlement Policy* which requires that the project costs include the "full cost of all resettlement activities, factoring in the loss of livelihood and earning potential among affected peoples".**

The BHP-IP also fails to monetize all the costs and benefits associated with the project, as recommend by the *OM600*. For example, it describes, but does not assign a monetary value to such benefits as improved access to reliable electricity supply and income generating activities from businesses associated with the projects during construction and operation. Similarly, it discusses, without giving a monetary value to such social and environmental impacts as the project's effects on the hydrology and aquatic life of the Nile River and loss of cultural sites. On the other hand, the BHP-IP calculates savings from reduced import of

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<sup>96</sup> The BIP Appraisal Proposal states that "A sum to compensate the Forest Authority for loss of values is being agreed upon and will be applied to improve the ecological value of the existing estate in the vicinity of the Mabira", *supra* note 8, paragraph. 4.7.4, p.19.

<sup>97</sup> PPA Study, *supra* note 66, p. 73 ; Table 5-4, p. 93; Table 6-2, p. 87; and Table 6-6.

<sup>98</sup> BHP -SEA, Main Report, *supra* note 1, Appendix I Assessment of Past Resettlement Activities and Action Plan (APRAP), paragraph 5.3.1, p. 20 *inter alia* states: "Another issue that was raised by people on both banks is that the price that landowners would charge for replacement land was higher than the price paid in compensation for the lost land. While one acre of land would be compensated between UGX 0.8 M and UGX 1.2 M, it was not uncommon, according to PAPs (project affected peoples), to be charged UGX 2.2 M for a similar piece of land. PAPs state that they were viewed as rich persons and were overcharged for everything, including most prominently agricultural land. This cannot be substantiated as there was no monitoring of land transactions in the area." Furthermore, on p. 21 the APRAP states: "Where PAPs say that they are worse off, the main reason for it is usually the loss of agricultural land, the smaller size of the replacement land they have been able to secure, or its deficient fertility."

fossil fuel when diesel generated electricity is replaced by hydropower from the BHP. The PPA Study also includes in its economic analysis environmental benefits from reduced emission of carbon dioxide (CO<sub>2</sub>) when thermal energy is replaced by hydropower.<sup>99</sup> **While it is generally preferred (as a best practice) to put value for the costs of the environmental and social benefits and costs for Net Present Value (NPV) analysis, the Panel finds that the Bank’s appraisal process, including the PPA Study, complied with the requirements of Annex 3 paragraph 30 of OM600, because the Bank staff did identify and discuss the most relevant externalities at least in qualitative terms.**

The PPA Study used a discount rate of 10% for its NPV calculations. The Bank staff used 12% as the economic cost of capital in its economic analysis. Based on the base case scenario, the economic analysis of the Bank shows an EIRR (Economic Internal Rate of Return) of 25.6% for BHP and 26% for BIP, whereas the PPA Study’s analysis shows an EIRR for the Bujagali projects of 22% and 22.9% for high and low hydrology scenarios respectively. The PPA Study sensitivity tests found a zero probability of an EIRR less than 10% and a very low probability for an EIRR less than 12%, concluding that “the expected economic return of the Bujagali project is high and very robust to adverse outturns in the key parameters”<sup>100</sup>.

The Panel recognizes that the NPV could be affected by the chosen discount rate depending on the timing of short term and long term costs and benefits. However, as demonstrated by the PPA Study sensitivity tests, the EIRR is considered to be very robust with regard to such key variables as the hydrology, capital cost increases, green house effects, etc. **While the Panel did not find any explanation for why the Bank staff utilized a higher discount rate than was used by the PPA Study, the Panel finds that the discount rate adopted by the Bank complies with OM600.**

## **Alternative Energy Supply Options**

### ***Request and Management Response***

The Requesters claim that “Other alternative energy options have not been adequately studied to provide evidence that Bujagali dam project is the least-cost option.”<sup>101</sup> Furthermore, the Requesters claim that the PPA Study “does not adequately assess[ing] the alternatives, yet there have been various efforts in the recent past to analyze Uganda’s renewable energy potential.”<sup>102</sup> The Requesters also contend that, with regard to least-cost options, the “World Bank Group, like the Ugandan government, has skewed its research efforts to consistently promote Bujagali above other options.”<sup>103</sup>

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<sup>99</sup> For the economic analysis they used a price of 25 USD/ton of CO<sub>2</sub>. Benefits are calculated on the basis of a mixture of power production from hydro and thermal plants with hydrology generation assessed for high and low water flow scenarios.

<sup>100</sup> PPA Study, *supra* note 66, paragraph 8.7, p. 139.

<sup>101</sup> The Request, *supra* note 9, paragraph 2.2.8, p. 6.

<sup>102</sup> *Ibid.*, paragraph 2.2.8, p. 8.

<sup>103</sup> *Ibid.*

In their response, Management argues that the alternatives considered in the economic analysis were comprehensive and complied with the *ESAP*. They maintain that the economic analysis in the PPA Study explores all alternatives, and is designed to maximize the project's expected NVP, subject to financial, institutional, and other constraints.<sup>104</sup>

### ***Applicable Policies***

The Bank procedures that the Panel finds relevant to the economic analysis of alternatives are spelled out in *OM600*, Annex 3, Paragraph 2 which stipulates that a good economic analysis should seek to answer several questions including: "is the project the best alternative?" and in the Bank's *Environment Procedures for the Public Sector* which in Appendix 10 describes the generic contents of the terms of reference for an ESIA as including short and long term, temporary and permanent impacts of alternatives.

### ***Discussion***

The BHP-IP does not contain a detailed analysis of project alternatives. It merely states that "The proposed project was confirmed as an integral part of the least-cost expansion plan of Uganda's power generation system. The alternative to undertaking the Bujagali project would have been to build a number of thermal plants. Many alternative system configuration scenarios with and without Bujagali were simulated and then compared. Under all possible scenarios, the proposed project remains the least-cost option."<sup>105</sup> On the other hand, the PPA Study includes some analysis of alternative energy forms such as Uganda's geothermal potential and small and medium scale hydro. The PPA Study rejects geothermal as a viable alternative to Bujagali after concluding that "...historical estimates of the geothermal potential in Uganda ... are substantially overstated."<sup>106</sup> Furthermore, noting that six small hydro plants (3–13 MW) will be on stream before 2011, the PPA Study concludes that, while there are other small hydro sites in Uganda, "their costs and production characteristics are not sufficiently known at present for purposes of long term planning."<sup>107</sup> The PPA Study does not raise or discuss other renewable energy sources such as municipal solid waste, solar or wind. The fact that oil was discovered in Western Uganda (Lake Albert) in 2006 and could be a potential resource for power production is not mentioned by the PPA Study or in the Bank's project documents.

The PPA Study identifies Karuma, Kalagala, Ayago, Murchison and Masindi as possible alternative large hydropower sites. It did not consider Kalagala as a candidate because of its "offset" status, and rejected Ayago and Murchison for their high environmental impact and Masindi for being too large. The PPA Study concludes that "Bujagali and Karuma therefore appear to be the only major hydro power candidates that can be developed in the coming years to contribute to meeting the power demand in the country by mobilizing the renewable energy of the Nile."<sup>108</sup> These two hydropower alternatives were compared in terms of their economic returns (NPV and impact on tariffs).

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<sup>104</sup> Management Response, *supra* note 11, paragraph 2B.1, p. 12.

<sup>105</sup> BHP -IP, *supra* note 4, paragraph 4.11.1, p. 16.

<sup>106</sup> PPA Study, *supra* note 66, p. 64.

<sup>107</sup> *Ibid.*, p. 63.

<sup>108</sup> PPA Study, *supra* note 66, paragraph. 5.6.1, p. 79.

**The Panel believes that more detailed analysis of the potential alternatives could have been made in the Bank’s project appraisal document, as well as in the PPA Study. However, the Panel does not find that the Bank staff have failed to comply with OM600 or any other policy because the Bank’s policies and procedures do not provide detailed guidance to the staff on how economic analysis of alternatives should be done.**

## **Project Costs, Bujagali as Least Cost Alternative**

### ***Request and Management Response***

The Requesters claim that Bujagali is an economically risky project and that the cost of the project is a contentious issue that raises questions about the citizens’ ability to afford its tariffs, the high cost of the project, and the debt that will be incurred to fund the project.<sup>109</sup> They claim that the total cost of the Hydropower project rose from USD 430 million to USD 860 million by the end of March 2007.

The Management responds that the Bujagali project has been found to be the least cost option for Uganda on both a NPV and levelized tariff basis in all cases except in the unlikely case when low electricity demand is combined with high hydrology.<sup>110</sup> Management acknowledges that the costs of the project have increased and contends that, *inter alia*, the main reasons for this are: (i) increase in the cost of metals by an estimated 90% over the last 5 years ....; (ii) increase in the cost of oil by 140% between 2000 and 2006 ....; (iii) a tighter market for power generation equipment ...<sup>111</sup>

### ***Applicable Policies***

OM600 paragraph 10 stipulates that the “Task Manager should verify that the project cost estimate in the Preparation Report reflect sound analysis and investigation. Estimates should be confirmed by the mission’s technical staff through spot checks in the field and discussion with contractors and suppliers of goods.” Furthermore, OM600, Annex 3, Paragraph 6 *inter alia* states: “Normally base costs are estimated in the course of feasibility study and are later refined to take into account any further engineering and other detailed preparation work that has taken place by the time of appraisal...”

### ***Discussion***

The Panel has looked into the total costs of the two Bujagali projects, which as of the date of issuing this report has been confirmed by the Bank’s staff to be USD 860 million for the BHP compared with the USD 735.5 million mentioned in the BHP-IP. The major cost components of BHP are civil works and electromechanical equipment under a turnkey EPC (Engineering Procurement and Contract). According to the BHP-IP dated April 2007 “the cost of the EPC contract was US\$ 483.2 million covering the construction of the Bujagali

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<sup>109</sup> The Request, *supra* note 9, paragraph 2.2.9, p. 9.

<sup>110</sup> Management Response, *supra* note 11, paragraph 2A.3, p. 11.

<sup>111</sup> *Ibid.*, paragraph 2E.1, p.24.

Hydropower Project and spares.”<sup>112</sup> The original bid price at the end of 2006 was USD 467.2 million excluding spare parts. The Bank staff has informed the Panel that the final EPC price, set at the end of December 2007, is USD 564.4 million. This shows that the expected fixed bid price for the EPC contract used in the appraisal documents and economic analysis has increased by approximately 20% since the first economic analysis of BHP was made.<sup>113</sup>

The BIP Appraisal Document, estimates the costs for the T-Line to be USD 74.70 million, of which USD 49.95 million is for the construction of the T-Line and substations, USD 7.80 million is for contingencies and USD 16.95 million for resettlement and compensation.<sup>114</sup> The Bank’s staff stated on 16 April 2008 that the contractor’s final price is approximately USD 42 million.<sup>115</sup> This amount is lower than what was presented in the Project Appraisal Document, but substantially higher than what was included in the PPA Study’s economic analysis (USD 28 million in 2006 dollars).<sup>116</sup>

For the purpose of its risk analysis, the PPA Study defined two scenarios for capital costs, the “Low Bujagali Capital Costs” aggregated to 5% less than, and the “High Bujagali Capital Costs” aggregated to 10% more than Base Capital Costs. Each of the two scenarios was assigned a 20% probability and the base case a 60% probability because of “the advanced stage of development of the Bujagali project and the fact that the EPC contract has already been tendered and is under the final stage of negotiations.”<sup>117</sup> Clearly the actual contract prices are substantially different from what was used in the economic analysis.

**The Panel finds it unsatisfactory that the documents, presented to the Boards of Directors some months after the completion of the PPA Study, did not comment on the capital cost differences between the PPA Study and the project appraisal documents, and did not provide an explanation as to whether these differences could affect the result of the financial and economic analysis. This would in particular have been appropriate given the views in Uganda regarding the selection of the Bujagali over the Karuma site. The Panel therefore concludes that the Bank is not in compliance with OM600 paragraph 10 and OM600, Annex 3, paragraph 6 because, under these provisions, the Bank staff were required to provide full explanations and justifications in the Bank’s appraisal documents for the selection of Bujagali over the other alternatives.**

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<sup>112</sup> BHP -IP, *supra* note 4, paragraph 4.4.9, p.6.

<sup>113</sup> Management has informed the Panel that these cost increases result from Contractual Conditions of price adjustments and the delay of issuing the ‘Notice to Proceed’ to the contractor.

<sup>114</sup> BIP Appraisal Proposal, *supra* note 8, pp. 21-22.

<sup>115</sup> Converted from three different payable currencies at the prevailing ADB exchange rate of 16 April 2008 if the ADB exchange rate of December 2006 is used, the approximate contract value would be USD 38 million).

<sup>116</sup> PPA Study, *supra* note 66, Table 5-4, p. 72.

<sup>117</sup> *Ibid.*, pp 74 – 75.

## **Tariffs and Risk Assessment/Sustainability**

### ***Request and Management Response***

The Requesters' concern about the high cost of the Project leads them to express doubts about the citizens' ability to afford the resulting tariffs and about the availability of funds for rural electrification.<sup>118</sup>

The Requesters also argue that the evolution of tariffs over the life of the project was "deliberately understated ... in the analysis."<sup>119</sup> and that the "Bujagali dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid."<sup>120</sup>

Management in their Response argues that "... the ongoing electricity crisis has placed a significant strain on growth over the medium term"<sup>121</sup>, and that "further delays in augmenting Uganda's electricity generation capacity could undermine the economy."<sup>122</sup> Consequently, the Management argues that the projects, by enabling the injection of cheaper hydropower from Bujagali into the grid, will restore adequate and reliable electricity supply to the country and contribute to poverty reduction through improving the Ugandan population's access to electricity.

In addition, Management claims that the project will both relieve the GOU "of the necessity to provide a general subsidy for electricity tariffs" and enable it to "benefit from net tax revenues from the project that can be diverted to social programs." Furthermore, the fact that the project is financed through the private sector will enable the Government to focus its scarce financial resources on other priority sectors in the fight against poverty."<sup>123</sup>

### ***Applicable Policies***

OM600 Paragraph 34 emphasizes the importance of project sustainability and mandates that the "appraisal team must make every effort to ensure that the project has the potential to achieve it." This Paragraph lists a number of sustainability issues to be fully examined and discussed in the appraisal report, including that "the project will have a positive financial impact on the implementing agency." OM600, Paragraph 31 provides that "Sensitivity analysis is a valuable tool for testing the viability of a project under different assumptions about individual project parameters"; and Paragraph 32 stipulates that "sensitivity analysis should be closely related to the risks identified and analyzed in the appraisal report (e.g., adoption rate, implementation delays, world markets, impact of weather etc.)".

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<sup>118</sup> The Request, *supra* note 9, paragraph 2.2.9, p. 9.

<sup>119</sup> Ibid., paragraph 2.2.9, ii, p. 9.

<sup>120</sup> Ibid., paragraph 2.2.9, p. 9.

<sup>121</sup> Management Response, *supra* note 11, paragraph 9, p. 7.

<sup>122</sup> Ibid.

<sup>123</sup> Ibid., paragraph 40, p. 16.

The Bank Group's *Policy on Tariffs* (1985) puts emphasis on the sufficiency of revenues to finance operations and debt service.

### ***Discussion***

The GOU electricity tariffs policy provides that tariffs should aim at ensuring the financial sustainability of the electricity sector and promoting efficiency and affordability in service delivery. However, according to the BHP-IP since mid-2005 electricity tariffs have increased substantially as a result of the increased reliance on higher-cost thermal generation.<sup>124</sup> Average generation costs have increased from US\$0.65¢/kWh in 2004 to around US\$7.9¢/kWh in 2006, and were expected to reach US\$12¢/kWh in 2007 (when over 50% of generation was expected to be sourced from thermal plants).<sup>125</sup> The BHP-IP further states that consumer tariffs increased from US\$6.1¢/kWh in 2000 to US¢10.7/kWh in 2005, and to US¢21/kWh in 2006.<sup>126</sup> As a result, GOU is providing a subsidy to cushion the impact of the high cost of supply on customers.<sup>127</sup>

**The Panel finds no reason to disagree with the Management's views that the recent increases in electricity tariffs are a result of the investments in short term thermal generation capacity, and that future electricity tariffs are likely to decline when electricity from Bujagali replaces thermal power plants. Moreover, it finds no basis for holding that the Bank failed to comply with the policies applicable to this issue.**

On the other hand the Panel has been made aware of other project risks associated with the tariff structure. These risks include the ability of the distributor (UMEME) to maintain high collection rates and to reduce the technical and commercial losses, which were estimated at 39% (20% technical and 19% commercial) in 2006. In this regard, it should be noted that UMEME collection rates declined from 92% in 2005 to 80% in 2006. The PPA Study forecasts that by 2012 UMEME will have reduced its technical losses to 16% and its commercial losses to 5%.<sup>128</sup>

The combination of a low collection rate and technical and commercial losses indicates that only half of the electricity production is paid for, which should be a concern for the Bank with respect to the borrower's (i.e. UETCL) ability to fully cover the costs of new energy investments through the tariff system.

Of all the Bank related project documents, only the PPA Study addresses this risk. The BIP appraisal document merely expresses confidence in UETCL's ability to meet its obligations towards BEL, and the BHP-IP only focuses on securing future payments to BEL. This confidence appears to be based on the terms of the Power Purchase Agreement. Pursuant to this agreement, UETCL (or its successor company) is required to purchase the full

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<sup>124</sup> BHP -IP, *supra* note 4, paragraph 4.5.17, p.10.

<sup>125</sup> *Ibid.*, paragraph 4.5.22, argues that "had the previous Bujagali project been implemented, the current average generation cost could have been lower than US\$6¢/kWh", p.11.

<sup>126</sup> The Management's Response, *supra* note 11, states that the end user tariff in 2006 was US¢17.2/kWh.

<sup>127</sup> BIP Appraisal Proposal, *supra* note 8, paragraph. 4.6.3, p.18.

<sup>128</sup> PPA Study, *supra* note 66, p. 35.

capacity<sup>129</sup> made available by BEL, and the GOU guarantees these payments by UETCL. The Requestors expressed concern during the Panel’s visit to Uganda about the ability of the BHP to produce at full capacity when the current production at the existing Nalubaale and Kiira power station is only 140MW out of the installed capacity of 380MW.

Under the Power Purchase Agreement, UETCL is also obliged to fund a Liquidity Facility Agreement as additional security for these payments. Finally, the Power Purchase Agreement transfers the hydrological risk, defined as resulting from the occurrence of a low water level for 30 consecutive months, to UETCL. Should this occur, BEL will have the right to sell the plant to UETCL for a price that includes the outstanding principal and interest of the senior debt.”<sup>130</sup>

**In the Panel’s opinion the Bank should have varied the assumption of technical and commercial losses and the collection ratio, as part of the sensitivity testing of the capacity of the system to generate sufficient income to pay for the power supplied by BEL, or to reduce the Government subsidies to the energy sector. The Panel concludes that the Bank’s failure to include such an exercise in its sensitivity analysis amounts to non-compliance with OM600 Paragraph 34 on Project Sustainability and Paragraphs 31 and 32 on Risk and Sensitivity Analysis.**

## **Access to Electricity and Affordability**

### ***Request and Management Response***

The Requesters claim that the “Bujagali dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid.” They argue that biomass continues to be the primary energy source for most people and that only a “fraction of the population can afford unsubsidized electricity”.<sup>131</sup>

In response, the Management states that they consider the Bujagali hydropower plant to be an important part of the infrastructure needed for Uganda to continue its broad based growth in support of poverty reduction.<sup>132</sup> Management acknowledges that this project will not meet the needs of the 95% of Ugandan households that currently do not have access to electricity and states that other efforts are underway to help meet their needs.<sup>133</sup>

### ***Applicable Policies***

OM500 Paragraph 6 stipulates that when the Bank reviews the Borrower’s preparatory studies (conducted without the Bank involvement) such reviews should seek to establish how efficiently and successfully the preparation has done the following, *inter alia* “....

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<sup>129</sup> Capacity charge is based on the 250MW production capacity and will be the same irrespective of production output (low or high hydrology and demand).

<sup>130</sup> BHP -IP, *supra* note 4, paragraph 4.4.1, p. 5.

<sup>131</sup> The Request, *supra* note 9, paragraph 2.2.9 ii, p. 9.

<sup>132</sup> Management Response, *supra* note 11, paragraph 2F, p. 26.

<sup>133</sup> *Ibid.*, paragraph 2E.2 p. 25.

Establish realistic project objectives...making sure that the project does not attempt to resolve every problem in the sector but rather has a very clear focus ...and ensuring that all possible alternatives have been examined.” *OM600* Paragraph 7 says that “The appraisal team should pay particular attention to issues related to poverty, gender, population and participation.” The *Policy on Poverty Reduction* elaborates on this latter requirement, when it states in Paragraph 6.1.3 that the Bank’s “focus on poverty reduction as the overarching development objective implies that it be effectively put at the center of Bank operations and procedures.” ... and that there must be a timely assessment of the impact of macro-economic policies, sectoral interventions and specific projects on poverty reduction. The *Policy on Poverty Reduction* also deals specifically with infrastructure related- issues in Paragraph 5.5.2.3 which states that: To facilitate the contribution of infrastructure to poverty reduction, the Bank will: “support the development of basic infrastructure and public utilities, especially in rural areas; promote the access of the poor to efficient, safe and affordable infrastructure services; involve the poor in the development and maintenance of essential infrastructure; address regional inequity in access to basic infrastructure; and examine the possibilities for promoting public-private partnership in the development, maintenance and delivery of infrastructure”. It adds in Paragraph 5.5.6.1 that “The private sector can contribute to poverty reduction in two major ways. First, it can provide direct investment that generates employment opportunities. It can also participate in the development of infrastructure within the framework of public-private partnership.”

### *Discussion*

**The Panel agrees with both the Requesters and the Management that the Bujagali projects cannot solve the energy needs of the majority of Ugandans, especially those living in rural areas.** It is evident from the Panel investigations that a significant portion of the benefits from Bujagali, especially in the early years, are likely to go to better-off urban households and particularly to the industrial and commercial sectors. Even after completion of the project, electricity will still be very costly for poorer households and beyond the reach of many Ugandans.<sup>134</sup>

**The Panel has found very little discussion of the economic impact of the project on low income households in both the Bank’s projects documents and in the PPA Study in spite of the fact that the terms of reference of the PPA Study states that the consultants should “identify the direct impact of the project on poverty alleviation by estimating the economic impact of the project on low income households.”<sup>135</sup>** The only references in the PPA Study are to the likely direct economic impact of the project on the incomes to a limited number of local workers during construction and operation of the power plant,<sup>136</sup> and the indirect economic impact on affiliated business opportunities in the project area. **The Panel concludes that the Bank’s appraisals of the projects do not**

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<sup>134</sup> Uganda – Moving Beyond Recovery: Investment and Behavior Change for Growth, Report No. 39221-UG, World Bank, V.1, (Sept 2007), p. 25.

<sup>135</sup> PPA Study, *supra* note 66, Appendix A, paragraph 26, p. 10.

<sup>136</sup> According to the Management Response, *supra* note 11, paragraph 42, “the project is expected to create 600 – 1500 temporary jobs for Ugandan nationals, 10 percent of whom are likely to be hired from local communities” p. 16.

**comply with *OM600* and the *Policy on Poverty Reduction* which respectively require particular attention to poverty, gender, population and participation and adequate analysis of the projects' impact on poverty reduction in the appraisal documents.**

## **VII. CONCLUSION AND RECOMMENDATIONS**

The Panel appreciates the cooperation that it received from the Bank's Management and staff who, by making themselves available for interviews and by providing the necessary information and documents, helped the Panel to understand the Bank's involvement in the Bujagali projects' preparations and to review compliance with the Bank's policies and procedures.

Based on its investigations and findings, the Panel, as described in this report, has found instances of non-compliance with ADB policies and procedures in both the BHP and BIP projects. It is aware that under Paragraph 52(c) (ii) of the *IRM Rules*, the Panel can make recommendations on "any remedial changes in the scope or implementation of the Bank-Group financed project, subject to considerations of any restrictions or arrangements already committed to by the respective Bank Group institution or any other relevant party in existing project-related agreements". However, the Panel concludes that, because the BHP and BIP projects are co-financed projects and it may not have all relevant information on the "restrictions or arrangements" already agreed to by other funders or interested parties in these projects, it would be inappropriate for the Panel to make specific recommendations on how the Bank can resolve the identified instances of project specific non-compliance. Nevertheless, it would like to emphasize that the Bank should address the instances of non-compliance identified in this report.

Paragraph 52(c) authorizes the Panel to make recommendations regarding changes in "systems or procedures within the Bank Group" that could be made to avoid recurrences of similar problems to those it has found in the course of its investigations. In the process of conducting this review, the Panel made some observations regarding the Bank's policies, procedures and systems that may have contributed to the instances of compliance and non-compliance identified by the Panel. In the following sub-sections, the Panel offers its recommendations on steps that the Bank can take to enhance the effectiveness of its future operations and general operational efficiency.

The Bank's Management comments to the Panel's recommendations are included in Annex 1 of this report.

### ***Recommendations Related to the Bank's Policies and Procedures***

The search for policies and operational guidelines applicable to the Bujagali compliance review consumed a considerable amount of the time of the Panel, CRMU staff, and other Bank staff. Several of the relevant policies were not available electronically, especially those dating back to the 1990s, while others could not easily be accessed on-line (Intranet or Internet).

In addition, the Panel found that there were often more than one policy document applicable to an issue and that there was no clarity on how to apply these often overlapping policies and procedures to the issue. As a result, Bank staff was often unclear about which policy document they should treat as authoritative.

In order to address both these issues, the Panel recommends that the Bank should:

1. Ensure that the Bank's policies and procedures are reviewed to evaluate the comprehensiveness of their coverage, streamlined to avoid unnecessary overlap, and systematized so that it becomes easier for Bank staff and other stakeholders to understand how the different strategies, policies, guidelines and manuals relate to each other, and how they should be applied in the Bank's operations.
2. Ensure that the Bank's policies and procedures becomes easily available to all interested parties in the Bank's operations, including borrowers, officials of executing agencies, civil society groups, affected people and the public at large. Facilitating access to the Bank's policies and procedures is consistent with the Bank's *Policy on Information Disclosure*, and would effectively contribute to enhanced awareness and understanding of the Bank's operations among all stakeholders, including affected people living in the areas where projects are being planned and implemented.
3. Ensure that Bank Management and staff include in project appraisal documents specific references to the policies upon which they have relied in making their project appraisals and adequate information to show that they have complied with the requirements of all applicable Bank policies and procedures. Such references would also facilitate project supervision by staff members who were not necessarily involved in the preparation of the project.
4. Ensure that Bank Management and staff include adequate information in appraisal documents to justify their conclusions and recommendations.

### ***Recommendations Related to the Bank's Operational Systems***

As indicated in the introduction to this section, the Panel, when undertaking the review, observed some operational constraints and would like to offer the following recommendations for the Bank Management's consideration:

5. The Panel gained the impression from its interviews with the Bank staff responsible for the Bujagali projects that they seemed to have been overly confident in the policies and procedures of co-financiers, in particular the World Bank, and in their supervision and due diligence. However, as the operations of the ADB are governed by this Bank's own policies, the Panel recommends that the Bank take appropriate action to ensure that the Bank staff have an adequate knowledge of the Bank's policies and how they are applied in its operations, including co-financed operations.

6. Based on its observations at the Bank's headquarters and in the field, the Panel is concerned about the adequacy of the number of staff (and consultants) assigned to work on the social and environmental aspects of a complex operation like the Bujagali projects. The Panel therefore recommends that the Bank re-evaluate its human resource needs, paying particular attention to the expertise needed to effectively manage the main and cross-cutting issues involved in its operations.
7. While the Panel was able to eventually obtain access to all relevant project documents for its compliance review, the Panel is concerned with the way the records related to the two Bujagali projects are kept. Many important documents were not available in a central filing system or archive. The Panel, therefore, recommends that the Bank review its operations information and document storage system. An efficient information storage system is a key component in maintaining the Bank's institutional memory.

#### ***Monitoring the Implementation of Recommendations of the Bank's Boards of Directors***

The Panel, pursuant to its responsibilities under Paragraph 52(c)(iii), is required to recommend steps to be taken to monitor the implementation of any decision related to the projects that the Boards of Directors makes based on this report. The Panel therefore recommends that Dr Maartje van Putten be appointed, together with the Director of CRMU, to conduct the annual reviews of the implementation of the Boards of Directors' decision until such time as the projects are completed or until the Director of the CRMU and Dr. Maartje van Putten conclude that all aspects of the Boards' decision have been fully implemented.



## Annex 1: Management Comments to IRM Panel Recommendations

AFRICAN DEVELOPMENT BANK BANQUE AFRICAINE DE DEVELOPPEMENT



### INTER-OFFICE MEMORANDUM

Ref: ORPC.3/IOM/DP/2008/05/06  
Date: June 2, 2008

**TO:** Mr. Per Eldar Sovik, Director CRMU

**FROM:** Mr. Mandla. S. Gantsho, Vice-President, OIVP

Mr. Joseph. B. Eichenberger, Vice President, ORVP

**SUBJECT: COMPLIANCE REVIEW REPORT ON THE BUJAGALI HYDROPOWER AND INTERCONNECTION PROJECTS- COMMENTS BY RELEVANT DEPARTMENTS TO THE REVIEW PANEL'S RECOMMENDATIONS**

- I. We acknowledge receipt of your memorandum dated 05/05/2008 (Ref. CRMU/MM/PES/2008/05/0001) on the above subject. We appreciate the recommendations presented in your memo resulting from the ongoing investigation for the preparation of the full Compliance Review Report on the Bujagali projects.
- II. We understand that the full Compliance Review Report will not be available to Bank management until after its submission by CRMU to the Board of Directors of the Bank. In light of this, Bank Management is limited in its ability to prepare a full and comprehensive response to the Panel recommendations until the compliance report has been finalized.
- III. However, please find below our initial response to each of the recommendations presented in your memorandum. Management has already begun to address a number of the concerns expressed in your draft as part of the on-going reform processes, while others will begin shortly.

#### IV. Recommendations related to the Bank's policies and procedures

(1) *Ensure that the Bank's policies and procedures are reviewed to evaluate the comprehensiveness of their coverage, streamlined to avoid unnecessary overlap and systematized so that it becomes easier for Bank staff and other stakeholders to understand how the different strategies, policies, guidelines and manuals relate to each other, and how they should be applied in the Bank's operations.*

The Bank is in the process of revising or developing several new sector policies and guidelines for Bank group operations. In particular, the Operations Manual, which will serve as the main reference document including policy/guideline summaries, is under going revision. It is expected to be completed by September 2008. This same revision effort is ongoing with respect to cross-cutting policies, procedures and guidelines. New business processes, currently being implemented to streamline the delivery of Bank operations, are intended to sharpen task team ownership of operations and accountability for their compliance with Bank policies. As part of this reform, the Bank has moved to a new system of peer review to ensure that appropriately skilled professionals are involved in quality and compliance review and assurance. Senior Management engagement and oversight has also been strengthened through the Operations Committee.

A revision of the Environmental and Social Assessment Procedures (ESAP) is currently underway and expected to be completed in 2009. Management would like to assure CMRU that the revision process will comprehensively examine the interaction between and hierarchy among the various policies to eliminate any overlaps and to strengthen their applicability in the Bank's operations.

With respect to the Bujagali projects, the key Bank safeguards policies applied during the development of ESIA included: Environmental & Social Assessment Procedures (ESAP), and Policy on Involuntary Resettlement. ESAP in turn calls for application of Bank's policy principles on Poverty Alleviation, Gender equity and participation of civil society. These policies were finalized in the last 5 years and are still considered to be valid. A stock-taking exercise on-going now to assess the ESAP implementation will also help identify ways to further improve mainstreaming of Bank's cross-cutting policies.

(2) *Ensure that the Bank's policies and procedures become easily available to all interested parties in the Bank's operations, including borrowers, officials of executing agencies, civil society groups, affected people and the public at large. Facilitating access to the Bank's policies and procedures is consistent with the Bank's Policy on information Disclosure, and would effectively contribute to enhanced awareness and understanding of the Bank's operations among all stakeholders, including affected people living in the areas where projects are being planned and implemented.*

The Bank is committed to ensuring access to its policies and procedures by all its stakeholders. The Bank is currently taking steps to ensure that its policies and

procedures are fully accessible in the Bank's website including the public information center. The Bank's website has been substantially updated and its content improved; in addition, the Bank is moving ahead with a fundamental redesign that will make it more useful and user friendly. It also intends to produce a web-based compendium of all policies now in place by September 2008.

*(3) Ensure that Bank Management and staff include in project appraisal documents specific references to the policies upon which they have relied in making their project appraisals and adequate information to show that they have complied with the requirements of all applicable Bank policies and procedures. Such references would also facilitate project supervision by staff members who were not necessarily involved in the preparation of the project.*

As noted above, the Bank has already introduced a number of new business processes including the Presidential Directive No 07/2007 concerning the Operations Review and Approval Process relating to the review and approval of country strategies, project appraisal reports, studies and other policy and operational documents. Various additional guidelines and formats have been introduced to provide staff with the required guidance in the implementation of the new review process. The Management will ensure that the new Review and Appraisal Process will further strengthen the reference to and compliance with various Bank policies applicable to the project preparation, supervision and post-evaluation. In addition, training modules on specific policies are being planned for; as well as additional training of these in the future for current and forthcoming policies.

With respect to the Bujagali project, separate comprehensive summaries (over 100 pages) of the ESIA and RAP were prepared and disseminated in English and French to the Board and also posted in the Bank's PIC as part of the Bank's Information Disclosure policy. The summaries for the hydropower project were distributed at least 60 days and for the transmission line at least 120 days, prior to the Board presentation of the respective project documents. It is for this reason that the Bank's appraisal reports cover environmental and social information in a succinct manner.

*(4) Ensure that Bank Management and staff include adequate information in appraisal documents to justify their conclusions and recommendations.*

The basic format for project appraisal reports has been redesigned in order to focus more effectively on critical information. A number of seminars and workshops have been recently organized and will continue to take place to raise Bank staff's comprehension and skills related to the new business processes including the log frame preparation, results based design of CSPs and projects, results indicators and targets, etc. all of which are expected to improve level of information and related justification in appraisal documents.

V. Recommendations related to the Bank's operational systems:

*(5) The Panel gained the impression from its interviews with the Bank staff responsible for the Bujagali projects that they seemed to have been overly confident in the policies and procedures of co-financiers, in particular the World Bank, and in their supervision and due diligence. However, as the operations of the ADB are governed by this Bank's own policies, the Panel recommends that the Bank take appropriate action to ensure that the Bank staff have an adequate knowledge of the Bank's policies and how they are applied in its operations, including co-financed operations.*

It is essential that Bank Staff have adequate knowledge of Bank's policies. We are committed to increase dissemination of policies and staff training to enhance the application of our policies in the Bank's lending operations. At the same time the Bank has agreed to operate within the framework of the Paris Declaration to undertake joint missions and to harmonize with other donors' policies and processes (and theirs to ours). This increasingly calls for the use of joint lenders' project preparation and supervision to reduce project transaction costs and the burden of multiple missions on borrowers. In doing so, the Bank remains committed to ensuring that the mandates of Bank policies are respected. In cases where the policies of multiple institutions differ significantly, Bank policy would be expected to prevail.

With respect to the Bujagali projects, the Bank was involved at its earliest inception beginning with a joint lenders mission in 2006 to Uganda to review and give advice on the Scope of the ESIA studies. Subsequently, the Bank participated in several missions and teleconferences with the appointed consultants and other lenders during the review of the ESIA and RAP at various stage of their production. The Bank also participated in the public consultations meetings held in Uganda. And the Bank participated in the final joint lenders' meeting in Washington to sign off on the ESIA and RAP studies. During this entire process, the mandate of the Bank policies was respected.<sup>137</sup>

*(6) Based on its observations at the Bank's headquarters and in the field, the Panel is concerned about the adequacy of the number of staff (and consultants) assigned to work on the social and environmental aspects of a complex operation like the Bujagali projects. The Panel therefore recommends that the Bank re-evaluate its*

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<sup>137</sup> Regarding supervision, there has been only one official supervision mission to date which was carried out by the joint lenders' group (WBG, IFC, MIGA, AfDB, ADF) from March 6-12 2008 in which OIVP, OPSM and OINF staff also participated. The Bank mission had a major influence on the project sponsor's (BEL) ongoing monitoring of the various environmental and social impacts particularly related to ensuring gender equity in the contractor's (Salini) recruitment practice. The Bank was also instrumental (with the help of the UGCF (country office)) in helping to resolve the stalemate being experienced by BEL in proceeding with the compensation for loss of crops along the transmission line. The stalemate was due to indecision by the Uganda Government Chief Valuer in not fixing the price of crops. The UGCF and the HQ Management meeting with the Ugandan authorities helped to speed up this process. Record of BEL and WBG's appreciation of the Bank's intervention on this matter is also available

*human resource needs, paying particular attention to the expertise needed to effectively manage the main and cross-cutting issues involved in its operations.*

We recognize the serious constraints faced by Bank staff working on environment and social aspects including gender, poverty, civil society participation and climate change. As stated in the ADF-11 Deputies Report a detailed review of the capacity and adequacy of Bank group staffing in gender, environment and climate change will be undertaken in 2008 as part of a wider review of the skills and capacity of the Bank. The findings of the staff competencies/skills survey will be used by Management to ensure that skills gaps are appropriately resourced going forward. Just in the past few weeks, two new environmentalists have been recruited in OPSM and one in OWAS. Two additional Gender experts have also been recruited in the OIVP and OSVP complexes Additional experts are expected to be recruited for climate change work. While some of the shortfalls will be met with additional recruitment, part of this shortfall would also be addressed through skills re-training. And, for the first time, The Bank is undertaking a 3-year staffing projection, which will allow the institution to be more strategic in its recruitment processes.

*(7) While the Panel was able to eventually obtain access to all relevant project documents for its compliance review the Panel is concerned with the way the records related to the two Bujagali projects are kept. Many important documents were not available in a central filing system or archive. The Panel, therefore, recommends that the Bank review its operations information and document storage system. An efficient information storage system is a key component in maintaining the Bank's institutional memory.*

We fully agree on the need to strengthen the archiving, record keeping and filing systems and procedures in the Bank including the setting up of an efficient central archive. Some of these activities have been initiated in OPSM with the lead provided by the Department's Portfolio Supervision Division. We should also see Bank wide improvement with the conversion of several STS positions to GS positions allowing for the recruitment of more permanent and experienced secretarial pool which will improve record keeping.

- VI.** In conclusion, Management would like to thank CRMU for its recommendations to help improve the effectiveness of Bank's policies, procedures and guidelines. Management would like to assure CMRU that it is committed to the continuous improvement in the Bank processes to make its operations more effective. We look forward to reviewing CRMU's full Compliance Review Report and subsequent discussion with the Boards.

## **Annex 2: ADB POLICIES AND PROCEDURES EXAMINED BY THE IRM PANEL**

- Policy on Involuntary Resettlement (November 2003)
- Integrated Environment and Social Assessment Guidelines (2003)
- Integrated Water Resources Management (April 2000)
- Environmental Review Procedures for Private Sector Operations (May 2000)
- Operational Manuals (1999, 2004)
- Policy on Poverty Reduction (February 2004)
- Gender Policy (June 2001)
- Environmental and Social Assessment Procedures for Public Sector Operations (June 2001)
- Environmental and Social Auditing Guideline (June, 2000)
- Policy on Good Governance (1999)
- Policy on Disclosure of Information (2005)
- Policy on the Environment (2004)
- Strategic Impact Assessment Guidelines (2003) ( to the best of the Panel's knowledge, this Guideline has not be formally approved by the Bank as a policy)
- Policy on Tariffs (1985)

### **Annex 3: The Request**

# NATIONAL ASSOCIATION OF PROFESSIONAL ENVIRONMENTALISTS (LTD).



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BOMBO – BWAISE RD

5<sup>th</sup> May, 2007

TO: **THE DIRECTOR,**  
COMPLIANCE REVIEW AND MEDIATION UNIT (CRMU)  
INDEPENDENT REVIEW MECHANISMS  
AFRICAN DEVELOPMENT BANK  
P. O. BOX 323 OFFICE 6C-EPI C 1002  
TUNIS BELVEDERE, TUNISIA  
Email: [crmuintfo@afdb.org](mailto:crmuintfo@afdb.org)

Dear Sir/Madam,

**RE: REQUEST (CLAIM) ON THE PROPOSED BUJAGALI  
HYDROPOWER AND INTERCONNECTION PROJECT IN  
UGANDA.**

Reference is made to the proposed Bujagali hydropower and interconnection projects in Uganda.

We have raised a number of social, economic and environmental concerns about the project to the project sponsors, Bujagali Energy Limited (BEL), Government of Uganda and the World Bank Group that have not been addressed ever-since the inception of the project in Uganda

We have learnt that the project is now at the African Development Bank seeking financial support and is in advanced stages of approval at the Bank. We have also learnt that the Bank instituted an Independent Review Mechanism (IRM) to investigate the Bank's compliance to its operational policies and procedures regarding projects supported by the Bank as a mechanism for persons adversely (likely to be adversely) affected by projects supported by the Bank to submit their grievances requesting the Bank to comply with its operational policies and procedures.

It is against this background that the National Association of Professional Environmentalists (NAPE) and other Non-Governmental Organizations (NGOs) are submitting this request to the Compliance Review and Mediation Unit (CRMU) of the Bank to conduct an investigation on the Bujagali project and the Bank's compliance to its operational policies and procedures while considering the project for financing. This is because the Bujagali project is based on flawed social, economic and environmental assessments and any action by the Bank to

finance the project will adversely affect the Ugandan society, economy and the environment and will be in violation with the Bank's operational policies and procedures.

An advance email has been sent to you and this will be followed by registered mail via your Country Office in Uganda.

Yours sincerely,

**Signed by:**

A handwritten signature in black ink, appearing to read 'M. Frank', with a horizontal line extending to the right.

**MURAMUZI FRANK  
EXECUTIVE DIRECTOR**

# AFRICAN DEVELOPMENT BANK CLAIM ON THE BUJAGALI DAM PROEJCTS IN UGANDA

## SUMMARY

*The once stalled Bujagali hydropower project in Uganda is back and fast-tracking under a new developer, Bujagali Energy Limited (BEL), ignoring outstanding and new concerns raised on the project by the Ugandan civil society such as the impacts of hydrology and climate change on power generation of Bujagali, the costs of the project, its affordability, commitments on mitigations measures, Kalagala offset, community development action plans, compensation and resettlement processes, dam safety, etc. The project is in advanced stages of due diligence and approval processes for financial support at the World Bank Group, European Investment Bank, African Development Bank, among others. We have learnt that the African Development Bank, an institution intending to finance the Bujagali project, instituted an Independent Review Mechanism (IRM) in June 2004 to investigate the Bank's compliance to its operational policies and procedures in financing projects. It is against this background that we are submitting a request (claim) to the African Development Bank Independent Review Mechanism for consideration of an investigation of the proposed Bujagali hydropower projects in Uganda that the Bank intends to finance and to request the Bank to stay its decision on financing the project, until such an investigation is done. We believe that the failure of the Bujagali project sponsors to address civil society's outstanding and new concerns on the project is a violation of African Development Bank's operational policies and procedures and any action by the Bank to support the project before the concerns are resolved is a violation of its own operational policies and procedures that will greatly harm the Ugandan society, economy and the environment.*

## 1.0. INTRODUCTION

In 2001, we submitted a claim to the Inspection Panel of the World Bank Group concerning the Kiira (Owen Falls Extension), Nalubaale (Owen Falls) and the proposed Bujagali Power stations in Uganda, which was duly addressed by the Panel ([www.worldbank.org/inspectionpanel](http://www.worldbank.org/inspectionpanel)).

Following the intervention of the Inspection Panel and coupled with the performance shortfalls, controversies related to social, economic and environmental aspects, evidence of corruption associated with the AES Nile Power's (AESNP) Bujagali dam project and its failure to reach financial closure at the World Bank Group, the company, AESNP, pulled out of the project, which subsequently stalled the project.

Due to the ever-escalating electricity demand and the inability of Nalubaale and Kiira hydropower stations to generate enough electricity to meet the country's demand, the Government of Uganda has revived and is in the process of fast-tracking the Bujagali hydropower dam project under different proponents, locally registered as Bujagali Energy Limited (BEL)<sup>1</sup> that is currently being considered for financial support by the World Bank Group, African Development Bank, European Investment Bank, among others. This has resulted in many shortcuts being taken to ensure that the project is approved as fast as possible, ignoring outstanding and new concerns raised on the project. Like in the previous

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<sup>1</sup> A consortium of IPS of Aga Khan, Sithe Global and others

AESNP case, BEL's Bujagali hydropower dam project is based on flawed assumptions and data that have little or no bearing to the current situation and therefore are not an adequate basis for approval of the project.

We have learnt that the African Development Bank has instituted an Inspection Panel of its own to review the Bank's compliance to its Operational Policies and Procedures (OPs). This is a welcome development, because the African Development Bank has become sensitive to the realities of the impacts of its Bank financed projects and the need for selfevaluation to ensure effective and meaningful development in Africa.

We also appreciate that the Africa Development Bank acknowledges that often:-

- There is inadequacy in personnel to carry-out the full range of activities specified by the Environment policies, leading to inadequate information concerning the environmental impacts of Bank financed projects
- Projects financed by the Bank are not properly categorized
- There is need for improvement in the design, implementation, monitoring and regular updates of Environmental Management Plans (EMPs) and Environment and Social Management Plans (ESMPs)
- While there are separate national institutions responsible for environment issues in some Regional Member Countries (RMCs), there is often lack of environmental expertise in the implementing units in the RMCs
- There is need to move away from stand alone infrastructure projects to a more holistic approach that fosters sustainable development and poverty reduction
- There is need for adequate communication and coordination between the Bank and RMCs to ensure dissemination of policies and guidelines and reduce transaction costs
- There is need for incentives to enhance environmental and social awareness and stewardship
- There is need for an effective monitoring and evaluation process based on baseline data and quantifiable performance indicators relating to social concerns
- There is need for public disclosure and transparency of environmental information, especially Environmental and Social Impact Assessments (ESIAs).

For these reasons, we request the African Development Bank to conduct an independent investigation on the Bujagali hydropower project in Uganda.

It is against this background that the National Association of Professional Environmentalists (NAPE) and other NGOs are submitting this claim to the African Development Bank (ADB) for consideration of an investigation in the Bujagali hydropower and Interconnection Projects in Uganda currently under consideration by African Development Bank for possible financial support. The following are our concerns regarding the Bujagali dam project that we desire the Bank to take into account.

## **2.0. CONCERNS ON THE BUJAGALI HYDROPOWER PROJECT**

### **2.1. Hydrological Risk, Climate Change, Cumulative Impact Assessments and Kalagala Off-set**

2.1.1 BEL's Social and Environmental Assessment (SEA) does not adequately address the outstanding questions about hydrological changes on power production at the Nalubaale,

Kiira and the proposed Bujagali facilities, especially now when Lake Victoria water levels have declined.

2.1.2. Without doubt, Kiira has contributed substantially to the over-draining of Lake Victoria, causing a lot of misery and economic loss to Uganda and neighboring countries. This has not been properly addressed in the documents we have seen.

2.1.3. According to the SEA, BEL has little or no control on the manner in which Nalubaale and Kiira will be operated by Government of Uganda (GoU) (HPP Main Report, p356 6th paragraph) and therefore cannot under the circumstances dictate the outflow rates through upstream power stations to ensure sufficient water for Bujagali's power production, implying that Bujagali's operation will be highly dependent on the operations of Kiira and Nalubaale. Now that BEL cannot control the outflow of water from power stations upstream and did not obtain commitment from GoU to ensure sufficient outflow rates through Nalubaale and Kiira, what guarantees does BEL have that the project will have enough water and generate the projected capacity? This issue is a lynchpin in the project's economic viability.

2.1.4. BEL's SEA deliberately projects Lake Victoria as being capable of providing adequate water for the project even in its current diminished hydrological state, which is not possible. Where is the additional water going to come from? It is acknowledged by Engineer Elimu Esimu of Eskom that "currently the facilities (Nalubaale & Kiira) are not running at full capacity, because of limitations from tail water and the need to maintain live storage"(ref. Phase 2 Consultation Material PCDP Appendix C, p 12), implying hydrology is still a major limitation. It is now clear that the Agreed Curve<sup>2</sup> is no longer being respected and the Victoria Nile flow regime has changed; consequently the original long-term energy output assessment for Bujagali is no longer valid (WREM, 2005a). Experts reported that although Bujagali dam was designed for 234-290MW, in reality, this is not possible under the current hydrological regime. Independent experts projected the output to be a maximum of 172MW. BEL's SEA does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam could lead to more sustainable flows out of the lake as it will "make use of the same water" released by the existing dams. Neither the SEA nor the documents it is based on explore the opposite scenario (i.e. that a new dam will provide more incentive to release higher flows, in order to maximize electricity sales).

2.1.5. The Ombudsman of the IFC and the World Bank Inspection Panel stressed the need to address the hydrological flow rates in the previous AESNP Bujagali Project and they considered hydrology critical for Bujagali dam. BEL does not address this concern.

2.1.6. BEL's SEA reports do not address climate change and its possible impact on power production at Bujagali. Current and future climate models indicate hotter, drier conditions, lower lake levels and lower downstream river flows (WREM, 2005a). It is unknown whether Lake Victoria will recharge to the high levels and outflow experienced during the 1961-2000 period. It is also not known whether such a recharge will occur in the next few years or in the next 100 years. A 2005 report by Water Resources and Energy Management International Inc., a US consultancy commissioned by the Uganda Ministry of Energy and Mineral Development, predicts that climate change could dramatically reduce the lake's levels and therefore outflow to the Nile. The report states: *"Lake evaporation shows a steadily increasing trend, a direct consequence of temperature increase. From 2025 on, lake evaporation becomes consistently higher than lake rainfall with this deficit exceeding 20 billion cubic meters per year toward the end of the century. It thus appears inevitable that, if*

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<sup>2</sup> The Agreed Curve is a water release (outflow) rate through the hydropower stations built on River Nile based on natural river flows (run-of-river) that is directly proportional to the levels of the Lake Victoria that was agreed upon by Government of Uganda and the riparian countries, Egypt and Sudan as an operational rule for releasing water through the power stations on the Nile River.

*the rainfall process remains stationary, climate warming will disturb the historical balance of lake rainfall and evaporation, and will create serious deficits."*

2.1.7. A recent (2006) technical report of Directorate of Water Development (DWD), a lead agency, is missing in BEL's SEA. This could probably address the issues of hydrology, climate change, declining water levels in Lake Victoria and River Nile. No study released to date analyses the risks from climate change-induced drought and other hydrological changes to the performance of Bujagali.

2.1.8. The February 2007 report, Economic and Financial Evaluation of the Bujagali Projects by Power Planning Associates (PPA<sub>1</sub>), bases its analysis on flawed hydrological and climate change assumptions and computations. For example:-

i. The economic analysis is based on a water release operational rule that does not follow the *agreed curve*, yet existing dam operators' permits require that this rule be adhered to.

ii. The PPA<sub>1</sub> recommended "Constant Release" operational rule for Lake Victoria based on low (687m<sup>3</sup>/s) and high (1247m<sup>3</sup>/s) hydrological scenarios instead of the current release rate (400 m<sup>3</sup>/s) based on the agreed curve (natural flows) will not permit quick recovery of the Lake and lead to over-draining of the Lake in order to meet targeted electricity generation of Bujagali hydropower station and the current electricity demands. In addition, the constant flow will lead to increased sedimentation, a change in water temperature, vegetation and geomorphology that will affect ecosystem functions, fisheries, livelihoods, tourism recreational opportunities and electricity generation capacity downstream.

iii. The entire economic analysis is based on lake levels that have been observed in the last 100 years, instead of the recently experienced (3-5 years) and likely lake levels over the next 30 or more year scenarios.

iv. The report also assumes that climate change will not have a major impact on future lake levels, which is highly doubtful. Similar concerns were raised by independent analysts<sup>3</sup> (*Annexes I & II*).

2.1.9. The last Inspection Panel report stated: *"The Panel consequently concludes that the issue of cumulative effects, addressed by Management and raised by the Requesters, is of real significance and is deserving of greater attention."* Although much time has passed since the Bujagali project was first proposed at the World Bank, to date the cumulative impacts issue remains unresolved. There was no deliberate attempt by BEL to identify cumulative impacts. There are no Cumulative Impact studies on Building a Cascade of Dams along the River Nile, including Bujagali. The SEA also does not discuss what changes to the existing dam complex would be required to begin to restore the Lake's level, and how such changes would affect Bujagali. The World Bank and IFC also echoed that lack of a comprehensive management plan gives rise to long-term management challenges of the River Nile. A recent analysis by Engineer Daniel Kull of Lake Victoria and the proposed hydrological curve change (*Annex II*) has revealed that in order for Lake Victoria water levels to recover quickly, the operational rule of the River Nile waters for electricity generation should conform to the agreed curve (natural flows). It remains to be seen if other analyses for the project will properly address these concerns. Generally, the ongoing debate over the existing dams' role in the draining of Lake Victoria should be settled in a transparent, participatory way. This requires the timely release of relevant data

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<sup>3</sup> An Analysis of "Bujagali II-Economic and Financial Evaluation Study-Final Reports" by Power Planning Associates by Pete Tsournos, Associate Professor, Department of Economics, California State University- Chico and Engineer Daniel Kull. "Lake Victoria and the Proposed Hydrological Curve Change".

about water releases through the dams<sup>4</sup>, information about hydrological assumptions and commitments from the Government on future dam operation and water releases.

#### **2.1.10. Kalagala “Offset”**

Paragraph 1 of the agreement between World Bank and GoU states that “*Government of Uganda undertakes that any future proposal which contemplates a hydro power development at Kalagala will be conditional upon satisfactory EIA being carried out which will meet the World Bank Safeguard Policies as complied with in the Bujagali project. Government and the World Bank will jointly review and jointly clear such an EIA*” (HPP Main Report, Appendix D1, 2006). This, however, is not a guarantee that Kalagala Falls would never be developed for hydropower. The commitment on Kalagala Falls as an “Off-set” by government of Uganda is not binding. It does not completely remove Kalagala as a future dam site. Legal interpretation of the agreement by the Inspection Panel also confirmed that there was no guarantee for Kalagala as an offset for Bujagali (Ref. Inspection Panel Report, 2002).

The lack of up-to-date and adequate information on hydrology, climate change, cumulative impacts assessments and commitment on Kalagala “Off Set” in BEL's SEA violates the African Development Bank Policies on Environmental Assessment. We believe that the absence (inadequacy) of this critical information will negatively affect the well being of Ugandan society, in particular and East Africa, in general.

#### **2.2.0. Economic, Comprehensive Options and Affordability Assessment**

2.2.1. There is no evidence in the SEA report that a comprehensive economic analysis for Bujagali HPP was done. What has been released on the World Bank website ([www.worldbank.org/bujagali](http://www.worldbank.org/bujagali)) is not comprehensive and therefore cannot be used as basis for determining the economic viability of the project. Therefore, it is difficult to determine the economic viability of the project. Both the World Bank Inspection Panel and IFC Compliance Advisor/Ombudsman echoed similar concerns in the previous AESNP Bujagali dam project. The Inspection Panel recommended that comprehensive assessments be carried out before any further damming of the Nile could be done.

2.2.2. The recent (February 2007) economic analysis by PPA<sub>1</sub> also does not adequately address the economic viability in relation to hydrological risks, social and environmental impacts. The authors of the report only highlight the benefits and not the costs associated with change in water flows and disruption of people’s livelihoods of lake-side dwellers and businesses.

2.2.3. The incremental social and environmental costs or damages attributed to Bujagali project were not monetized, consequently allocating a zero monetary value to the environmental damages and social costs by default. The 10% social discount rate used in the economic analysis is too high, underestimates the Bujagali project’s damage costs and indicates that the World Bank favors projects that produce short-term benefits against long-term costs. The economic analysis should include the monetized social and

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<sup>4</sup>At an October 2006 public meeting in Kampala about recent drops in Lake Victoria's water levels, the Uganda Ministry of Energy disputed that the dams were a primary cause of the problem, and promised to release data to prove that. To date, despite numerous written requests, the data has not been released. Hydrologists are asked to see the following: Annual Net Basin Supply (NBS) for the Lake Victoria Basin for all years on record; Daily outflow from both the Nalubaale and Kiira dams since construction of Nalubaale, however most importantly since construction of Kiira, until the present; Daily Lake Victoria water level, measured at Jinja, since construction of Nalubaale, although again most importantly since the construction of Kiira, until the present; Daily Agreed Curve prescribed Owens Falls outflows since construction of Nalubaale, although again most importantly since the construction of Kiira, until the present.

environmental costs of building a dam, altering water flows and disruption to the livelihoods of lakeside dwellers and businesses.

2.2.4. BEL's SEA report (HPP Main Report, p335) states that "if Bujagali were not to be built, then either lack of electricity will persist or more expensive alternatives will be needed to be built." The fact is that if target levels of energy cannot be met with Bujagali, other more costly sources will be needed, until the proposed Karuma project is commissioned.

2.2.5. The economic analysis failed to systematically determine the macroeconomic benefits of the Bujagali project. The macroeconomic analysis was based on two case scenarios 1) the least-cost expansion plan with Bujagali and Karuma and 2) the least cost expansion plan without Bujagali and with Karuma commissioned as early as 2012. The economic analysis was also based on demand forecasts, base fuel, capital cost and low hydrology. The assumptions are that thermal energy will be displaced earlier, there will be two investments (Bujagali & Karuma) instead of one (Bujagali) and tariffs will be lower when Bujagali is around compared to when it is absent for households connected to the grid, while those not connected will not be affected. These assumptions are erroneous, because the reduction in prices of goods and services will be small since the reduction in cost of electricity production, tariffs and macro-economy accruing from Bujagali project will be small.

2.2.6. It is also critical to involve stakeholders from other countries sharing Lake Victoria in addressing the problems caused by the changes in water flows and to come up with workable solutions for the long-term effects.

2.2.7. An analysis of the risks of climate change on Uganda's energy sector and its economy should also be undertaken and publicly released.

2.2.8. Other alternative energy options have not been adequately studied to provide evidence that Bujagali dam project is the least-cost option. Again, the recently released economic analysis by Power Planning Associates does not adequately assess the alternatives, yet there have been various efforts in the recent past to analyze Uganda's renewable energy potential. Another recent Strategic/Sectoral, Social and Environmental Assessment (SSEA) study on power development options in the Nile Equatorial Lakes region by the Nile Basin Initiative (NBI)/NELSAP<sup>5</sup> does not adequately address the alternative energy options. This NELSAP report restricts itself on energy options that have some form of preliminary data, a degree of development and emphasizes regional energy trade at the expenses of known and promising potential energy options whose study has been limited, but could prove more relevant to national energy development and energy security needs. Therefore, the NELSAP report has limited national interest and is not an adequate basis for decision-making regarding power development options for Uganda. The known potential alternative energy options that have not been taken seriously by government<sup>6</sup> and the NELSAP study include:-

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<sup>5</sup> . Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

<sup>6</sup> Ref. Uganda's Ministry of Energy and Mineral Development's "Support of Renewable Energy Development in Uganda" (<http://www.ren21.net/iap/commitment.asp?id=127>), which had as a goal "By 2006: solar PV systems equivalent to 320 kWp sold to households and institutions; a comprehensive database of Uganda's renewable energy resources developed; feasibility studies for the development of an additional 60 MW completed."

- i. **Bagasse:** Although it has been discussed for years, the country has developed only a few megawatts of its currently estimated 40MW potential<sup>7</sup>.
- ii. **Small hydro (less than 10 MW):** Of at least 46 MW at 16 sites that has been identified, only 13MW have been developed.
- iii. **Micro-hydro (less than 100 kilowatts):** A limited number of sites have been developed, despite there being at least 40MW of potential<sup>8</sup>.
- iv. **Karuma Dam (150 MW)** is considered to be less socially and environmentally destructive than Bujagali (and in fact than all currently proposed large dams in Uganda). It would have the added benefit of bringing electricity to the northern part of the country, whose development has been marred by continued rebel conflict. It was previously compared directly to Bujagali, but lost-out over economics. Later, Karuma's project sponsors in Norway discovered that the economic analysis used to justify Bujagali was based on greatly inflated costs for building Karuma<sup>9</sup>. Currently, it is alleged to be 10 months behind Bujagali schedule in Uganda's energy development project cycle<sup>10</sup>
- v. **Geothermal:** Uganda has significant potential, with estimates ranging up to 450 MW, but studies have lagged behind hydroelectric analysis. Although the Bujagali EIA by Burnside International Ltd. states that only 45 MW is feasible, this seems premature and pessimistic as some of the sites they refer to as having a poor chance of commercial development are still being studied. Experts we have talked with who are working directly on such studies say that the potential for specific sites is much greater than the Project SEA indicates. The economic analysis by Power Planning Associates reports a geothermal potential of only 40MW, raising doubt on the credibility of their findings.
- vi. **Municipal Solid Waste:** Uganda has an estimated 10-30 MW potential.
- vii. **Solar:** The East African recently reported: *"The government's plan to save 46MW of grid power during peak hours using solar photovoltaic and solar water heaters has not taken off. Government had estimated that a total of 100,000 grid connected consumers would install solar PV systems and use solar lighting instead of grid electricity."*<sup>11</sup> Energy used for water heating is a significant contributor to the electricity demand, accounting for almost 50MW. Experts estimate that 10MW of peak power could be saved immediately (and more in future) with solar water heaters for grid-connected customers. Government of Uganda has abandoned solar energy to individual, NGO and local community development interests.
- viii. **Efficient Lighting:** The bulk of Uganda's peak demand is used for lighting, which consumes up to 92MW, according to a World Bank study. If all lights were replaced

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<sup>7</sup> "Review of Norwegian support to the Energy Sector in Uganda," 13 June 2006, by the Nordic Consulting Group. The report notes that in 1998, Kakira Sugar Works planned to install a 30MW bagasse-fueled electricity plant, which could have been installed in 2 years' time. Instead, the government focused on the "presumably less expensive power generation options at Owen Falls Extension and Bujagali."

<sup>8</sup> Ibid

<sup>9</sup> "Confidential report over-prices competing Karuma Falls project," Development Today, December 3, 2003. The article states that "a World Bank report comparing Uganda's energy options operates with cost figures for the Norwegian backed Karuma hydropower project that are some US\$200 million higher than those the developer, NORPAK, has presented to the Ministry of Energy in Uganda. In a comparison of Karuma with Bujagali, the Canadian consultant firm Acres International has used its own design concept for Karuma ... Bank management has insisted on keeping the Acres report secret, even though the Bank's Inspection Panel states that not making it public is 'not in compliance with the World Bank Disclosure Policy. The report was the key document in the Bank's decision to support the Bujagali project in December 2001."

<sup>10</sup> As reported by the Minister of State for Energy Hon Simon D'Ujanga at a Ministry of Energy and Mineral Development, in collaboration with World Bank, Public Briefing held at Serena Hotel in Kampala 4<sup>th</sup> April, 2007.

<sup>11</sup> <http://allafrica.com/stories/200610100044.html>

with energy-efficient light bulbs, the country's peak demand could be cut to below 20MW<sup>12</sup>.

ix. **Transmission Losses:** According to the 2006 Bujagali EIA by Burnside International Ltd., "Another option to reduce demand is to reduce technical losses, which for Uganda is high at 21 percent. Acres (1999) estimated that improvements to the country's failing distribution infrastructure could eliminate as much as 30 MW of losses from the grid." On 3<sup>rd</sup> October 2006, the East African reported that Uganda was applying for a US\$180 million loan from the World Bank to cover a variety of investments in the energy sector; only US\$10 million from the project is expected to go toward demand-side management and energy efficiency measures<sup>13</sup>.

x. **Wind power potential** needs further exploration, as wind speeds have only been recorded at low heights, not the 10 meters that is standard for wind power analysis<sup>14</sup>.

xi. **Improved, efficient stoves and biogas digesters** would be key to bringing cleaner energy to the rural poor, and reduce deforestation from cutting fuel wood.

Uganda Government technocrats have dismissed the contribution of these alternative energy options based on their development costs and difficulty to connect to the national grid. The SEA does not give cost, cost-benefit and opportunity-cost scenarios and calculations for installation and development of these alternative energy options as basis for determining Bujagali as the least-cost option. The idea of dismissing energy alternatives, because they cannot easily be connected to the national or regional grid (*BEL's HPP Main Report, p167-171*) is erroneous. What should be assessed is rather whether alternative electricity options will help reduce the burden on existing national grid-based hydropower at competitive costs (prices) than other options by taking away areas where other energy options could be developed as independent grids rather than emphasizing the need for connectivity to the national or regional grid. These independent grids could prove more beneficial to the majority of the people and the current rural electrification scheme being promoted by government. It therefore becomes clear that the various energy options have not been assessed in either a comprehensive or balanced way as part of the evaluation leading up to Bujagali. The East African Commission, in a report on the decline of Lake Victoria's water levels<sup>15</sup> stated that: "*Partner states should make deliberate efforts to reduce dependency on hydropower by developing alternative sources of energy like geothermal, wind, solar, thermal and natural gas within 5 years.*" But, the government of Uganda, the project developer and the World Bank are proceeding with Bujagali as the least-cost option, yet this has been effectively disputed.

The World Bank Group, like the Ugandan government, has skewed its research efforts to consistently promote Bujagali above other options. In the project's first incarnation at the Bank, data was manipulated to justify Bujagali as the "least-cost" option for Uganda after its consultants pointed to other projects as cheaper. While the World Bank's 2002 appraisal of

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<sup>12</sup>"Reduce your power costs, use energy saving bulbs," New Vision, January 22, 2007.

<sup>13</sup> The Energy Ministry has identified preliminary needs to improve efficiency, including educational programs to increase awareness on energy conservation and efficiency; a program to reduce the cost of efficient lighting; a program to subsidize energy efficient technologies; a national building code based on energy efficiency concepts (and a program for compliance); and a host of other important needs.

<sup>14</sup>"Investing in Uganda's Energy Sector," <http://www.ugandainvest.com/energy.pdf>

<sup>15</sup> Special Report on the Declining of Water Levels of Lake Victoria, April 2006, by the EAC Lake Victoria Basin Commission ([http://www.eac.int/lvdp/lake\\_victoria\\_waterlevels\\_apr\\_06.pdf](http://www.eac.int/lvdp/lake_victoria_waterlevels_apr_06.pdf))

the Bujagali project was over-optimistic in many instances, the analysis of alternatives to the project was consistently pessimistic. This is still a problem with the new BEL Bujagali project. Going back even further, the World Bank used unusually optimistic hydrological data on the Kiira project, and claimed there was little risk to using the optimistic figures (even though most experts at the time believed otherwise). This has resulted in drastic draining of Lake Victoria to low levels close to those in 1924. A comprehensive, independently facilitated and participatory options assessment process is needed for future energy planning in Uganda, especially one that incorporates a rights and risk analysis. More importantly, there needs to be concerted action to develop these resources.

### 2.2.9. Affordability

i. Bujagali remains an economically risky project, a risk worsened by changing hydrology and climate. The cost of Bujagali to Uganda has long been a contentious issue, and questions have been raised about citizens' ability to afford its tariffs, the high cost of the project, which has grown considerably and issues of indebtedness. At one time, the cost of Bujagali project was reported to be US\$430 million, then US\$550 million and then US\$580 million. From January 2007 to end of March 2007, the Bujagali cost has risen from US\$735 million to US\$860 million and is expected to escalate even higher when other additional costs are included. The Prayas report of 2002 indicated that the project had been over-priced by more than double the actual costs, which could lead to a national loss of more than US\$20 million in excessive payments each year. In a meeting between the World Bank and NAPE held on the 28<sup>th</sup> February 2007 in Kampala, World Bank acknowledged that the cost of Bujagali project had increased by 30%.

ii. While evolution of tariffs of the Bujagali project was a requirement for the economic analysis, omission or commission deliberately understated them understated in the analysis. The 6 or 6.5 US cents frequently quoted for the Bujagali project is a projected tariff that will be paid by consumers 30 years after commissioning the project and loan amortization. Tariffs that will be incurred after commissioning the project and during the loan amortization period have deliberately been omitted, with the explanation that there is a formula in the Power Purchase Agreement (PPA<sub>2</sub>) for computing the tariff, whenever necessary and therefore "there is no need for tariff projections"<sup>16</sup>. What then was the price (tariff) against which the (PPA<sub>2</sub>) was signed by government of Uganda?

It is, therefore, increasingly becoming clear that Bujagali Dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid. Biomass (burning wood) continues to account for more than 90% of the nation's primary energy use, and only a fraction of the population can afford unsubsidized electricity. Bujagali will feed into a very limited national grid, its power bound mainly for Kampala, Jinja, Entebbe and other urban centers. Therefore, we are convinced that, even if the national grid covers the whole of Uganda, electricity from the Bujagali project would not be affordable. The high cost of the project will further limit funds available for rural electrification and is expected to lead to reductions in subsidies for electricity tariffs for grid-connected users. Uganda already has the most expensive power in the region and tariffs have more than doubled in recent months, thus pushing more people out of the already limited market for electricity. This will therefore negate the country's economic development and efforts for poverty eradication.

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<sup>16</sup> As reported by the Executive Director of the Electricity Regulatory Authority (ERA) at a People's Public Hearing on the Bujagali Hydropower Project at Grand Imperial Hotel in Kampala held on 30<sup>th</sup> March 2007

We believe that the absence of an adequate and comprehensive economic and alternative (options) assessment of the Bujagali dam Project violates the African Development Bank Policies on Economic Evaluation of Investment Operations, Poverty Reduction, among others, which requires the evaluation of projects to ensure that they meet development goals. The Bank assesses the robustness of the project with respect to economic, financial, Institutional and environmental risks. The Bank's economic evaluation considers the sources, magnitude and effects of the risk associated with the project, by taking into account the possible range in values of the basic variables and assessing the robustness of the project's outcome with respect to changes in these values." There is sufficient evidence that the Bujagali dam project was not subject to this kind of analysis.

### **2.3.0. Information Disclosure, Transparency and Openness regarding the Bujagali Dam Project**

2.3.1. It is a requirement of the African Development Bank that there is sufficient information disclosure, transparency and openness regarding Bank financed projects. It is our hope that the Bank will ensure that these principles are met.

2.3.2. More transparency and openness is needed on how various options have been evaluated. At least, project proponents should release all documents on the project's economic viability, including all studies on the Lake Victoria/Nile hydrology, the PPA<sub>2</sub>, and options analysis. The information must be released with adequate time to review before further action is taken on Bujagali. The only document released for review was BEL's SEA, which does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam will be designed based on the "Agreed Curve."

2.3.4. The key document that assigns economic risks, the Power Purchase Agreement (PPA<sub>2</sub>), was only recently (January 8, 2007) released for public scrutiny at the Uganda Electricity Regulatory Authority's (ERA) Office in Kampala. It does not include the costs of Bujagali dam project, it does not apportion responsibilities, risks and guarantees between the parties regarding the dam project.

2.3.5. The previous PPA<sub>2</sub> for AESNP was first kept secret, until after the High Court of Uganda ruled<sup>17</sup> that it is a public document that should be made public. This was also the position of the Inspection Panel in 2002, which stated that "It seems evident that full disclosure of the PPA<sub>2</sub> is vital, if the intent is to place the public in a position to analyze, understand, and participate in informed discussion about viability of the Project and its impact on the economy and well-being of Ugandans." When the AESNP PPA<sub>2</sub> was finally released, it was revealed that it posed unjustifiable risks to the Ugandan government, consumers and taxpayers.

2.3.6. Uganda laws require that Parliament must approve the state's obligations under the PPA<sub>2</sub>. There is no evidence that BEL's PPA<sub>2</sub> has been debated and approved by Uganda's Parliament, yet it is reported in BEL's SEA to have been signed way back in 2005 by government. BEL's PPA<sub>2</sub> was therefore signed without incorporating the costs of the project related to studies, construction and compensation and resettlement issues, which will definitely be reflected in the tariff of electricity from the Bujagali project. This is not proper.

We believe that the discrepancies in the PPA<sub>2</sub> process poses a great threat to the Ugandan society and economy and is a contravention of the law of Uganda and violates African

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<sup>17</sup> Greenwatch vs GoU & UETC ref. HCT-00-CV-MC-0139 OF 2001

Development Bank's Policy on Information Disclosure, Accountability, Economic Evaluation of Investment Operations, Poverty Reduction, etc.

#### **2.4.0. Dam Safety Issues**

Bujagali dam design does not adequately consider the safety problems regarding the old Owen Falls (Nalubaale) dam, especially now when the powerhouse and bridge have large cracks. BEL's SEA states that a Bujagali Dam Safety Panel (BDSP) shall be formed. Just forming a dam safety panel is not enough. There should have been an integral comprehensive plan and strategies for addressing dam safety issues. Such strategies should have included concrete steps to decommission the old Nalubaale and disaster preparedness mechanisms and associated costs. Such strategies are very important; especially since there was no EIA done for Kiira dam and no post-construction audit done for Nalubaale dam. The issue of whether Bujagali Dam would be able to survive a failure of the Owen Falls Dam is still a major concern. Failure to address dam safety issues and environmental audits in the SEA violates African Development Bank's Policies on Safety of Dams. The African Development Bank Environmental and Social Auditing Operational procedure (2000) *"states Audits form a central part of the Bank's project cycle. Audits are a tool to systematically, independently obtain and objectively obtain evidence to evaluate project compliance with environmental and social loan conditionalities and the Bank's crosscutting policies. To ensure that audits conducted by the Bank are of uniformly executed and to a high standard, the audit procedure and auditing process are to be integrated into Bank Operational Procedures"*. The Banks Integrated Environmental and Social Impact Assessment (IESIA) guidelines (2003) stipulate that the bank will take an active part to promote *"best practices"*.

#### **2.5.0. Indigenous Peoples, Cultural and Spiritual Issues**

BEL's SEA considers the project area as not inhabited by indigenous people. It therefore considers Basoga as not being indigenous, yet the Constitution of the Republic of Uganda (third schedule) considers Basoga as an indigenous people. Has the constitution of Uganda changed? Or is the Constitution of Uganda (1995) not relevant to the Bujagali project? African Development Bank's Environment and Social Auditing Operational procedures (2000) and IESIA 2003 guidelines consider indigenous people and cultural issues important in the development of Bank supported projects. Now that African Development Bank is planning to financially support Bujagali dam project in Uganda, any omission on the Bank's part in considering the importance of peoples and cultural property is a violation of the Bank's own policy and procedural guidelines. Cultural and spiritual issues in the Bujagali project area were inadequately covered in the SEA. It is assumed in the SEA to have addressed cultural and spiritual issues of the affected community. This, then calls for an effective consultation process involving all clans that are culturally and spiritually attached to Bujagali Falls followed by a public hearing.

#### **2.6.0. Compensation and Resettlement**

2.6.1. BEL's SEA states that AESNP, the previous project proponent, completed land acquisition, resettlement and relocation of all residents formerly located in the reservoir area and compensated land owners and other project affected people. However, houses and facilities provided to the resettled communities by AESNP are now dilapidated less than five years after construction, implying that the structures were poorly constructed and would probably soon crumble. This calls for a review of the structures into which

dam-affected people were resettled to establish their appropriateness and suitability as compensation and safety.

2.6.2. Most of the people who were moved in 2002 were not given land titles to their new lands, which caused great uncertainty. Problems that arose with the resettled communities were left unresolved for years after the original project sponsor (AESNP) abandoned the project. It took strenuous lobbying on their behalf by our organizations to get the government to respond to some of the problems. Attached herewith is a letter addressing the problems faced by the community resettled in Naminya by the dam developers and GoU.

2.6.3. The existing compensation and resettlement frameworks are out-dated and do not reflect current economic situations. This calls for a review of the existing compensation and resettlement frameworks with a view of updating and making relevant to current economic realities.

2.6.4. People affected by the Bujagali Interconnection Project were never compensated and resettled. It is therefore important that compensation and resettlement of these project-affected people is based on updated compensation and resettlement frameworks that are inline with the current economic situation. There is also need for commitment and strategies (mechanisms) on the part of the project sponsor on how the compensation and resettlement of project-affected communities will be handled.

2.6.5. The lack of a detailed and updated compensation and community development action plan in BEL's SEA is a violation of African Development Bank's policies on involuntary resettlement (2003), good governance (2000) and Environmental and Social Auditing (2000), Industrial Policy guidelines, Stakeholder Consultation and Participation (2001), among others.

### **2.7.0. Consultation Concerns**

While there is evidence of consultations in BEL's SEA, project proponents confuse consultation with true participation in a decision-making process. Consultations with the 240 clans in Busoga and 52 clans of Buganda were not done at all. In addition, the SEA does not indicate how each of the stakeholders' concerns raised during the consultation process are going to be addressed. The failure to address concerns raised and obtain agreements during the consultation process by the dam developer violates African Development Bank's Policies on Stakeholder Consultation and Participation (2001) and Environmental, Social Auditing guidelines (2003), Environmental Policy (2004), among others.

### **2.8.0. Old and Inconsistent Data**

BEL's Social and Environmental Studies (SEA) are based on old data that has little or no bearing to current situation. For example, sections 7.4.1.3 p336, water quality data, climate, air-borne particulate data, among others were done almost ten years ago and do not reflect the current environmental realities e.g. declining lake and river water levels, degradation of wetlands and forests, increased silting, climate change, etc. that have impacts on hydropower production. Fish species that were found to be endemic in the previous AESNP studies were mysteriously not discovered in BEL's SEA (*Annex III*), raising doubt on the fish report in BEL's studies. Was it a deliberate attempt on the part of the consultants to manipulate information? Or is that now the endemic fish species have become extinct?

### 2.9.0. Fauna (terrestrial & Aquatic)

BEL's EIA studies on animals, birds and aquatic life were carried out for very short periods of 1 to 2 months that do not give the variations in species distribution and diversity that usually occur over a period of one year. The failure to adequately conduct environmental assessments violates the ADB's Policies on Environmental and Social Auditing (2003), Environmental Policy (2004).

We have taken the following actions to try to resolve the above mentioned issues, but in vain:-

Requested for the tariff evolution of the Bujagali project over the projects life, cumulative impact assessment of having many dams on the same river, evidence of a commitment (agreement) on the Kalagala off-set, an updated mechanisms and commitment on the compensation and resettlement framework, dam safety strategies and disaster preparedness mechanisms for Bujagali and power stations upstream the Nile, a comprehensive assessment of the hydrological and climate change risks, a comprehensive economic, affordability and options assessment of the Bujagali Dam project from World Bank, Uganda government and the developer (BEL). However, what is now available as Social and Environmental Assessment (SEA) for the project, PPA, economic and options analyses do not address our outstanding concerns.

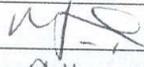
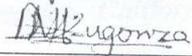
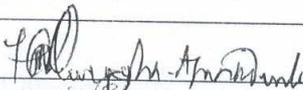
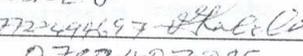
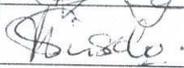
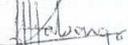
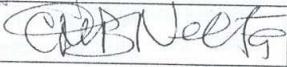
We have sent our outstanding concerns to the World Bank (available at <http://www.irm.org/programs/bujagali/index.php?id=061204letter.html>).

We, therefore, believe that the failure of the Bujagali dam developer (BEL) to address the outstanding social, economic and environmental concerns we have raised violates African Development Bank's guiding policies, principles and procedures. Any support by the Bank to the Bujagali dam project in its current state is a violation of the Bank's own policies, principles and procedures for supporting development projects. Consequently, such an action of support will materially affected our rights and interests and is likely to jeopardize our future social, cultural, and environmental security. We request the Independent Review Mechanism (IRM) of African Development Bank to recommend to the Bank's Executive Directors that an investigation of these matters be conducted in order to resolve the controversies. As we have always stated there can be no sustainable development without "truth-telling and truth-seeking in development." African Development Bank itself recognizes and accepts that "*sustainable development is a dominant development paradigm for the 21<sup>st</sup> century, being pro-poor to counter unacceptable impoverishment rates and that development should meet the needs of the present without compromising the needs of the future*"

We look forward to your response.

**Signed by:**

Signed by:

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## ANNEX I.

### **An Analysis of Power Planning Associates’ “Bujagali II – Economic and Financial Evaluation Study – Final Reports”**

*By Pete Tsournos, Associate Professor, Department of Economics, California State University - Chico*

*The stated purpose of the study by Power Planning Associates, which was commissioned by the World Bank Group, is to evaluate the economic viability of the proposed Bujagali project in Uganda, while taking into account the economic, financial, social, and environmental aspects. International Rivers Network asked economist Pete Tsournos to analyze the report against a few key questions.*

- **Does the report satisfactorily answer the question: “Can Bujagali operate economically during times of low water without more over-releases from Lake Victoria?”**
- **What would be the economic implications of following the Agreed Curve (or is this information that not be extrapolated from the report)?**

The PPA report authors state that water already released for the existing Kiira and Nalubaale hydroelectric dams can be used to generate additional electricity downstream at Bujagali. In recent months, water was released above and beyond the “Agreed Curve” (a water-release agreement intended to ensure that the releases through the dams correspond to the natural flow of the river before damming) in order to mitigate a national shortage of electricity and high prices of energy. Coupled with an ongoing drought, the existing dams’ water-release regime has led to dramatic reductions in the level of Lake Victoria. Since no additional water releases are necessary for the proposed downstream Bujagali site, more energy can be generated for any given water release. The authors state that Bujagali will generate 1.2 times the power already generated by the Nalubaale–Kiira complex, and that the generation of same total power would require a release of only 45% from the lake as compared to the present situation without Bujagali (p.47).

However, there are shortcomings to the analysis. First the analysis is based on a water release operation rule that does not follow the Agreed Curve. The existing dam operators’ permits dictate allowable flows based on this agreement. PPA’s recommended operation rule for Lake Victoria adopted for the analysis is instead a “constant release” scenario, which can be summarized as follows: Under the low hydrology scenario, the mean water release target is 687 m<sup>3</sup>/s, while the high hydrology target is 1247 m<sup>3</sup>/s, rather than the agreed curve of 400 m<sup>3</sup>/s when lake levels are low (between 1133.5 and 1135 ft.) and 1850 m<sup>3</sup>/s when lake levels high (exceeding 1136.2 ft) (p.51). The recommended operation rule is likely based on water release targets that optimize the operation of the electric turbines while also stabilizing (if not restoring) the water level of Lake Victoria. Appendix B.6.5 of the PPA report states that the recommended operation rule was derived so that the target energy will be supplied with a defined reliability of 95% of the time while the Minimum Operating level of the lake (taken as 1133.5) is only reached 5% of the time.

The entire economic analysis is based upon lake levels as have been observed in the last 100 years, rather than the lower levels that have been recently experienced. The report also assumes that climate change will not make an appreciable change in the Lake's levels for the project's economic lifetime. **These two assumptions, combined with the reliance on the less-dynamic hydrological model known as the "constant release" model as proposed in the PPA report, make it difficult to know whether the Lake will experience future declines due to the operation of the three dams.** The economic implications of following the Agreed Curve are difficult to extrapolate from the report. Generally speaking, if the operation rule of Lake Victoria was restricted to follow the Agreed Curve, then the estimated benefits of the Bujagali are likely overstated, and especially so if climate change has a greater impact on the Nile outflow than the report acknowledges.

The price/value of electricity is greatest when water and electricity are scarce. If the agreed flow 400 m<sup>3</sup>/s, rather than the recommended 687 m<sup>3</sup>/s, is followed during the low hydrology scenario, less electricity will be generated at a time when the price/value of electricity is relatively high. Under the low-hydrology scenario, the target energy level will not likely be met 95% of the time and the NPV and rate of return of the project under the low-hydrology scenario will be overstated and expected returns are less likely, with the Agreed Curve release of 400 m<sup>3</sup>/s vs. the assumed release of 687 m<sup>3</sup>/s. Furthermore, the least cost expansion plan may also be affected if less electricity can be produced from Bujagali, under the low-hydrology scenario when only 400 m<sup>3</sup>/s of water is released. If target levels of energy cannot be met with Bujagali, other more costly sources may need to be considered, until the proposed Karuma project can be commissioned, no earlier than 2012.

If 687m<sup>3</sup>/s, rather than 400m<sup>3</sup>/s, is released during the low-hydrology scenario, and the objective is to keep the level of the lake stable, less water must be released during the high-hydrology scenario. The proposed water releases of only 1133.2 m<sup>3</sup>/s, rather than agreed releases of 1850 m<sup>3</sup>/s, during the high-hydrology scenario, will likely have little impact on the estimated benefits of Bujagali. When water is relatively abundant, the price/value of electricity is lower and the capacity of Bujagali is reached at 1247 m<sup>3</sup>/s. any additional water released beyond 1247 m<sup>3</sup>/s will only increase generation in Nalubaale–Kiira, not Bujagali.

The authors themselves state that the disadvantage of following the Agreed Curve is that variable water releases and thus variable energy output from all hydroelectric generators on the Victoria Nile does not allow for stable scheduling of generation to meet the total demand of the power system and to export energy to neighboring countries. Beyond this statement, the authors do not offer any formal analysis of the economic implications of following the Agreed Curve.

## **II. Impacts of Climate Change**

The report states that climate change is not found to be significant enough in the medium term (to 2030), to influence hydrological scenarios for this dam. This assumption is driven by two factors: the literature on climate change cited, and the 10% social discount rate, utilized by the World Bank and the authors of the report.

The assessment of the impact of climate change on Lake Victoria water levels seems to be based on limited studies, particularly a single study by Tate, Sutcliffe, *et al.* Tate, Sutcliffe, *et al.*, consider two 30-year baseline periods, 2021-2050 and 2070-2099. For the 2021-2050 periods, the authors predict slightly smaller than historically observed outflows, while predicting slightly higher than present outflows for the 2070-2099 period. Thus, the authors believe it is acceptable to use historical evidence from 1900-2005 as a basis to predict and model future hydrological conditions (page 33 appendix). However, in summarizing the literature on the climate change in the Nile basin and predicted changes in Nile flow, Paris, Yamana, and Young state that nearly all studies predict temperatures will increase, but precipitation predictions are uncertain. Paris *et al.* further state that the literature review confirms that there is a great deal of uncertainty in predicting future Nile flows (including the White Nile), and thus it is important to consider different scenarios of climate change and water flows when assessing the performance of proposed dams on the Nile. **While the authors of the Bujagali assessment consider both high- and low-flow scenarios within the study, both scenarios are based on past historical evidence rather than the various predicted future scenarios of water flows altered by climate change.**

However, as long as the World Bank mandates the utilization of a 10% social discount rate, the intermediate and long-term effects of climate change will have only a moderate impact on the analysis. On page 35 of the appendix, the authors state: “In the process of present-worth calculation of all costs and benefits of various expansion strategies, based on a social discount rate of 10%, the present worth of elements of the calculation beyond 15 to 20 years after commissioning each new project is quite low. As a consequence, one should identify hydrological scenarios that form the most representative periods of 15 to 20 years from the known historical series of net inflows into the lake.”

The World Bank utilizes a social discount rate of 10%. The discount chosen has a great impact when evaluating long-term issues such as the impacts of global warming. Suppose global warming leads to \$100 million in climate related damages 50 years from now, a discount rate of 10% implies that we should only spend roughly \$850,000 to avoid such damages. In other words, \$100 million, 50 years from now, discounted by 10% is worth roughly \$850,000 today. On the other hand, the NPV of \$100 million, 50 years from now, is \$8 million and \$61 million when utilizing a social discount rate of 5% and 1%, respectively. **By utilizing a social discount rate of 10% the World Bank favors projects that produce short-term benefits and long-term costs.** Even a modest discount rate will favor small benefits conferred today over much larger benefits conferred in the distant future. Many economists have argued that when evaluating the intergenerational consequences of climate change, a high discount rate unfairly places a smaller weight or value on the well being of future generations relative to the well-being of current generations. For example, the Stern Review on the Economics of Climate Change utilizes a discount rate of 0.1% when assessing the impacts of global warming. Even Nordhaus, who disagrees with the utilization of 0.1%, in his critique of the Stern Report, utilizes an initial social discount rate of 3% that slowly decreases to 1% over a 300-year period when evaluating the impacts of global warming. As long as the World Bank utilizes a social discount rate of 10%, it is unlikely that the various predicted future scenarios of water flows altered by climate change, 30 or more years down the road, will have much impact on the economic analysis of the Bujagali project.

### III. Social and Environmental Cost

While the authors of the PPA study contend that the constant release scenario may stabilize lake levels and is beneficial in terms of energy generation and planning, there may be environmental impacts created when water releases no longer mimic “natural flows”. The more stable water flow can potentially lead to an increase in sedimentation, a change in water temperature, a change in vegetation and geomorphology that could affect fisheries and ecosystem functions. The constant water flow could also affect livelihoods, such as tourism and whitewater recreation opportunities, riverside farming, and the ability to produce electricity downstream. **The authors only highlight the benefits and not the costs associated with the change in water flows.** The authors do acknowledge the potential effects of changing water flows by stating that the exact criteria in shifting from low releases to high releases should depend on factors such as the minimum requirements on the lake level expressed by riparian stakeholders of the lake, requirements expressed by populations living near or downstream of Lake Victoria, power demand of the Uganda power system, power export opportunities and other means of power generation available. However, no attempt is made to estimate cumulative social and environmental costs of the proposed changes in water releases. Furthermore, when considering the incremental social cost and environmental costs of Bujagali, impacts are accounted for in a manner that is biased toward hydroelectric generation.

The incremental environmental/social costs or damages from the Bujagali project are never monetized. By doing so, one is placing a zero dollar value to the environmental damages and social costs, by default. Only the mitigation program costs (actual expenditures) can be included as an environmental cost of the Bujagali project, which may or may not be enough to compensate for the environmental and social damage that will actually take place. On the other hand, the authors do monetize the environmental benefit of the avoided CO<sub>2</sub> from the Bujagali project. The report should include the monetized environmental costs of building a dam and altering water flows. The same rigorous, quantitative analysis techniques employed in the Stern Report can be applied to the Bujagali project, so that the fullmonetized social and environmental cost of the project can be determined. By only including the benefits and not the full social and environmental costs, the authors will underestimate the incremental impact of the Bujagali project.

**•Does the report clearly justify its assumptions that Bujagali will lower the cost of electricity in Uganda? What are the real-life implications of Bujagali on tariffs and affordability of electricity?**

The macroeconomic benefits of the Bujagali project are moderate at best and could not be determined in a rigorous or systematic manner, within the report. The macro-economic analysis considers two cases (1) the least-cost expansion plan with Bujagali and Karuma and (2) the least cost expansion plan without Bujagali and with Karuma commissioned as soon as possible, in 2012. The consultants have assumed the base demand forecast, base fuel and capital cost and the low-hydrology scenario when considering each of the two cases.

The main differences in the two cases are: thermal energy is displaced earlier, two investments take place instead of one, and tariffs will be lower, in the “with Bujagali” case relative to the “without Bujagali” case. The direct impact on households is expected

to be small, since most households are not connected to grid, but for those who are connected, tariffs are expected to be 5% lower “with Bujagali” relative to the case “without Bujagali”. Even if cost savings to producers are passed onto consumers, households can expect very little impact on the price of goods and services, since the price reduction in electricity to producers is small. Furthermore, the cost reduction in electricity production is unlikely to be great enough to be a factor in attracting new investment to Uganda, under either scenario.

The main advantage of the Bujagali project is that relatively costly thermal generated electricity is displaced. The Bujagali project has a higher NPV and likely a stronger macroeconomic effect, with the low hydrology scenario, relative to the high hydrology scenario. Under the high hydrology scenario, more electricity can be generated from the existing Nalubaale–Kiira operation, and thus displace more thermal generated electricity, relative to the low hydrology scenario. As the authors note, the energy capability of Bujagali is used up more quickly and displaces more thermal at an earlier date under the low hydrology scenario, relative to the high hydrology scenario. Under the high hydrology scenario, which is not considered, less thermal is displaced by Bujagali and at a later date, and, thus, will have a smaller impact on the cost of electricity production, tariffs and macro-economy. The work of the authors seems to indicate that under the high hydrology scenario, either Bujagali or Karuma could be avoided altogether. The benefits to the macro-economy will be dampened if only one investment takes place rather than two.

The macro-economic analysis is also based upon the low hydrology scenario mean water release target should of 687 m<sup>3</sup>/s, rather than the Agreed Curve of 400 m<sup>3</sup>/s. If target levels of energy cannot be met with Bujagali when the Agreed Curve is adhered to, other more costly sources of electricity must be considered, until the proposed Karuma project can be commissioned. Thus, the reduction in tariffs and macroeconomic impact will be smaller than the moderate impacts that have been estimated for the project.

#### **IV. Conclusion**

Had the authors based their analysis on the Agreed Curve, the expected benefits and value of the project would be lower than they are under the constant-release scenario as reported in the study. By operating Lake Victoria more like a reservoir, the expected benefits of Bujagali are likely greater than what could be expected under the more natural flows of the Agreed Curve. Despite basing the analysis on assumptions that will yield higher expected benefits, the effect of the proposed Bujagali project on the economy of Uganda is still moderate at best. Social and environmental impacts are poorly addressed throughout the analysis. When considering the incremental social costs of the project, the social benefits of hydroelectricity are included while the social costs are not systematically estimated and largely ignored, thus potentially creating a bias towards hydroelectricity in estimating the least-cost expansion plan. The report also fails to consider the economic, social and, environmental impact of the proposed changes to water releases, even though the report seems to acknowledge that various stakeholders will be impacted by changes to lake levels and downstream water flows. Finally, nearly all climate change studies predict changes in temperature and precipitation, in the Nile River Basin yet this extensive literature is ignored. Instead of addressing the potential effects of climate change, the entire analysis is based on historical data. It remains unclear

whether the proposed constant water release plan will indeed restore and stabilize Lake Victoria water levels, under the various climate change scenarios

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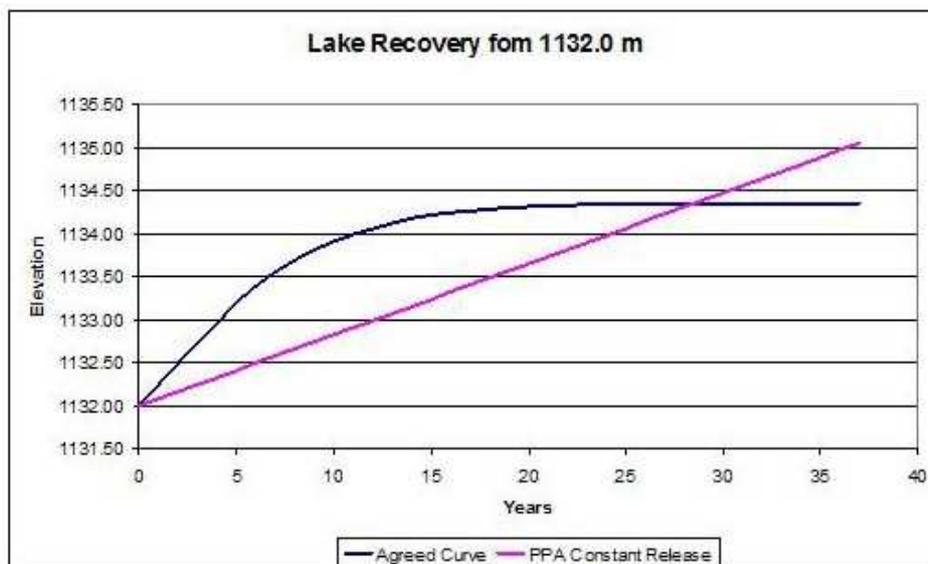
## ANNEX II

# Analysis of Lake Victoria and The Proposed Hydrological Curve Change

By Daniel Kull, Independent Hydrologist

### *New Release Regime for Bujagali Dam Would Slow Recovery of Lake*

*A new hydrological release plan (known as the "Constant Release" curve) has been proposed by Power Planning Associates for the Bujagali Dam project. This raises the question: "How will the new curve affect the recovery of Lake Victoria, which has already been badly harmed by excessive releases from two existing dams?" International Rivers Network asked hydrologist Daniel Kull to look at this question. Here is his reply.*



The graph above shows that the Agreed Curve allows the lake level to recover more quickly than with the PPA proposed outflow regime. The graph looks at how Lake Victoria would recover from a baseline level of 1132.0 m (a low level that was experienced late last year ) during 35 years of constant average inflow (average net basin supply "NBS" 1900-2005 computed in the PPA report). As the graph shows, the Agreed Curve releases would restore the lake to a relatively "normal" level within about six years, while the Constant Release flow will not reach that level for close to 18 years. The Agreed Curve response is more representative of a naturally functioning lake, as opposed to the PPA regime, which resembles the filling of a reservoir.

*Daniel Kull is the author of Connections Between Recent Water Level Drops in Lake Victoria, Dam Operations and Drought (February 2006), which can be downloaded from <http://tinyurl.com/2mpjzm>*

The lake's level as of January 2007 was reported to be 1,132.34 metres above sea level, according to the Tanzania *Daily News* (<http://www.dailynews-tsn.com/page.php?id=5214>). From the late 1800s to about 1960, lake levels averaged between 1133.86 and 1134.86.

## ANNEX III

### **Concerns about the Impacts of the Bujagali Dam Project on Endangered Fishes and Fisheries in the Victoria Nile**

By Les Kaufman\*

A report on sampling for this project (Nov. 2001 Haplochromine Habitat Study for Bujagali Hydropower Project) has identified, on river sections above and below the proposed dam site, the occurrence of species listed as extinct, critically endangered, or endangered. It also listed species never before recorded in Uganda. The discovery of range extensions of recently described taxa, and the recovery of vulnerable, threatened, and endangered taxa from the Victoria Nile should not be interpreted to mean that these fishes are more secure in the wild than previously thought. Rather, it is an indication that the Victoria Nile offers a refugium for these taxa that should be carefully safeguarded as insurance against extinction.

With regard to all haplochromine species, there is an inadequate database from which to draw precisely the kinds of conclusions that the Bujagali report aspires to reach. The scientific community has long appreciated the need for a thorough survey with particular focus on the haplochromine cichlids, and has pushed for it for many years, but to date there is very sparse sampling effort (the Bujagali study notwithstanding) in the Lake Victoria Region.

Another important consideration is that haplochromine taxonomy is currently sufficiently in flux that the scientist responsible for every identification should be listed along with other scientists consulted in making this determination. Furthermore, voucher specimens should be in a proper museum archival system, referred to by specimen and lot number and should be available for taxonomic confirmation on request. In addition, voucher photographs should be made available on the Internet and DNA material archived for species confirmation, a procedure that can in theory be carried out at Makerere University (qualified Ugandan scientists exist; funding is absent).

The most appropriate interpretation of the Bujagali results to date is that the Victoria Nile is an important refugium for certain endangered haplochromine cichlid species, and activities that might negatively impact these populations should be avoided.

While the data presented in the Nov. 2001 Haplochromine Habitat Study is the product of a well designed and implemented study that effort alone is inadequate to rule out a likelihood of negative impacts to the survival of endangered species caused by dam construction. The discovery of other populations of threatened or endangered haplochromines downstream and/or upstream of the proposed dam site is welcome information, but does not by itself assure that the remaining populations are secure or that the meta-population impacts of losing the Bujagali sub-populations will be negligible. Furthermore, no comprehensive dataset exists to provide a baseline for the biological diversity of the surrounding Nile and Lake Victoria systems. Thus, while the IUCN Red List provides the best available information, a comprehensive baseline study and continued monitoring are required to adequately assess and document the effects on aquatic wildlife and food fishes of the proposed Bujagali dam. Indeed, a solid commitment of the resources necessary to generate a sufficient database and analytical basis for rigorous conservation decision-making would itself constitute an immense positive step for the region. It is even possible that this work alone could ultimately do more good for environmental sustainability in the Nile basin than any harm brought upon the

ecosystem by a thoughtfully and responsibly executed Bujagali dam. Local and international scientists advised that a thorough biodiversity study be conducted of the Victoria Nile and adjacent waters in Lake Victoria and Lake Kyoga, with emphasis on haplochromines, as a key part of the Bujagali EIA. A groundbreaking region-wide biodiversity survey was one of the major components of LVEMP as originally conceived. For whatever reason, neither has come to pass, leaving us in our current predicament.

While the potential impacts to species diversity and ecosystem services from the proposed dam are extremely high, we recognize the intense need for affordable electricity that avoids greenhouse gas emissions. If significant additional measures were taken to better monitor, design the proposed dam, and mitigate its impacts, the result could be a positive dam development project rather than an ecological tragedy. Proper monitoring requires a comprehensive study to establish baseline conditions and monitor changes during and after project construction. Additional design measures should be considered, their efficacy assessed, and a best practice put in place. These should include more serious consideration of the idea of a fish ladder or other provisions for conservation of *Anadromous* fishes (including *Barbus altianalis* and the endangered *Labeo victorianus*), the gazetting and proper enforcement of aquatic reserves for known critical habitats of endangered haplochromines and other wildlife, afforestation (using native vegetation) of the steep and erosion-prone banks and islands, and possibly even restoration programs for endangered species such as the mbiru, *Oreochromis variabilis*, which may still be present at low density. Rather than being limited to the immediate vicinity of Bujagali, these mitigative and restorative measures should be carried out as part of a comprehensive plan for sustainability from end to end along the short but ecologically, economically, and culturally important stretch of river that is the Victoria Nile.

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\* Les Kaufman is a Professor of Biology at Boston University's Marine Program and a Senior PI in Marine Management Area Science for Conservation International. He can be reached by email at [lesk@bu.edu](mailto:lesk@bu.edu).

**NAMINYA RESETTLEMENT AREAS  
WAKISI SUB-COUNTY  
MUKONO DISTRICT**

18 February 2007

**To: The Director  
Bujagali Energy Limited (BEL)  
Jinja, Uganda**

Dear Sir,

**RE: Unfulfilled promises by Bujagali dam project and  
Problems we are facing at the Naminya Resettlement  
area.**

We the people who were displaced by the proposed Bujagali dam and resettled in Naminya Resettlement area are writing to you to express the problems we are facing in this area since we were resettled.

Before we were resettled, we were promised many things, but up to now, it is five years, many of those things have never been fulfilled or provided

The following are the problems:

**1. Land titles**

We were promised that all the resettled people would be given plots of land with land titles. Few people have so far received land titles for their plots after long waiting and protests to government. Many of us are not sure whether or not we shall be able to get land titles for our plots of land. This has caused uncertainty to whether the land we have belongs to us or another person holding the land title, who can easily evict us. We have heard rumours that the land we have belongs to Madhvani

**2. School**

We were promised a Primary School for our children, but today, our families are increasing and the children do not have any primary school to go to. We have improvised by using one of the vacant houses in the resettlement area as a nursery and primary 1 to 4 classes. But, we are continuously warned to vacate the premises and take our children elsewhere. Where shall we take our children for

schooling? The nearby school is a missionary and private school and the owners have refused our children to go to attend in that school.

### **3. Health centre**

We were promised a Health Centre III with maternity ward, laboratory, minor theatre, inpatient wards, but today what we have is a model house with two health personnel which operates 5 days a week and only 3 hours a day. To get this facility was a very long struggle with the help of some NGOs that linked us to Mukono District Local Government. The question is, "When shall we ever get the type of health facility that was promised"?

### **4. Water**

We were promised water tanks for harvesting rain water on every house, but after using those tanks for less than one year, they started leaking and now majority of them are not functioning. The available 3 functional plastics water tanks were provided by an NGO.

There is only one borehole in the community that can not serve the whole community. Even then, it is not centrally located and not easily accessible by the majority of the resettled people.

### **5. Housing**

The houses that we were provided with are sub-standard and incomplete. By the time, people were resettled, the houses did not have kitchens, were not plastered and lacked ceilings. The houses are too small to cater for our families, especially those of us with two wives and many children. To make the matters worse, the houses are now cracked and we fear that they will fall on us.

### **6. Latrines**

The latrines that were provided were too small in size and shallow (less than 8 ft deep) and whenever it rains, they are filled with water that floods which could pose danger to our health.

### **7. Electricity**

We were promised electricity, but up to now, we have never been given electricity. Moreover, during the resettlement, some settlers were given plots in the way-leave of the high voltage transmission lines, that evacuates electricity from Jinja to Kampala. Later on, these people are being told that they can not use these plots and yet they are not given alternative plots.

## **8. Sources of income and food**

Where we originally were, we carried out fishing and farming as sources of income, but the plots we were given in the resettlement area are not enough for farming. Moreover, we no longer have access to the river to do fishing, because the river has been fenced-off by the dam developers. This has negatively affected our sources of income and food. The fish ponds that were promised to us have never been put in place.

## **9. Resettlement disturbance package**

We were promised a resettlement disturbance package for a period of five years, but up to now, we have never received anything.

## **10. Community centre**

We were promised a community centre, but up to now, it has never been put in place

## **11. Market**

We were promised a market nearby, but up to now the market has never been constructed.

## **12. Environment protection**

We were promised tree seedlings to plant in our compounds and the resettlement area, but up to now we have never received any seedlings, yet the resettlement is on a slope and is bare without trees.

## **13. Employment**

We were promised jobs once construction of Bujagali dam starts. But we need written assurance that we shall get those jobs when construction of the dam starts, particularly we want to know how many of our people will be employed.

## **14. Routine maintenance of access roads and other infrastructure**

We were promised routine maintenance of our access roads, but up to now, maintenance has never been done

## **15. Visitations and consultations by World Bank, Government and the dam developer**

Government and the dam developers. Why is it that whenever World Bank, Government and the Bujagali dam developers visit us, they just pass through without talking to us. They just discuss among themselves and leave. Even when they want to discuss with us, they do not give us ample time for us to prepare ourselves. Does being in a resettlement area, remove our respect of being citizens of this country?

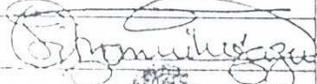
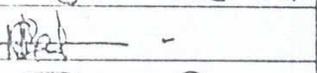
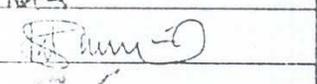
We look forward for your answers to our problems.

Signed by the resettlers of Naminya Resettlement area.

We attach the signatures of the resettlers.

- c.c. Hon. Minister of Energy and Mineral Development
- c.c. Hon. Minister of Lands
- c.c. Hon. Minister of Local Government
- c.c. Hon. M.P. Buikwe
- c.c. Hon. M.P. Women
- c.c. NAPE
- c.c. I.G.G.
- c.c. R.D.C. Mukono
- c.c. Chairman L.C.5 Mukono
- c.c. Chairman L.C.III Wakisi
- c.c. Chairman L.C.II Naminya
- c.c. Chairman L.C.I Namilyango
- c.c. World Bank

NAME	SIGNATURE
Mukisa yaweri	
Kuzza Lawrence	
Orukaga Rutaria	
Gambe Lusi	Gambe
Mukwe Nakisuta	
Dlunga Mathias	
Kauma Lakhia	
Otabonyo Steven	
Nakemya Teodora	
Ngobi vicent	
KAWUKA PETER	Peter
Kawuka ASHET	
Keziya Amoit	
Mukaidu Lye H.	
Namuganya Jane	
Sunday amuda	
NASANDU JULINYANA	
NAIMOLU MALIMUNA	
OYITE KIFLOLI	Cyite K
Nyambi Francis	
Akyemo F.	
Nabwure Christin	
Mugebane Jemasi	mugebane
Nyambi Florence	Nyambi Florence
Amola Jane	
Kakayi Lana	
Magemu Robert	Magemu
Bazila Isizi	Isizi
Wekundwe Sam	

NAME	SIGNATURE
Mwilugazu Sityo Samuel	
Bulage Margret	
Bogere David	
Bogere SHERIFER	bogere Sherifer
NAFUUNA GRACE	
WANYAMA ALEX	

## **ANNEX 4: THE MANGEMENT RESPONSE**

**AFRICAN DEVELOPMENT BANK MANAGEMENT RESPONSE TO  
REQUEST FOR COMPLIANCE REVIEW OF THE  
UGANDA: BUJAGALI HYDROPOWER PROJECT (PRIVATE SECTOR) AND BUJAGALI  
INTERCONNECTION PROJECT (PUBLIC SECTOR)**

**June 2007**

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- II. THE REQUEST
- III. PROJECT BACKGROUND
- IV. SPECIAL ISSUES
- V. CONCLUSION

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- Annex 1. Claims and Responses
  - Annex 2. Government of Uganda letter on the Kalagala Falls Offset
- Map            Uganda: Bujagali Hydropower and Interconnection Project Area

## I. BBREVIATIONS AND ACRONYMS

ADF	African Development Fund
ADO	Automotive Diesel Oil
AfDB	African Development Bank
APL	Adaptable Program Loan
APRAP	Assessment of Past Resettlement Activities and Action Plan
BEL	Bujagali Energy Limited
BHP	Bujagali Hydropower Project
BIP	Bujagali Interconnection Project
BIU	Bujagali Implementation Unit
BP	Bank Procedures
CDAP	Community Development Action Plan
CFL	Compact Fluorescent Light
DSP	Dam Safety Panel
DWD	Directorate of Water Development
EA	Environmental Assessment
EAP	Environmental Action Plan
EIB	European Investment Bank
EIRR	Economic Internal Rate of Return
EPC	Engineering, Procurement and Construction
EPRP	Emergency Preparedness and Response Plan
ERA	Electricity Regulatory Authority
ERT	Energy for Rural Transformation
FIRRI	Fisheries Resources Research Institute
GCM	General Circulation Models
GoU	Government of Uganda
GWh	Gigawatt hour
HFO	Heavy Fuel Oil
IDA	International Development Association
IFC	International Finance Corporation
IPN	Inspection Panel
kWh	Kilowatt hour
MIGA	Multilateral Investment Guarantee Agency
MSW	Municipal Solid Waste
MW	Megawatt
NAFIRRI	National Fisheries Resources Research Institute
NAPE	National Association of Professional Environmentalists
NBI	Nile Basin Initiative
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NGO	Nongovernmental organization
NPV	Net Present Value
OP	Operational Policy
PCDP	Public Consultation and Disclosure Plan
PEAP	Poverty Eradication Action Plan
PPA	Power Planning Associates
RAP	Resettlement Action Plan
RCDAP	Resettlement and Community Development Action Plan
SEA	Social and Environmental Assessment
SEAP	Social and Environmental Action Plan
SSEA	Strategic/Sectoral Social and Environmental Assessment
TOR	Terms of Reference
UETCL	Uganda Electricity Transmission Company Limited
UJAS	Uganda Joint Assistance Strategy

UMEME  
WASP

Electricity distribution company  
Wien Automatic System Planning

**Currency Equivalents**

(Exchange Rate Effective (February 2007))

1 Unit of Account = 1.49015 United States dollar = 2726.76 Ugandan shilling

## I. INTRODUCTION

1. On June 4, 2007, the Compliance Review and Mediation Unit (CMRU) registered a Request for Inspection, Compliance Request RQ 2007/01 (hereafter referred to as the “Request”), concerning the proposed Bujagali Hydropower Project (BHP) and Bujagali Interconnection Project (BIP) in Uganda. The AfDB Board approved a private sector loan of USD 110 million for the BHP on May 2, 2007. A proposal to provide an ADF loan of UA 19.21 million for the BIP is scheduled for presentation to the ADF Board on June 27, 2007.

2. **Organization of the Report.** This document is the AfDB Management Response to the Request for compliance review, and it contains the following sections: Section I is the Introduction; Section II outlines the Request for Compliance Review; Section III provides sector and project background; Section IV discusses special issues, and Section V contains the conclusion. Annex 1 presents the Requesters’ claims, together with Management’s detailed responses.

## II. THE REQUEST

3. The Request for Inspection was submitted by the Ugandan National Association of Professional Environmentalists (NAPE) and other local organizations and individuals (hereafter referred to as the “Requestors”).

4. Attached to the Request is a letter from the resettlers of the Naminya Resettlement Area.

5. The Request claims that the AfDB’s approval of the Bujagali Projects may constitute violations by the Bank of various provisions of its policies and procedures, including the following:

- Environmental and Social Assessment, (2001)
- Environmental and Social Audit Guidelines, (2003)
- Environment Policy, (2004)
- Involuntary resettlement Policy, (2003)
- Information Disclosure Policy, (2000)
- Governance Policy, (2000)
- Economic Evaluation of Investment Operations,
- Poverty Reduction, (2003)

## III. PROJECT BACKGROUND

6. Over the last three years, Uganda has suffered serious power shortages<sup>1</sup> arising from a combination of: (a) delays in developing additional generation capacity, particularly the AfDB and World Bank Group supported Bujagali private hydroelectric plant, which was to have been in service by now, but is currently expected to be in service in 2011; (b) a prolonged drought in the region, which has, in turn, reduced the generation output of the existing hydropower plants (i.e., Nalubaale and Kiira); (c) the high level of technical losses in the distribution system; and (d) annual demand growth of about 8 percent, which has put additional pressure on the power system. The proposed Bujagali project is aimed at providing the capacity needed to overcome the supply constraints in a least-cost and environmentally and socially sustainable manner.

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<sup>1</sup> The amount of load shed in 2006 is estimated at 364 Gigawatt hours (GWh) compared to 98 GWh in 2005.

7. ***Uganda's Poverty Eradication Action Plan (PEAP).*** Uganda's development objectives are articulated in the 2004 PEAP, the third version of its poverty eradication action plan. The 2004 PEAP restates the country's ambitions of eradicating mass poverty and of becoming a middle income country in the next twenty years. It promotes a shift of policy focus from recovery to sustainable growth and structural transformation. The PEAP presents specific policies and measures to achieve its objectives, grouped under five pillars: (a) economic management; (b) enhanced competitiveness, production and incomes; (c) security, conflict resolution, and disaster management; (d) governance; and (e) human resources development.

8. ***Uganda Joint Assistance Strategy (UJAS).*** The UJAS was approved by the AfDB Board of Executive Directors in December 2005 as the country assistance strategy, which was jointly prepared with seven other development partners. The UJAS lays out the strategy for supporting the implementation of the third PEAP and achievement of the Millennium Development Goals. It promotes strong collaboration and harmonization among development partners and with the Government, as well as a stronger focus on results and outcomes. As part of the UJAS harmonization agenda, an exercise to ensure effective division of labor among development partners has been launched.

9. ***Power Crisis Impacts on Economic Growth.*** Although economic growth and Uganda's external position were largely consistent with the Government's program for 2005/2006, the ongoing electricity crisis has placed a significant strain on growth over the medium term. In particular, businesses and consumers have been forced to endure service cuts extending over hours or even days, with some shifting production to times when power is available, and many larger businesses relying on high-cost back up generators. Manufacturing, high-value agriculture (e.g., flowers), and processing industries (e.g., fish) are most affected by power cuts, and profits in these industries are being squeezed. Other macroeconomic consequences from the current power crisis are inflation of about 0.5% above projections through September 2006 due to higher energy costs, a widening trade deficit due to higher oil prices, and increases in diesel fuel import volumes for thermal power plants that have been installed to partially fill the supply gap left by the reduced hydropower production. The country loses about \$6 million with each month of delay beyond the commissioning date of the first effort to develop the Bujagali project. The present situation, with extensive load-shedding blackouts, is not sustainable and further delays in augmenting Uganda's electricity generation capacity could undermine the economy. The economic cost of unserved energy in 2006 is estimated at about US¢39.4/kWh.<sup>2</sup>

10. ***Power Sector Strategy.*** The power sector strategy of the Government of Uganda (GoU) has been to: (a) maintain the legal, regulatory and structural sector reforms that are in place; (b) leverage the role of the private sector in investment operations and future sector development; (c) provide adequate, reliable and least-cost power generation with the goal to meet urban and industrial demand and increase access; and (d) scale up rural access to underpin broad based development.

11. Since 1999, the GoU has implemented a comprehensive power sector reform program and enacted a new Electricity Act; established an independent Electricity Regulatory Authority (ERA); and unbundled the State-owned Uganda Electricity Board into separate entities responsible for generation, transmission and distribution. The GoU has promoted the efficient operation of the power sector, in part by increasing the role of the private sector through offers of concessions for generation and distribution facilities. The number of urban and rural households with direct access to electricity has grown and the GoU is addressing the need to provide adequate, reliable and least-cost

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<sup>2</sup> Source: "Bujagali II – Economic and Financial Evaluation Study" (hereafter called the Economic Study), Power Planning Associates Ltd., February 2007. The cost of unserved energy is estimated based on the cost of self-generation using diesel generators (for commercial and industrial customers) and the consumer 'willingness to pay' for residential customers.

power generation capacity to meet demand and pursuing regional power interconnections with the countries of the East African Community.

12. Uganda's bold reforms notwithstanding, it has been challenged by power shortages, as stated above. The increased cost of shifting from a primarily hydro-based system in 2005, to a situation in which 45 percent of generation is being supplied through expensive thermal plants in 2007, has been met through a combination of higher tariffs and subsidies. The hope for the country is that the Bujagali project, once commissioned, will provide longer term, lower cost power supply, mitigating the present crisis.

13. **Project Objectives.** The main objective of the BHP is to provide least-cost power generation capacity that is expected to eliminate power shortages in 2011 when the plant is commissioned. The proposed project would represent an increase of 250MW of generation capacity on the national grid. In addition to mobilizing private investment and commercial bank lending, AfDB Group involvement in the proposed project is expected to provide: (a) comfort to first-time investors in the sector (including sponsors, commercial lenders and development finance institutions); (b) access to long term financing, leading to more affordable tariffs for the proposed project; and (c) project structuring advice, based on international experience, to ensure project bankability.

14. The objective of the BIP is to provide adequate transmission capacity for evacuation of power from Bujagali Power Station to the one existing and future distribution companies, thereby increasing access to cheaper and more reliable electricity supply. By enabling the injection of cheaper hydropower from the Bujagali Hydropower Station into the grid, the BIP will have diverse and significant development impact. First, the project will restore adequate and reliable electricity supply to the country as well as the financial sustainability of the power sector. Second, the project will contribute to poverty reduction and attainment of the Millennium Development Goals through improving the Ugandan population's access to electricity, which in turn will facilitate water supply, health care delivery, education and rural development. Finally, the construction of the BIP will enhance the prospect of regional integration through greater cooperation and trade in energy, as the installations provided by the BIP can be integrated in the regional power system covering Uganda, Kenya, Tanzania and Rwanda.

15. **Project Description.** The proposed BHP is a 250MW run of the river power plant with an adequate reservoir for daily storage, an intake powerhouse complex, and an earth filled dam with a maximum height of about 30 meters, together with spillway and other associated works. The proposed project will be constructed on the Nile River, approximately 8 kilometers north of the existing Nalubaale and Kiira power plants<sup>3</sup>. The powerhouse will be constructed to house 5x50MW Kaplan turbines. The small reservoir will have an estimated surface area of 388 hectares, extending back to the tailrace areas of the Nalubaale and Kiira dam complex. The proposed project will require 238 hectares of land take for the project facilities, of which 80 hectares will be for new inundated areas adjacent to the Nile River. The land take includes 113 hectares for temporary and ancillary facilities, including temporary haul roads, coffer dams, storage and quarries. The proposed project is located downstream of the Nalubaale/Kiira dam complex, and therefore would re-use water released from the lake. The improved efficiency of water use would reduce pressure for releasing water above the Agreed Curve<sup>4</sup>. The proposed project is structured as an independent power producer which will sell electricity to the Uganda Electricity Transmission Company Ltd. (UETCL) under a 30-year Power Purchase Agreement, signed on December 13, 2005.

16. The proposed BIP will require the construction of 75 kilometres of 220 kV and 28 kilometres of 132 kV transmission line as well as the construction of a substation at Kawanda, and extension of

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<sup>3</sup> See map provided after the Annexes.

<sup>4</sup> The Agreed Curve functions as an operating rule for water discharges through the Nalubaale and Kiira dam complex, in which the volume of water released remains consistent with what would have occurred under natural conditions, thereby ensuring no change in downstream discharge (water releases are a function of the lake level at any given time).

the Mutundwe substation. The location of the transmission installations is indicated in the Map at the end of the report. A five metre strip along the length of the transmission will be permanently acquired and this amounts to 52 acres. A wayleave of 301 ha (total area) is identified as land which will be affected by restrictions on use of land to affected land owners/occupants. The total area required for the project resettlement and compensation component is 353 ha.

17. ***Previous Bujagali and Other Energy Projects and the 2001/2002 Inspection Panel Investigation.*** On August 7, 2001, the World Bank Inspection Panel registered for inspection IPN Request RQ01/3 concerning the SDR 86.9 million (US\$125 million) Third Power Project (Power III) financed by IDA, the SDR 24 million (US\$33 million) Supplemental Credit for Power III, the SDR 48 million (US\$62 million) Fourth Power Project (Power IV), and the proposed Bujagali Hydropower Project for which IDA was providing a US\$115 million Partial Risk Guarantee. The Request was submitted by NAPE, the same group that has submitted the current Request, as well as another group, Uganda Save Bujagali Crusade, and other local institutions and individuals.

18. At that time, the same Requesters stated that the failures and omissions of IDA in the design, appraisal, and implementation of the above-referenced projects materially affected the rights and interests of the Requesters and were likely to jeopardize their future social, cultural, and environmental security. More specifically, the Requesters stated that the Owen Falls Dam Extension<sup>5</sup> and the construction of the proposed Bujagali Hydropower Project had resulted, or could have resulted, in social, economic and environmental harm to the local population. The Requesters also stated that they had been harmed or were likely to be harmed as a result of failure to undertake an Environmental Assessment (EA) of the Owen Falls Extension; the lack of a cumulative environmental assessment related to the dams already built, under construction and in the final stages of design; inadequate involuntary resettlement (including compensation arrangements); inadequate consultation, participation and disclosure of information; and lack of economic and technical analysis, including lack of alternative economic analysis, especially in the case of the Owen Falls Extension.

19. The World Bank Inspection Panel recommended to their Board in October 2001 that it investigate the Request and the Board authorized the investigation. The Panel's findings were sent to the World Bank Board on May 23, 2002. Key findings focused on the Bujagali Project and concerned: disclosure of information about the project; preparation of a Sectoral Environmental Assessment; an assessment of the cumulative impacts of constructing multiple dams on the Nile River in Uganda; use and adequacy of an environmental offset (at Kalagala Falls); economic evaluation (including demand forecast and institutional, tariff and affordability risks); examination of power generation alternatives; issues surrounding the power purchase agreement (i.e., transmission, strategic risks, and affordability); social compliance (use of socio-economic surveys, community development action plans, compensation), and management of cultural property.

20. In its June 1, 2002 document entitled "Management Report and Recommendation in Response to the Inspection Panel Investigation report (Uganda – Third Power Project, Fourth Power Project and Bujagali Hydropower Project)," the World Bank Management recommended a nine-point action plan, which was endorsed by their Board of Executive Directors on June 17, 2002. Annex 3 includes the nine points noted in World Bank Management's Action Plan, along with an additional point regarding disclosure issues in the Power IV project. Annex 3 also explains how the various issues raised by the Inspection Panel are being addressed in the context of the design of any new hydropower project at the Bujagali site involving the World Bank Group.

The World Bank, IFC's and the African Development Bank, Board of Directors, approved the Bujagali project being developed by AES Corporation, a United States power company, on December

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<sup>5</sup> The Owen Falls Dam, financed by the United Kingdom and constructed in the 1950s, is now called Nalubaale, and the Owen Falls Extension is now called Kiira. IDA financed emergency repairs to the Nalubaale Dam in the early 1980s and the construction of Kiira in 1991. The 2001 Power IV Project provided financing for Units 14 and 15 at the Kiira powerhouse.

18, 2001. Delays in the implementation of the project and AES' weakening financial position as the result of a downturn in the United States market eventually led to AES' withdrawal from the previous project and to a termination by the GoU in September 2003. The GoU then initiated a transparent bidding process in adherence with the Government's procurement guidelines, to seek a new project sponsor to develop the Bujagali project.

21. In September 2003, the GoU began to pursue selection of new sponsors for the development of the hydropower project at Bujagali, with private sector participation and World Bank Group support. The feasibility of the proposed new power sector operation has been reassessed in the context of Uganda's power needs and its alternatives for power supply. There have been extensive national and regional analyses of the project's environmental, social, and economic impact, and a detailed examination of generation alternatives, accompanied by numerous public consultations and disclosure of project documents. Bujagali will be the largest private investment in Uganda and among the largest in the power sector in Sub-Saharan Africa, with potential long-term benefits for future private sector investment as well as economic development in the country. It can also serve to establish a standard that can be replicated by other countries and investors in the region.

#### **IV. SPECIAL ISSUES**

##### **Current Context and Future Vision**

22. Uganda's power supply situation has deteriorated significantly in recent years. The power crisis has slowed industrial production. The failure of the previous effort to develop Bujagali has exacted a very high price from the country. It is noteworthy that if the previous Bujagali project had been successfully financed in 2002, Uganda would have been able to avoid, or, at the very least, minimize the high cost of thermal generation and load shedding. Moreover, the reductions in Lake Victoria water levels from over-abstraction for hydropower production may not have occurred. This is because the Bujagali project is downstream of the current Nalubaale/Kiira dam complex, and would have re-used the upstream water releases. If commissioned, the project would have produced power at a significantly lower cost than what Uganda is now paying for the supply from thermal power plants running on imported fuel. Indeed, repeated extensive economic analysis has verified that the Bujagali project remains the least-cost supply option for Uganda.

23. The failure of the first attempt at developing the Bujagali project, while unfortunate, did provide valuable lessons to the GoU in shaping the current proposed project. It also afforded an opportunity for institutions such as the World Bank Group to evaluate lessons of experience, including the outcomes and recommendations of the the World Bank Inspection Panel review, and better understand and appreciate the various concerns of the stakeholders within and outside Uganda.

24. The GoU has carefully followed a transparent and open, competitive process for the selection of the project's private sector sponsors. The selection was based on four criteria: (a) the internal rate of return on the equity to be invested by the sponsor in the project; (b) a cap on the development costs that the sponsor would be allowed to include in the project tariff; (c) sponsor acceptance of responsibility for the UETCL transmission line construction management; and (d) the monthly operation and maintenance fee that the project company (to be formed by the selected sponsor) will earn as part of the project tariff, to the extent the plant's target availability is achieved. Furthermore, the selected project sponsors have conducted an open and competitive selection process for the project's engineering, procurement, and construction (EPC) contractors, in compliance with procurement rules of all the lenders participating in the financing of the BHP.

25. Learning from the past, the GoU committed to and implemented a stronger program of public disclosure. This project's Power Purchase and Implementation Agreements have been disclosed by the GoU, and the World Bank Group on behalf of all the lenders has disclosed the project's Economic Study, BEL's full SEA, the Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

Strategic/Sectoral Social and Environmental Assessment (SSEA), and other environmental and social documents. Tools and means for outreach have included internet websites (where the public can read the Social and Environmental Assessment and the Economic Study, for example), in-country disclosure (advertised in local media), proactive consultations, and dissemination events to ensure that this information is widely available. The AfDB posted the summary of the SEA and RAP for the BHP on March 2007 in its public information center (PIC). Many of the information-related questions of the current Request are addressed within the body of information and analysis made available to the through the World Bank PIC.

26. The economic cost of the delayed development of the Bujagali hydropower project is conservatively estimated during 2006-2010 to be at least US\$735 million. When the proposed Bujagali project is commissioned in 2011, it will generate at least 60 percent more annual energy than the thermal (diesel) plants would produce in 2010. This is an indication of the economic penalty that the long delay of the proposed project implementation will have imposed on Uganda. Furthermore, the environmental toll, nationally and globally, from oil-based thermal generation (i.e., increased carbon and other pollutants), as well as the less efficient use of the Nile River waters, is significant. Most importantly, continued uncertainty about the project affects economic expectations and thus deters investments across the spectrum of Uganda's industrial, commercial and agricultural sub-sectors. The result is a lowering of standards of living for all citizens, particularly the poor, and loss of job and wealth creation.

#### **Issues Raised by the Requesters**

27. **The AfDB Management shares some of the Requesters' concerns, which largely stem from the project's earlier cancellation.** Going forward with this new project, these issues are being addressed in several ways, as discussed in the following paragraphs and further detailed in Annex 1 containing all the 9 issues raised by the Requesters and AfDB Management corresponding responses.

28. **Kalagala Offset.** The GoU has reiterated the commitment (see Annex 2) to the Kalagala offset that it made under the previous effort to develop Bujagali, as presented in the World Bank Management Report and Recommendation in response to the World Bank Inspection Panel's investigation of Power III, Power IV, and the Bujagali Hydropower projects. This offset commitment is consistent with the mitigation provision for Kalagala Falls, and also recommended in the BEL Social and Environmental Assessment (SEA) Report that has been reviewed and disclosed by the AfDB and World Bank. As well, the commitment to maintain the Kalagala Offset is strengthened in practice, not only by GoU's commitment to identify sustainable investment programs to facilitate tourism, with appropriate mitigation measures, but also by the enhanced role that Kalagala Falls will play, as (a) rafting companies, once relocated, will locate some of their facilities around the offset area, and (b) other tourism operators, such as small arts and crafts shops, restaurants, four wheeler rentals, and locally owned enterprises are also expected to move their businesses nearer to Kalagala Falls.

29. The offset provision for Kalagala Falls and the adjacent natural habitat will be included as a GoU obligation in the IDA Indemnity Agreement for the Bujagali project, and will be binding throughout the life of the Indemnity. The World Bank Management notes that their Bank's legal recourse to enforce Government's commitment to maintain the Kalagala Falls offset will not be available after the termination of the Indemnity Agreement. Hence, the draft Indemnity Agreement, discussed with the GoU, includes a provision that, prior to the termination of the Indemnity Agreement, the World Bank and the GoU will pursue discussions to identify mechanisms or instruments to enable the continuation of the GoU obligation to set aside the Kalagala Falls site. **The AfDB management supports the steps taken by the World Bank and the GOU's commitment to ensure perpetuity of the Kalagala Falls offset.**

30. **Safety of Dams.** While no AfDB policy explicitly requires evaluation of dam safety, the AfDB Management agrees that dam safety concerns are an integral part of the review of any

hydropower development. The World Bank **has** established a Dam Safety Panel (DSP), which includes two of the three members of the previous panel set up under the earlier effort to develop the Bujagali project. The DSP will provide advice through final design, construction, initial filling, and the start-up of the dam, including any design or operational precautions, to ensure that the project is consistent with Bank policies. The financing agreements also require the preparation of an Emergency Preparedness and Response Plan (EPRP) that includes failure scenarios for both Nalubaale/Kiira and Bujagali. Recent assessment of the Nalubaale/Kiira dam complex (financed under the Power IV Project) has confirmed their structural integrity.

31. ***Bujagali Resettlement.*** The AfDB Management agrees with the Requesters' contention that past resettlement is incomplete. This is largely because the project was terminated in 2003 and the sponsor (AES Nile Power) responsible for resettlement withdrew. The new conditions have been addressed in the Assessment of Past Resettlement Activities and Action Plan (APRAP) and Community Development Action Plans (CDAP) developed by BEL. BEL and the Bujagali Implementation Unit (BIU) are now resolving all outstanding issues, and have committed to:

- Completing the process of titling;
- Upgrading the existing Naminya School, and building a kindergarten (nursery);
- Improving health services at the Wakisi and Bodondo Health Centers;
- Restoring boreholes already drilled, drilling ten more, replacing taps, and providing maintenance training;
- Evaluating sanitation conditions and addressing outstanding problems;
- Conducting a feasibility study for electrical distribution to the resettlement community; and
- Implementing longer-term community development programs.

32. ***BIP Resettlement.*** Although the displacement of the people by the BIP has not yet occurred, the AfDB Management notes that people who will be affected by the transmission line must be compensated and resettled satisfactorily. The draft Resettlement Action Plan (RAP) for the BIP was disclosed in the AfDB public information center (PIC) and the World Bank InfoShop and in-country on December 21, 2006 and land evaluations for the line were completed in early 2007.

### **Key Project Issues**

33. The AfDB Management is acutely aware of the importance of this project not only in the Ugandan economic, social, and environmental context, but also as an example of the result of a successful implementation of power sector reforms. Therefore, the AfDB Management has sent several missions to Uganda to prepare and appraise the two projects. These missions have worked closely with the GoU, stakeholders and the BHP sponsor. The AfDB Management believes that this has resulted in analyses of the projects' merits which provide solid underpinnings that incorporate views of key project stakeholders.

34. In particular, the AfDB Management considers that the economic, environmental, social and financial safeguards, technical, governance, and other required analyses to date are fully compliant with relevant AfDB policies and were undertaken to high professional standards. Moreover, the overall project due diligence adequately accounts for best practice as well as the findings of the previous World Bank Bujagali Inspection Panel report. In this regard, Management notes that the analyses:

- Assessed a wide range of supply options, including alternative hydropower sources, such as geothermal power and thermal power (e.g., oil based); small-scale renewable options (e.g., mini-hydro and biomass); oil imports; and other supply options ;
- Tested a wide range of demand scenarios derived using the most recent data on the Ugandan economy and the electricity sub-sector, including a low-growth scenario which reflects minimal economic growth; and
- Assessed the impacts of both low and high hydrology scenarios, and separately determined that climate change is not predicted to have a negative impact on water availability.

The above issues are discussed in detail in Annex 1 which contains the AfDB Management response to each of the 9 issues raised by the Requesters.

35. The economic and hydrological work and preliminary results were discussed and agreed with the GoU and other industry stakeholders at participatory workshops in January and March 2006, as well as during a review of the pre-final results in Kampala in January 2007.

36. The AfDB Management is aware of the financial and economic penalties that Uganda has endured due to the previous sponsor's inability to mobilize financing for the former Bujagali project. Management also is mindful of the higher cost of this proposed project. For this reason, the AfDB is supporting the GoU and the project sponsors to proceed as quickly as possible, while at the same time ensuring compliance with AfDB requirements. The project sponsor and the EPC contractor were both selected through a transparent and competitive process.

37. The AfDB Management believes that the environmental and social preparation work to date has appropriately accounted for the legacy issues from the previous project as well as new issues, and that it takes appropriate account of the various AfDB policies. In particular:

- Environmental and Social Assessment Procedures (ESAP, 2001);
- An assessment of the status of the resettlement actions under the previous project, and a plan for remediation and completion were prepared and disclosed; and are consistent in line with the AfDB Policy on Involuntary Resettlement (2003))
- The Government has re-committed to offsetting of the Kalagala Falls site in compensation for inundation of Bujagali Falls; (see Annex 2)
- Consultations with affected communities have been undertaken and their concerns have been integrated into the planning; and are in line with the Bank's ESAP, Information Disclosure Policy, Governance Policy, Policy on Stakeholder consultations, etc
- Assessment of cumulative impacts has been undertaken which is also required by the 2004 US Legislation on Pelosi Amendment. The AfDB Board which also includes Executive Director representing the US Government also supported the project on May 2, 2007.

38. Finally, the AfDB Management would like to highlight the disclosure of information undertaken during the preparation of the project. The standard environmental and social documents were publicly disclosed on by the World Bank and the AfDB on December 21, 2006 and later the BHP SEA Summary by the African Development Bank in March 2007. As indicated previously, the World Bank Group on behalf of all the lenders had also disclosed the economic and financial analysis in its entirety (February 26, 2007). This document was provided to the Requesters on February 28, 2007, the day before the Request was submitted to the World Bank Inspection Panel. For its part, the

Government has publicly disclosed the full text of both the Power Purchase Agreement and the Implementation Agreement not just for the legally required 30 day period, but for an open-ended period of time. This is highly unusual for a private sector transaction of this nature.

### **Project Benefits**

39. The project will: (a) displace about 738 GWh of expensive fossil thermal production (about 35 percent of Uganda's total 2010 generation needs) when it is commissioned in 2011; (b) relieve any residual load shedding; and (c) meet incremental base load demand with least-cost power generation. This should lead to a decrease of up to 10 percent in end user tariffs (in 2006 real terms). Also, in view of the current very low 5% access rate, the provision of adequate, reliable least-cost power is expected to facilitate a substantial increase in the number of connections of residential users per year to the power grid, including in rural areas. It will also allow industrial and commercial users to increase their output and efficiency, and therefore their profits, thereby enhancing economic growth. Availability of cost effective electricity could also increase the attractiveness of Uganda as an investment destination. These developments are expected to have positive impacts on poverty alleviation in Uganda, directly through the availability of power to newly connected households and indirectly through employment creation. The proposed project will also have a positive impact on Uganda's balance of payments situation.

40. **Public Finance.** The Government will be relieved of the necessity to provide a general subsidy for electricity tariffs and will benefit from net tax revenues from the project that can be diverted to social programs. The fact that the project is financed through the private sector will enable the Government to focus its scarce financial resources on other priority sectors in the fight against poverty.

41. **Lake Victoria Hydrology.** Since the project is located downstream from the Nalubaale/Kiira dam complex, it will use the same water that has already been released through Nalubaale/Kiira and, given the project's higher head, will allow Uganda's generation output to more than double without any additional release of water. Therefore, the project is expected to reduce the pressure to over-abstain water from Lake Victoria, thereby helping to preserve lake levels and facilitate the GoU's compliance with the Agreed Curve. Through the displacement of oil-based thermal power that would otherwise be needed, the project will also reduce carbon and other pollutant emissions.

42. **Employment and Local Communities.** During the construction phase of the dam, the project is expected to create 600-1,500 temporary jobs for Ugandan nationals, 10 percent of whom are likely to be hired from local communities. As mentioned earlier, the Kalagala offset will also provide opportunities for employment in the tourism sector. Finally, during operation of the dam, project affected people under the hydropower plant and associated Interconnection Project will benefit through the Community Development Action Plans (CDAPs) from increased economic activities in and around the site (e.g. dam maintenance and tourism). The CDAPs will also provide employment enhancing measures indirectly through improved educational and health services, provision of clean water, and renewable energy systems, all of which improve the country's progress toward achieving the Millennium Development Goals.

43. **Demonstration Effects.** The project will be Uganda's first large scale Independent Power Producer project and one of the largest mobilizations of private financing for such a project in Sub-Saharan Africa. As stated earlier, the project will provide economic and commercial benefits to Uganda, drawing from a comprehensive set of reforms in the power sector, which started in 1999 with support from the World Bank Group. As such, it will facilitate further private sector investment in Uganda and have important demonstration effects in the region. On the other hand, failure to implement the project would be very costly for the country, as power sector reforms may be jeopardized; it could also send a negative signal to other countries in the region regarding the effectiveness of power sector reforms.

## Next Steps

44. Beyond the Board approvals of the two projects, key issues that the AfDB Management will emphasize during the supervision phase, are: (a) a close follow-up on environment and social mitigation and monitoring plans including the resettlement action plans, the Kalagala Falls offset; and (b) close coordination with the World Bank on the Dam Safety Panel's ongoing assignment as well as engineering oversight by World Bank Group and AfDB technical staff, assisted by the Lenders' Engineer.

## V. CONCLUSION

45. The Bujagali project is the least-cost expansion option for Uganda, where the ongoing deterioration in power supply has already slowed development and contributed to the lower water levels in Lake Victoria. The project's benefits can also be seen with a more human face: Uganda's young population, and high population growth point to the fundamental importance of off-farm, energy intensive economic expansion to absorb the building wave of new workers. While short-term financing of this key infrastructure sector is critical to maintain its stability, Government funding to this otherwise commercial sector diverts funds from other high priority, non-revenue-generating budget areas.

46. The Bujagali project is highly overdue, and Uganda continues to pay a high price for the delay imposed by the failure of the first attempt. This price can be counted in economic terms: Uganda has lost about US\$6 million with each month of delay beyond the commissioning date of the first project, while the current unreliable power supply undermines economic growth.

47. The African Development Bank Group's support to this project is pivotal to its success: AfDB's long-term advisory and assistance role in the power sector gives confidence to the private sector and lenders; AfDB have participated in the project's due diligence, particularly on economic, environmental, and social issues with other development partners; and provided the financing backing required for this project.

48. Recognizing the importance of the project, and the critical nature of AfDB's participation, Management takes the Requesters' concerns very seriously. The AfDB Management firmly believes that the project adheres closely to all the relevant Bank policies and procedures. The Management also firmly believes that the project developers and all the financiers have been conscientious in pursuing the welfare of project affected persons as well as Uganda as a whole.

49. The Request identifies project risks, including climate change and affordability. The AfDB Management agrees with the Requesters that these must be addressed. Management believes these aspects have been studied carefully and thoroughly and properly addressed, not only in accordance with the Bank policies, but also in light of the previous World Bank Inspection Panel review as well as international best practice. The Request also questions the adequacy of analysis, including hydrology, economics, financial issues, environmental and social impact, and engineering. Management considers that the analysis was undertaken to high professional standards, accounts for a broad range of alternatives, and adopts a conservative demand growth and base case for hydrology and the other factors. Based on these, the project has acceptable rates of return overall.

50. The Request expresses concerns regarding transparency. The AfDB Management considers that the level of public disclosure meets, and even extends beyond the Bank requirements for an SEA. In addition to the disclosure of the environmental and social safeguard documents, the full economic analysis, including the hydrology analysis, has been disclosed. Moreover, the SSEA has also been disclosed, which views the project in a regional context and cumulative impacts, and the GoU has publicly disclosed both the Power Purchase Agreement and the Implementation Agreement, a commendable and unusual step for a private sector transaction.

51. The AfDB Management shares the Requesters' concerns about resettlement to date. The previous project sponsor's withdrawal left some of the social aspects unfinished, although the BIU has maintained an active presence on the ground. In addition, the time lag before entry of the new project sponsor has tested the patience of local populations. The RAPs prepared by the new sponsor for the BHP and BIP are designed to ensure that local populations are fairly treated and their livelihoods improved.

52. In summary, the AfDB Management firmly believes that this project has been well prepared in accordance with all the applicable Bank policies, and that it will significantly benefit Uganda's development and drive for poverty alleviation.

## **MANAGEMENT ANNEX: REQUESTER'S 9 COMPLIANCE ISSUES\* AND MANAGEMENT RESPONSES**

In the Request for Compliance Review, the Requesters highlight nine (9) concerns that in their opinion are in violation with policies and procedures of the African Development Bank. This document (Annex 1) addresses each of the nine issues including a summary of each issue followed by a brief management response.

### **Issue No. 1: (NAPE concerns 2.1.1 thru 2.1.5)**

- 1A. Hydrological risk,**
- 1B. Climate Change,**
- 1C. Cumulative Impacts Assessment**
- 1D. A Kalagala Offset**
- 1D. B Cumulative Impacts Assessment**

#### **Issue No. 1A: Hydrological Risk.**

*BEL's SEA does not adequately address the outstanding questions about hydrological changes on power production at the Nalubaale, Kiira and the proposed Bujagali facilities, especially now when Lake Victoria water levels have declined.*

*Without doubt, Kiira has contributed substantially to the over-draining of Lake Victoria, causing a lot of misery and economic loss to Uganda and neighboring countries. This has not been properly addressed in the documents we have seen.*

*According to the SEA, BEL has little or no control on the manner in which Nalubaale and Kiira will be operated by Government of Uganda (GoU) and therefore cannot under the circumstances dictate the outflow rates through upstream power stations to ensure sufficient water for Bujagali's power production, implying that Bujagali's operation will be highly dependent on the operations of Kiira and Nalubaale. Now that BEL cannot control the outflow of water from power stations upstream and did not obtain commitment from GoU to ensure sufficient outflow rates through Nalubaale and Kiira, what guarantees does BEL have that the projects will have enough water and generate the projected capacity? This issue is a lynchpin in the project's economic viability*

*BEL's SEA deliberately projects Lake Victoria as being capable of providing adequate water for the project even in its current diminished hydrological state, which is not possible. Where is the additional water going to come from? It is acknowledged by Engineer Elimu Esimu of Eskom that "currently the facilities (Nalubaale & Kiira) are not running at full capacity, because of limitations from tail water and the need to main live storage" implying hydrology is still a major limitation. It is now clear that the Agreed Curve is no longer being respected and the Victoria Nile flow regime has changed; consequently the original long-term energy output assessment for Bujagali is no longer valid Experts reported that although Bujagali dam was designed for 234-290MW, in reality, this is not possible under the current hydrological regime. Independent experts projected the output to be a maximum of 172MW. BEL's SEA does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam could lead to more sustainable flows out of the lake as it will "make use of the same water" released by the existing dams. Neither the SEA nor the documents it is based on explore the opposite scenario (i.e. that a new dam will provide more incentive to release higher flows, in order to maximize electricity sales).*

The Ombudsman of the IFC and the World Bank Inspection Panel stressed the need to address the hydrological flow rates in the previous AESNP Bujagali Project and they considered hydrology critical for Bujagali dam. BEL does not address this concern.

### **Response No. 1A: Hydrological risk**

**1A.1.** *The hydrology of the Victoria Nile is complex due to meteorological influences, the rainfall-runoff process, the scale of the evaporation losses, and the interaction between rainfall and evaporation within the watershed. The available reservoir inflow record comprises 106 years of data. It includes several significant hydrological cycles, among which the seasonal and ten year cycles are the most apparent. Given the length of the hydrological record at this site and studies on climate impacts, the hydrological risk for energy generation is considered to be definable from the available data set. Based on these data, the Economic Study estimated the probability of a low flow regime (or a firm release of 687m<sup>3</sup>/s) occurring during Bujagali's first 20 years of operation at about 79% and a high flow regime (or about 1,245m<sup>3</sup>/s) at about 21%. This is a conservative projection of water flows and, hence, energy output from the Bujagali Dam.*

**1A.2.** *AfDB acknowledges that because of the regional drought over the past several years, coupled with the lack of needed generation investments and a growth in demand of about 8%, since 2003 the GoU over-abstracted water for power generation. An analysis of Lake Victoria water levels during the 2003-2005 period concluded that the main origin of the drop in the lake level during this timeframe is an exceptionally dry period, during which the mean net inflow was only 46% of the long term average net inflow, and only 60% of the mean net inflow of the low hydrology scenario. The consequence of this low inflow, combined with the over-release of water for power generation, exacerbated the reduction in Lake Victoria's water levels. Since the end of 2005, the GoU has steadily decreased hydropower generation in an effort to return to the Agreed Curve operating regime. Water flows for power production are being scheduled so as to return to the Agreed Curve as soon as reasonably possible.*

**1A.3.** *If the Bujagali power plant was currently in operation, the consequence of this exceptionally dry period, in terms of over-abstraction for power generation, could have been substantially eliminated: the Bujagali site is located downstream of the existing Nalubaale and Kiira dam complex, and the same water release could have been used a second time at Bujagali and would have generated 1.2 times the power already generated by the turbines of Nalubaale/Kiira (the ratio is 1.2 due to the higher head available at Bujagali). Hence, with the joint operation of the existing hydropower and the proposed project, generation of the same energy output as currently generated by Nalubaale and Kiira would only require 45% of the current water release from Lake Victoria. Management acknowledges that BEL will not control the release of water from Lake Victoria, but is of the view that it is in the interest of the GoU to ensure that Bujagali and the Nalubaale/Kiira dams are operated efficiently. Bujagali is downstream of the Nalubaale/Kiira dam complex. There is no feasible scenario where water available will not be used for power generation at Nalubaale/Kiira, thus ensuring water releases for the proposed project. Finally, since the UETCL has to pay BEL a capacity charge whenever the Bujagali plant is available to generate power (based on the project's contractual capacity), there should be no incentive for the GoU to withhold water.*

**1A.4.** *The impact of hydrological flow rates on the planned Bujagali dam has been addressed extensively in the Economic Study. The Bujagali dam and its energy output are based on water releases from Lake Victoria consistent with the Agreed Curve and on the assumption of a low flow regime occurring during the first 20 years of the powerhouse's operation.*

**1A.5.** The SEA<sup>6</sup> prepared by the project sponsor (BEL) which assesses the social and environmental aspects of the project, states that the proposed 250MW project is not expected to significantly alter or affect the hydrology of Lake Victoria or the Victoria Nile. The quantity of water released from Lake Victoria as well as the timing of releases will continue to be controlled by the operation of the Nalubaale and Kiira facilities. The proposed project's energy output is based on the flow released from Lake Victoria through the Nalubaale/Kiira dam complex and power stations, in accordance with the Agreed Curve.<sup>7</sup> The reservoir for the proposed project is small and can only hold back a few hours of flow; this means that it will essentially pass through whatever flows are released by Nalubaale and Kiira.

**1A.6.** Given the importance of understanding Lake Victoria's hydrology—as suggested in the Requesters' question—a comprehensive analysis of the lake's hydrology and its impact on power generation at Nalubaale, Kiira and Bujagali is included in the study prepared for the World Bank by Power Planning Associates Ltd. (PPA), "Bujagali II – Economic and Financial Evaluation Study" (Section 2: Hydrology and Energy Generation of Hydropower Plants), hereafter called the Economic Study. This analysis complements the SEA. It was carried out by experts from Coyne et Bellier, as part of the PPA team and peer reviewed by an independent hydrologist, Professor Juan Valdes of the University of Arizona. The study was made public on February 26, 2007 at [www.worldbank.org/Bujagali](http://www.worldbank.org/Bujagali).

**Issue No. 1B: Climate Change (NAPE concern 2.1.6 and 2.1.8).**

*BEL's SEA reports do not address climate change and its possible impact on power production at Bujagali. Current and future climate models indicate hotter, drier conditions, lower lake levels and lower downstream river flows ... It is unknown whether Lake Victoria will recharge to the high levels and outflow experienced during the 1961-2000 period. It is also not known whether such a recharge will occur in the next few years or in the next 100 years. A 2005 report predicts that climate change could dramatically reduce the lake's levels and therefore outflow to the Nile.*

**Response No. 1B: Climate Change:**

**1B.1** The SEA addressed social and environmental issues related to the project; however, the broader climate change (and hydrology) aspects were addressed in different studies which have also been publicly disclosed. The Strategic/Sectoral Environmental Assessment (SSEA) analyzed in detail the impacts of climate change on power development options in the Nile Equatorial Region, including Bujagali. The analysis, using the best available General Circulation Models (GCM), examined the impacts of a range of changes in temperature on precipitation and, in turn, on runoff and net water yield in Eastern Africa in 2050 and 2100 relative to 2000. The results, based on 16 GCMs that best simulate East African climate, show that with rising temperatures, precipitation and net runoff will both increase, as will the losses due to evaporation and evapotranspiration. In addition, seasonal variability in runoff will also increase, with the wet seasons providing most of the increased runoff. By contrast, dry seasons are likely to be less affected.

\* Issues are the highlights of the concerns outlined in the Request of NAPE dated 5 May 2007 particularly under sections 2.1.0 to 2.9.0.

<sup>6</sup> Bujagali Hydropower Project, Uganda; Social and Environmental Assessment; prepared for BEL by R.J. Burnside International Limited; December 2006.

<sup>7</sup> The Agreed Curve functions as an operating rule for water discharges through the Nalubaale and Kiira dam complex, in which the volume of water released remains consistent with what would have occurred under natural conditions, thereby ensuring no change in downstream discharge (water releases are a function of the lake level at any given time).

**1B.2** In the northern and central west regions covered by the study, which include Bujagali, there is a high probability of increasing runoff and, hence, a higher potential for power generation than in the past.<sup>8</sup> Taking into account the uncertainties associated with such forecasts, the AfDB Management considers the analysis to be satisfactory.

**1B.3** The Bujagali project is estimated to reduce about 525 600 tCO<sub>2</sub> annually, which is a remarkable contribution to mitigate the climate change issues.

**Issue 1C: Technical Report (NAPE concern 2.1.7).**

A recent (2006) technical report of Directorate of Water Development (DWD), a lead agency, is missing in BEL's SEA. This could probably address the issues of hydrology, climate change, declining water levels in Lake Victoria and River Nile. No study released to date analyses the risks to Bujagali performance from climate change-induced drought and other hydrological changes to the performance of Bujagali.

**1 C: Technical report**

**1C.1** The AfDB Management believes that the technical report referenced here is the Technical Note entitled "Dropping Water Levels of Lake Victoria," which was produced for DWD in 2005. The objectives of the study that led to the report were: "(i) to establish and highlight the causes of lake drop; and (ii) to identify policy implications of the lake drop and determine remedial action for the future management of Lake Victoria." The study noted that the Nalubaale/Kiira operation contributed to the current lake level drop, and concluded that, "in the short term, it is in the interests of the Lake Victoria stakeholders that the release operations at Nalubaale/Kiira are gradually trimmed to eventually restore the natural regime of the lake." It also recommends that an Integrated Water Resources Management Planning approach be adopted for Lake Victoria Watershed management, and that Uganda install thermal power generation to reduce reliance on the lake for power production.

**1C.2** It should be noted that Uganda is adopting these recommendations, and is fully supportive of its efforts. Moreover, these actions (return to Agreed Curve operation and installation of thermal power) are consistent with the analysis carried in the Economic Study. In fact, the data (i.e., the hydrological record) used for the DWD report is the same as was used by the Economic Study team in analyzing the hydrology for the purposes of project analysis. Please see Item 1C above for a discussion of incorporation of climate change.

**Issue 1D: Cumulative Effects (NAPE concern 2.1.9, 2.2.6, 2.2.7).**

The last Inspection Panel report stated: "The Panel consequently concludes that the issue of cumulative effects, addressed by Management and raised by the Requesters, is of real significance and is deserving of greater attention." Although much time has passed since the Bujagali project was first proposed at the World Bank, to date the cumulative impacts issue remains unresolved. There was no deliberate attempt by BEL to identify cumulative impacts. There are no Cumulative Impact studies on Building a Cascade of Dams along the river Nile, including Bujagali. The SEA also does not discuss what changes to the existing dam complex would be required to begin to restore the Lake's level, and how such changes would affect Bujagali. The World Bank and IFC also echoed that lack of a comprehensive management plan gives rise to long-term management challenges of the river Nile. It remains to be seen if other analyses for the project will properly address these concerns. Generally, the ongoing debate over the existing dams' role in the draining of Lake Victoria should be settled in a transparent, participatory way. This requires the timely release of relevant data about releases through the dams, information about hydrological assumptions

<sup>8</sup> Nonetheless, the consultants, following a conservative approach, did not incorporate this potential upside as part of the base case for the Economic Study.

*and commitments from the Government on future dam operation and water releases... There is need in the economic analyses for an analysis of these dams' legacy of environmental damage and disruption to the livelihoods of lakeside dwellers and businesses. It is also critical to involve stakeholders from other countries sharing Lake Victoria in addressing the problems caused by the over-releases of water, and to come up with workable solutions for the long-term. An analysis of the risks of climate change on Uganda's energy sector and its economy should also be undertaken and publicly released.."*

### **Response No. 1D.A: Cumulative Impacts Assessment**

**1D.A.1** *The 2002 reports of the World Bank Panel and Management discussed in detail the issue of cumulative impacts and a suitable scope and level of analysis required to address the concern that additional dams along the Nile River could have unacceptable social and environmental consequences. In this regard, Management took note of the World Bank Panel's recommendation that "To be consistent with IDA policies, a further assessment of the cumulative effects of existing and potential hydropower development on the Victoria Nile as a freestanding Sectoral Environmental Assessment, or as an important component of the Regional Management Plan for the Upper Nile Basin, may need to be undertaken. The Strategic/Sectoral Environmental assessment (SSEA) for the Nile Equatorial Lakes (see Item 1C above) describes the criteria for assessing the social and environmental appropriateness of future hydropower developments on the Nile River in Uganda and in the entire East Africa region. Section 14 of the SSEA study analyzes the cumulative impacts of several hydropower development alternatives under differing scenarios of regional grid integration. It concludes that developing Bujagali and other sites in the Victoria Nile Basin (excluding Kalagala) will not have significant cumulative environmental impacts.*

**1D.A.2** *Furthermore, BEL's SEA examines the cumulative impacts of Bujagali, the hydropower plants at Nalubaale, Kiira and Karuma along with the transmission facilities therewith on the Victoria Nile in Uganda. It focuses specifically on the reach of the river between Lake Victoria and Lake Albert and takes into account other initiatives such as environmental offsets, natural areas, parks, reserves etc (Sections 7.6 and 7.7 of the SEA report). The potential cumulative environmental impacts examined include: possible changes in flow regime, likelihood of sedimentation, erosion and degradation of water quality; possible proliferation of invasive aquatic vegetation; and loss of natural habitats and resources. Although not required, BEL's SEA takes the two existing dams—Nalubaale/Kiira—and the proposed Bujagali plant as the baseline and compares this to the baseline that predates the construction of the Nalubaale/Kiira complex to analyze the cumulative impacts (Section 7.7.2).*

**1D.A.3** *The SEA concludes that the socioeconomic impacts of Bujagali, generally, would be local because the existing Nalubaale/Kiira power plants and Bujagali are separated by Lake Kyoga from Karuma Falls and other potential hydropower sites downstream on the Nile River. Lake Albert is located downstream of any identified hydropower options in Uganda and, therefore, will minimize the impact of any changes in flow regimes at the border with Sudan. The impacts of Bujagali's daily peaking are likely to be minimal, especially 5 kilometers downstream of the Bujagali tailrace. The sediment load in the Victoria Nile River is limited, as most sediment is retained upstream in Lake Victoria. Water hyacinths are trapped upstream from Nalubaale dam in Lake Victoria and will not create cumulative impacts downstream. However, there is the risk that changes in urban population densities and in agricultural practices in the Lake Victoria Basin could have an impact on the quality of the water flowing into the Victoria Nile which, together with effects induced by the power plants could lead to possible cumulative impacts.*

**1D.A.4** *The development of Kalagala, located downstream of Bujagali on the same stretch of the river, could have an adverse impact on aesthetic value of the Kalagala Falls, existing and potential tourism and biodiversity as well as on people who would have to be resettled. For these reasons, long term protection of Kalagala Falls by ensuring that its hydropower potential is not exploited is a necessary condition of World Bank and the AfDB Groups participation in the Bujagali project.*

**1D.A.5** Legacy issues stemming from the development of the Nalubaale/Kiira dam complex and the earlier attempt to develop Bujagali are not the responsibility of BEL. Nevertheless, any issues identified during consultations for Bujagali were considered by BEL in preparing the Bujagali project's community development program. The program is designed to meet the needs of the eight communities affected by the Bujagali project through culturally appropriate means, including consultations. Specifically, it provides for health care facilities, employment opportunities, water supply and sanitation, fisheries, education, small-scale tourism, training and financial services.

**1D.A.6** Issues related to the operation of the Nalubaale/Kiira dam complex and its effect on Lake Victoria levels, and the means to develop a comprehensive management plan for the Lake and the Nile River are addressed in responses to Items 1A and 1B above. The effects of climate change are addressed in the response to Item 1C above.

**Issue 1D...: Kalagala Offset (NAPE concern 2.1.10):**

Paragraph 1 of the agreement between World Bank and GoU states that "Government of Uganda undertakes that any future proposal which contemplates a hydropower development at Kalagala will be conditional upon satisfactory EIA being carried out which will meet the World Bank Safeguard Policies as complied with in the Bujagali project. Government and the World Bank will jointly review and jointly clear such an EIA." This, however, is not a guarantee that Kalagala Falls would never be developed for hydropower. The commitment on Kalagala Falls as an "Off-set" by GoU is not binding. It does not completely remove Kalagala as a future dam site. Legal interpretation of the agreement by the Inspection Panel also confirmed that there was no guarantee for Kalagala as an offset for Bujagali.. The lack of up-to-date and adequate information on hydrology, climate change, cumulative impacts assessment and Kalagala "off-set" in BEL's SEA violates that African Development Bank's Environmental Assessment. We believe that the absence(inadequacy) of the critical information will negatively affect the well being of Ugandan society, in particular and East Africa, in general..

**Response 1D.B: Kalagala Offset:**

**1D.B.1** To conform with this requirement, the GoU has agreed to reconfirm (see Annex 2) its commitment to the Kalagala offset that it made under the previous effort to develop the Bujagali project, per the terms reflected in the World Bank "Management Report and Recommendation in Response to the Inspection Panel Investigation Report (Uganda: Third Power Project, Fourth Power Project, and Bujagali Hydropower Project)." This offset commitment is consistent with the mitigation provision for Kalagala Falls, and also recommended in BEL's SEA Report.

**1D.B.2** As well, the commitment to maintain the Kalagala Offset is strengthened in practice, not only by GoU's commitment to identify sustainable investment programs to facilitate tourism, with appropriate mitigation measures, but also by the enhanced role that Kalagala Falls will play, as (a) rafting companies, once relocated, will locate some of their facilities around the offset area, and (b) other tourism operators, such as small arts and crafts shops, restaurants, four wheeler rentals, and locally owned enterprises are also expected to move their businesses nearer to Kalagala Falls.

**1D.B.3** The offset provision for Kalagala Falls and the adjacent natural habitat will be included as a GoU obligation in the IDA Indemnity Agreement for the Bujagali project, and will be binding throughout the life of the Indemnity. Management notes that the World Bank's legal recourse to enforce Government's commitment to maintain the Kalagala Falls offset will not be available after the termination of the Indemnity Agreement. Hence, the draft Indemnity Agreement, discussed with the GoU, includes a provision that, prior to the termination of the Indemnity Agreement, the World Bank and the GoU will pursue discussions to identify mechanisms or instruments to enable the continuation of the GoU obligation to set aside the Kalagala Falls site.

## **Issue No. 2:**

### **Economic, Comprehensive Options and Affordability Assessment**

*The Requesters believe that the discrepancies in the PPA process poses a threat to the Ugandan society and economy and is a contravention to the laws of Uganda, and violates African Development Bank's Policies on Information Disclosure, Accountability, Economic Evaluation of Investment Operations and Poverty Reduction.*

*Issue 2A: **Economic Analysis (NAPE concern 2.2.1 thru 2.2.7 and Page 10, para 1, 2.2.9).***

*There is no evidence in the SEA report that a comprehensive economic analysis for Bujagali HPP was done. What has been released on the World Bank website is not comprehensive and therefore cannot be used as a basis for determining the economic viability of the project. Therefore, it is difficult to determine the economic viability of the project. Both the World Bank Inspection Panel and IFC Compliance Advisor/Ombudsman echoed similar concerns in the previous AESNP Bujagali dam project. The Inspection Panel recommended that comprehensive assessments be carried out before any further damming of the Nile could be done.*

*The Bank assesses the robustness of the project with respect to economic, financial, institutional and environmental risks. "The Bank's economic evaluation considers the sources, magnitude and effects of the risk associated with the project, by taking into account the possible range in values of the basic variables and assessing the robustness of the project's outcome with respect to changes in these values." There is sufficient evidence that the Bujagali dam project was not subject to this kind of analysis at the World Bank Group.*

### **Response 2 A: Economic Analysis**

**2A.1** *The Economic Study conducted as part of the PPA for the lenders, rather than the SEA, addresses the economic viability and risk analysis of the Bujagali project. The Economic Study was made public on February 26, 2007 (on ([www.worldbank.org/Bujagali](http://www.worldbank.org/Bujagali))) and a copy was handed over to NAPE on February 28, 2007. The key elements assessed in the economic analysis include: (i) the impact of the current power crisis conditions on the sector and the need for emergency thermal power; (ii) the demand forecast, which is mainly influenced by new customer connection programs, commercial and industrial GDP growth, loss reduction and the tightening of commercial discipline over billings and collections; (iii) the level of electricity tariffs; (iv) the hydrology of Lake Victoria and its impact on hydropower generation; (v) the supply alternatives and their costs; (vi) the environmental and social costs of Bujagali and its main alternative; and (vii) the economic value of electricity to consumers, the end-user tariff path and its affordability. Risks arising from varying degrees of future uncertainty regarding these variables have also been evaluated. The Economic Study projects three electricity demand scenarios in Uganda (base, low and high), two hydrology scenarios (low and high) as described in Item 1 above, three oil price scenarios (base, low and high) and three project cost scenarios (base, low and high).*

**2A.2** *Economic evaluation of Bujagali takes into consideration environmental and social costs associated with the project. The largest such cost is for implementation of the resettlement and community development action plans related to the dam and the associated Interconnection Project. The Economic Study also analyses the financial sustainability of the power sector after Bujagali's commissioning. Using WASP<sup>9</sup> software, the Economic Study derives a set of 54 least-cost expansion plans for Uganda, including Bujagali and other generation options as candidates, using all the permutations of the scenarios described above. It also derives a set of 18 alternative expansion plans excluding Bujagali, but including all other candidate plants.*

<sup>9</sup> Wien Automatic System Planning (WASP) Package, Version IV, for carrying out power generation expansion planning, developed by the International Atomic Energy Agency.

**2A.3** Expansion plans that include Bujagali are compared to their counterpart “without Bujagali” and found to be less costly both on a net present value (NPV) and levelized tariffs basis. The only exceptions are cases when low electricity demand is combined with high hydrology. Under those cases, which have a total probability of occurrence of 6%, Bujagali is not needed in period 2011-2020. On a probability weighted average basis, generation expansion plans including Bujagali commissioning in 2011, compared to alternatives, represent an economic gain of US\$184 million on an NPV basis.

Another 13 expansion plans are derived to test for the impact of delaying Bujagali construction to 2012, lowering Bujagali’s capacity to 200MW, building Karuma before Bujagali, and excluding both Bujagali and Karuma from Uganda’s least-cost expansion plan. In all cases, the corresponding expansion plan with Bujagali in 2011 and with 250MW capacity is found to be less costly.

**2A.4** The project Economic Internal Rate of Return (EIRR) is calculated at 22% for the base case; it is also calculated for other combinations of scenarios described above and remains in all cases above 12.5%. In addition, a probabilistic analysis of ERR value was conducted using a Monte Carlo simulation software,<sup>10</sup> subjecting key project parameters to a probabilistic range of outcomes. This further confirmed the robustness of the project: there is a 50% probability that the ERR is greater than 22.7% and a 100% probability that the ERR is above 11.7%.

**Issue 2B: Energy Alternatives (NAPE concern 2.2.4 and 2.2.8, paraphrased).**

*BEL’s SEA report ...states that “if Bujagali were not to be built, then either lack of electricity will persist or more expensive alternatives will be needed to be built.” Yet, alternative energy options have not been adequately studied to provide evidence that Bujagali dam project is the least-cost option. Again, the recently released economic analysis does not adequately address the issues of assessing the alternatives. In recent years, various efforts to analyze Uganda’s renewable energy potential have been discussed or begun. There is therefore evidence that energy alternatives were not adequately addressed in BEL’s SEA. In addition, efforts to implement these alternatives have not been taken seriously by government.*

**Response 2B: Energy Alternatives**

**2B.1** The primary vehicle for assessing alternatives is the Economic Study. This required that the economic analysis explore alternative, mutually exclusive, designs to ensure that the project maximizes expected NPV, subject to financial, institutional, and other constraints.

**2B.2** The economic analyses considered power generation options that had realistic potential for availability in a time frame similar to the Bujagali project, and which, therefore, could be considered as alternatives. All options that could compete with the proposed Bujagali project in providing power to the main grid network were considered. However, Uganda’s Renewable Energy Policy and Plan<sup>11</sup> provides for “off-grid” electricity options such as solar PV and micro-hydro, as well as biofuels for cooking and industrial applications. The AfDB and other donors are actively supporting these programs as well.

**2B.3** In 2005 Uganda installed the first 50 MW thermal power plant, supplied, operated and maintained by Aggreko to meet the power shortage. A second thermal power plant of 60 MW was installed in 2006. Both plants are using light diesel and another 50 MW is scheduled for this year (2007) which will run on the cheaper heavy diesel option. The production of electricity using diesel not only harm the environment but also increase the cost of the KWh. In this context, hydropower has a distinct advantage of not producing CO<sub>2</sub> as is the case of thermal power.

**2B.4** In keeping with this requirement, the following short-term options considered were:

<sup>10</sup> Crystal Ball risk analysis software, developed by Decisioneering, Inc.

<sup>11</sup> MEMD, 2001

- 150MW fired with relatively expensive, but readily available Automotive Diesel Oil (ADO), based on a short-term Power Purchase Agreement,<sup>12</sup> 100MW currently in operation, and the 50MW balance of which is in advanced stages of procurement.

- 50MW, fired with more cost effective Heavy Fuel Oil (HFO), requires a longer lead-time than an ADO plant in order to develop supply logistics, based on a longer-term Power Purchase Agreement.

- Mini-hydro power stations currently under active development (see below).
- Bagasse-based cogeneration which will provide 15MW of power to the national grid (see below).

Options included in the analysis with longer lead-times were:

- Geothermal assessment of current exploration (estimated 40MW) concluded that the potential of the resource may be much lower than previously estimated 450MW (see below).

- Karuma Falls hydropower station, which is considered to be the most promising large-hydro alternative to the Bujagali project (and the only other large hydropower project in Uganda currently studied beyond its feasibility stage). The Economic Study included an updated cost estimate for Karuma based on the most recent unit costs for Bujagali, since the Bujagali costs were the result of an international competitive bidding process. This analysis concluded that Bujagali costs are lower than those for Karuma (see below).

- Additional fossil-fueled thermal power stations (HFO fueled medium- and low-speed diesels, simple and combined cycle gas turbines using ADO, steam plants fired either by HFO or coal).

The options analysis utilized the Wien Automatic System Planning (WASP) model, as explained in response to 2A.2 above. In determining the options to include in the Economic Study, the most recent information on the various domestic and imported power generation sources were considered, including the projects below:

- **World Bank Energy for Rural Transformation (ERT) Project (FY02)** is designed as a 10-year, 3-phase Adaptable Program Loan (APL) (US\$49 million for Phase 1, and US\$165 million for the full program). The program has supported preparation of a renewable energy resource database and capacity building plan<sup>13</sup>. ERT is also supporting investments in renewable energy power generation, including bagasse based cogeneration, mini-hydro, and micro-hydro.

- **Fourth Power Project (FY08)** is supporting geothermal exploration in western Uganda (Kibiro and Katwe), including shallow-well drilling which is required to assess the resource.
- **ARGEO Project (FY08)**, this proposed GEF-supported regional project will support participating countries, including Uganda, in developing commercial geothermal power generation plants.

<sup>12</sup> A Power Purchase Agreement defines the terms of sale between a power producer and a purchaser. In this case, the Power Purchase Agreement is between an Independent Power Producer and the Uganda Electricity Transmission Company Limited.

<sup>13</sup> Most recent report: Fourth Interim Report for Renewable Energy Resource Information Development and Capacity Building Assessment, Kamfor Company Ltd. April 2006.

- **Bagasse:** Although it has been discussed for years, the country has developed only a few megawatts of its currently estimated 40MW potential. Uganda has three sugar mills, two of which have expressed interest in expanding their existing bagasse based cogeneration system in order to export power to the national grid. Kakira Sugar Works is in the process of expanding its bagasse cogeneration in connection with an overall sugar mill expansion program. Kakira has signed a Power Purchase Agreement with UETCL to export 6MW of power to the grid during peak load periods. This does not represent the full power available for the proposed power station design. Moreover, the power station itself was not at the time designed to utilize the full bagasse stock available. However, in view of the increasing power shortages in Uganda, the GoU sought to extend the power purchase arrangements with Kakira to more fully utilize the bagasse resource. These negotiations are not yet concluded and are centered around a revised agreement that would provide 12MW to the national grid. Hence the WASP model runs provided for a firm 12MW from Kakira beginning in June 2007. The other sugar mill, SCOUL, is also developing plans for selling 3MW of power under an arrangement similar to Kakira's. The details of the transaction have not been concluded. However the WASP model runs assumed a firm 3MW addition in January 2009. The third mill, Kinyara, has no firm plans for a similar Power Purchase Agreement.

Cogen is also an opportunity to produce reliable electricity to the national grid. The AfDB in collaboration with UNEP and AFREPREN Kenya, with the funding from GEF, is exploring opportunities to support this area. The concerned companies have been consulted and Pre-feasibility are prepared in this respect. The identified capacity is estimated to 25 MW.

- **Small hydro (less than 10MW):** Of at least 46MW at 16 sites that has been identified, only 13MW have been developed.

Mini/micro/Small hydropower electricity is an ideal energy option for the rural areas because of its low operational, maintenance and repair costs. It produces clean energy and also it is more secure and reliable when compared to other options especially for areas where transmission of grid power is difficult. Mini-Small size hydro power is not ideal for long distribution due the costs involved. These are ideal for local distribution network.

A number of projects have been identified, but due to implication of the transmission lines, concessions, available investors and negotiation of the PPA. The projects are still under preparation and certainly will be considered as possibility to address the rural electrification issue and increasing the access rate. The World Bank has identified a number of hydropower plants in the north part of Uganda to replace the diesel generation (such as in Nebbi, Arua) and the projects are still under preparation.

**Micro-hydro (less than 100 kilowatts):** A limited number of sites have been developed, despite there being at least 40MW of potential. The Bank is providing considerable support to Uganda in development of its hydropower potential. This includes large-scale hydro (for example, through the ongoing Fourth Power Project and the proposed Private Power Generation Project (Bujagali)) and also through the ongoing ERT Project, which is supporting mini-hydro development for grid-connected and off-grid applications. In any case, whether on-grid or off-grid, each such investment is evaluated on its merits with regard to economic and other factors, and includes an assessment of alternatives.

The Bujagali Economic Study included all hydro projects that are either currently providing power to the grid, or suitable for grid connection and which are actively under development and thus suitable for consideration in the planning timeframe. The mini-hydro sites considered were: Kilembe Mines (3MW), Bugoye (13MW), Waki (6MW), Buseruka (9MW), Kikagat (10MW), and Ishasa (5.5MW). None of these options are in the "micro-hydro" range as defined by the Requesters. The primary reason for this is that micro-hydro systems are generally "off-grid" and therefore not "alternative" to Bujagali. All mini-hydro sites were considered as "committed" options in the analysis, which means that WASP always included them in the generation plan.

It is noteworthy that the Renewable Energy Assessment and Capacity Building Program recently estimated the construction costs of micro-hydropower development at US\$3,000 per installed kilowatt, plus another US\$2,500 per kilowatt for the associated transmission line.<sup>14</sup> This does not account for financing costs. The comparable costs for Bujagali are about US\$2,044 per installed kilowatt, plus about \$200 per kilowatt for the associated transmission line.<sup>15</sup> This simple comparison suggests the reason why such micro-hydro applications are typically not considered suitable for grid connection. However, despite these costs, in off-grid situations where diesel power is frequently the next best option, such micro-hydro plants can be the least-cost option.

**Karuma Dam (150MW)** is considered to be less socially and environmentally destructive than Bujagali (and in fact than all currently proposed large dams in Uganda). It would have the added benefit of bringing electricity to the northern part of the country, whose development has been marred by continued rebel conflict. It was previously compared directly to Bujagali, but lost-out over economics. Later, Karuma's project sponsors in Norway discovered that the economic analysis used to justify Bujagali was based on greatly inflated costs for building Karuma. The proposed hydropower project at Karuma is the most likely alternative to the proposed Bujagali project. Karuma is therefore included as a candidate in all the WASP model scenarios for both the "with" and "without" Bujagali case. The description of the various components of the Karuma Falls Hydropower Project is available in the Project Definition Report (March 1999) issued by Norpak. The scheme is a run-of-the-river type, with no active storage, using the natural head created by the Karuma Falls and adjacent rapids, immediately upstream of the bridge across the Victoria Nile. The developer of Karuma HPP, Norpak, was invited to negotiate a Power Purchase Agreement by the GoU in 2004. Norpak has been promoting the project since the 1990s and recently confirmed to the GoU its interest in developing the project. Norpak's initial proposal was to implement the project with an installed capacity of either 150 or 200MW, generated by 3 or 4 units of 50MW capacity each. As 3 units would be able to use only about 600 m<sup>3</sup>/s from the inflow of the Victoria Nile system planning studies will most probably show that at least 4 units should be installed. The design calls for less concrete than would be required for Bujagali, but also calls for a large volume of underground excavation. This includes, for each of the four units, one surge chamber approximately 500 m long, and one tailrace tunnel approximately 2 km long.

The costs of the Karuma project were estimated based on the March 1999 Project Definition Report, with additional information provided by Norpak showing the main volumes of works, and using the unit cost estimates provided in the competitively tendered Bujagali EPC<sup>16</sup> contract. In this manner the Karuma costs were updated to current market conditions. Construction costs for the 200MW Karuma plant were estimated at US\$588 million compared to the Bujagali construction costs of US\$491 million for a 200MW design and US\$511 million for a 250MW design. This analysis shows that Bujagali has a lower construction cost, which has resulted in its being the least-cost option when the two plants are compared in the WASP analysis.

**Geothermal:** Uganda has significant potential, with estimates ranging up to 450MW, but studies have lagged behind hydroelectric analysis. Although the Bujagali EIA by Burnside International Ltd. states that only 45MW is feasible, this seems premature and pessimistic as some of the sites referred to as having a poor chance of commercial development are still being studied.

<sup>14</sup> See Fourth Interim Report for Renewable Energy Resource Information Development and Capacity Building Assessment, Kamfor Company Ltd., April 2006, page 31.

<sup>15</sup> With financing costs included, the cost is US\$3,200 per installed kilowatt.

<sup>16</sup> Engineering, Procurement and Construction.

Experts who are working directly on such studies say that the potential for specific sites is much greater than the project SEA indicates. Notwithstanding the foregoing, geothermal development requires a multi-year program, which begins with surface assessments of resource potential, and then moves progressively to shallow well exploratory drilling and finally to deep well drilling. In view of the expense of deep well drilling<sup>17</sup> – estimated at US\$9 million – it is important to ensure that the preliminary studies show a strong likelihood of proving an exploitable reserve. The initial shallow well drilling is ongoing, with financing from the Fourth Power Project (US\$510,000).

A detailed review of geothermal prospects was conducted as part of the project analysis of alternatives.<sup>18</sup> The analysis concludes that historical estimates of the geothermal potential of Uganda being as much as 450MW are substantially over-stated. The true potential is likely to be in the order of only 10% of this figure. The key findings of the review are summarized below. These findings led to the inclusion of a 40MW geothermal power plant, to be commissioned in mid-2011, in the least-cost analysis.

There are three principal geothermal resource areas in Uganda. Two of these, at Katwe and Buranga, are low grade resources with reservoir temperatures of only some 100°C and consequently with nil potential for commercial scale power generation. The third prospect, at Kibiro, is more promising and appears to be a medium grade geothermal resource with reservoir temperatures of about 220°C. Kibiro is therefore considered to be the only geothermal resource in Uganda with clear potential for power development. The size of a geothermal power plant that could be developed at Kibiro will depend on actual resource conditions that have yet to be proven by exploration drilling. Nonetheless, deep geothermal resource conditions can be inferred from the results of surface exploration surveys undertaken to date. By this means, it is assessed that the Kibiro resource may prove to be suitable for the future development of either a 20MW condensing steam power plant or a 40MW organic Rankine cycle binary plant, both with an operational life of at least 25 years.

Since 2003, the AfDB is very active exploring the deployment of this Geothermal for electricity generation, in collaboration with UNEP and KFW, who has set up the Risk mitigation fund.

Uganda's geothermal capacity is estimated to be only 60 MW<sup>19</sup> It is worth noting that it would not be cost effective for Uganda to develop this power source due to the high costs involved in the exploration drilling compared to the uncertain benefits. The exploration and the preparation of the geothermal projects is time consuming. It can take up to 4 years. The development of these is still on, supported by funds from GEF and private institutions.

*Municipal Solid Waste:* Uganda has an estimated 10-30MW potential. The World Bank's Carbon Finance Unit is currently assisting the Kampala City Council in assessing the prospects for methane production from Kampala's municipal solid waste (MSW). While the assessment is not complete, current indications are that the available methane is very modest, and may not be sufficient for the purposes of power generation. The other alternative under consideration for methane destruction is flaring.

Power production may also be possible through gasification or combustion of Kampala's municipal solid waste. However, there are considerable hurdles which must be overcome to realize such a project. These include the rather formidable requirement for Kampala to establish an organized refuse collection program to ensure that an MSW-fueled power plant has a reliable fuel source. There are no firm proposals for MSW-fueled facilities. Therefore, this alternative was not considered in the options analysis.

<sup>17</sup> Specifically, the cost of bringing in the specialized drilling rigs, drilling and lining the holes, etc.

<sup>18</sup> See PPA Report, Appendix D.

<sup>19</sup> Pre-feasibility study prepared by the UNEP – Buranga site 10 MW, Katwe site 30 MW, Kibiro 20 MW

Making use of waste is also an alternative solution to produce gas, such as methane or electricity. In this respect, a good waste management, collection and separation is required, in order to make use of the available energy resource in the waste. In addition a number of environment issues have to be taken in consideration, such as pollution soil, combustion gases filtration, etc....

**Solar:** ...Energy used for water heating is a significant contributor to the electricity demand, accounting for almost 50MW. Experts estimate that 10MW of peak power could be saved immediately (and more in future) with solar water heaters for grid-connected customers. Solar Thermal can be used for energy saving option. This is the case of Kampala, to avoid the power shedding. Solar water heating options has been initiated sine 1992, and introduced to the health sector in 2004.

**Efficient Lighting:** The bulk of Uganda's peak demand is used for lighting, which consumes up to 92MW, according to a World Bank study. If all lights were replaced with energy-efficient light bulbs, the country's peak demand could be cut to below 20MW.

**Transmission Losses:** According to the 2006 Bujagali EIA by Burnside International Ltd., "Another option to reduce demand is to reduce technical losses, which for Uganda is high at 21%. Acres (1999) estimated that improvements to the country's failing distribution infrastructure could eliminate as much as 30MW of losses from the grid." On 3 October 2006, the East African reported that Uganda was applying for a US\$180 million loan from the World Bank to cover a variety of investments in the energy sector; only US\$10 million from the project is expected to go toward demand-side management and energy efficiency measures. Management agrees that energy efficiency in general, and demand side management in particular, are important tools in improving the efficiency of energy distribution and consumption in Uganda. The World Bank Group is fully supportive of programs in this area. This support includes:

- UMEME – The World Bank has supported Uganda in restructuring the power sector, including unbundling the former Uganda Electricity Board into generation, transmission, and distribution companies. From the perspective of energy efficiency, the key actor in Uganda is now UMEME, the private electricity distribution concessionaire.
- With respect to distribution losses (which NAPE has referred to as transmission losses), over the past year, system technical and non-technical losses have been reduced by UMEME, to about 34% (from 38%) and the billing collection ratio has improved to about 92% (from 80%), although the rate dropped again to 82% in December 2006 following the June and November tariff increases. UMEME's investments to the end of 2006 were US\$13.6 million, and there are plans to invest a further US\$65 million by 2011. In addition, IDA is providing US\$12 million (through Power IV) for new poles and transformers, and for 13,500 new customer connections. These investments will help reduce technical losses significantly over the medium term.
- In parallel, the World Bank-supported ERT Project has identified a number of measures that could have an immediate positive effect ("quick win") on demand side management which has identified a set of measures in the following order, the first of which is a component of the ERT Project:
  - *Compact fluorescent lights (CFLs)* – to reduce evening peak demand, which is heavily influenced by lighting. CFLs consume about 75% less energy than conventional incandescent lights. The ERT Project is financing procurement of an initial 800,000 CFLs, which would be distributed free to UMEME customers in order to gain immediate demand reductions. Thereafter, a commercial CFL market would be promoted.

Other elements of the demand side management program will be supported by the proposed Power Sector Development Project (FY07), as well as the next phase of the ERT Project:

- *Capacitors for power factor correction* – to improve the efficiency of the distribution network
- *Streetlighting program* – to replace conventional streetlights with energy efficient bulbs
- *Solar water heating program* – to replace electric water heaters with solar water heaters, and thus reduce electricity load
- *Long-term energy efficient/demand side management strategy* – which would set out a long term plan for improving energy efficiency, targeting both existing and new users.

**Wind power** potential needs further exploration, as wind speeds have been recorded at low heights, not the 10 meters that is standard for wind power analysis.

The recent Renewable Energy Assessment states that “due to its geographical location, Uganda does not seem to benefit from good wind resources with most areas having wind speeds of less than 3.0 m/s.”<sup>20</sup> However, the assessment points out that a full assessment of wind resources has not yet been concluded for Uganda, and there may be isolated sites, such as in Karamoja, which show promise. The AfDB -supported ERT Project is supporting a broad program of renewable energy development, which seeks to prioritize the assessment, development, and investment in the most promising renewable energy areas. In comparison to other renewable resources with which Uganda is richly endowed such as mini/micro-hydro and biomass, wind power is not considered to be a promising option within the timeframe of the Bujagali economic analysis.

The Ministry of Health with the assistance from Danida has studied ways to use wind energy for power generation. For the most part, wind speeds in Uganda are not high enough to produce power in meaningful quantities of electricity. It is currently used to power water pumping (such as Moroto Hospital). Wind energy can be used for small scale batteries charging as the cost is less compared to solar PV. In addition, Wind power as is the case for solar power requires a back up.

Improved, efficient **stoves and biogas digesters** would be key to bringing cleaner energy to the rural poor, and reduce deforestation from cutting fuel wood. Management agrees that improved efficiency in traditional fuel use will have important environmental benefits for Uganda. However, these cannot be considered as “alternatives” in the economic assessment of the Bujagali hydropower plant.

Nevertheless, it should be noted that GoU, with the support of GTZ (Germany), is promoting use of biomass technologies developed to improve energy efficiency for household, institutional and industrial practices. These include the domestic and institutional firewood stoves and the firewood baking oven.

In addition, the AfDB, under the ongoing ERT Project, in order to facilitate expanded use of renewable energy power generation based on biomass, is supporting the installation of demonstration biogas digesters in Uganda at the three institutions of Kyambogo, Nyabyeya Forest Reserve and Buddo. The objectives of this activity are to: (i) demonstrate the feasibility of biomass gasification for electricity generation and thermal productive uses; (ii) explore the possibility to use a variation of biomass fuel stocks; (iii) train engineers and raise awareness of biomass gasification as a low cost renewable energy option for rural electrification and productive thermal uses; and (iv) use gasification producer gas to improve energy efficiency. However, biomass gasification is not sufficiently advanced in Uganda to consider it as a commercial option today. It was therefore not proposed as an alternative to Bujagali in the WASP analysis.

<sup>20</sup> Page 36. Also, it should be noted that sustained wind speeds of 5-6 m/s are needed to consider wind for grid-connected power applications.

### **Issue 2C:**

*The SEA does not give cost, cost-benefit and opportunity-cost scenarios and calculations for installation and development of these alternative energy options as basis for determining Bujagali as the least-cost option. The idea of dismissing energy alternatives, because they cannot easily be connected to the national grid ...is erroneous. What should be assessed is rather whether alternative electricity options will help reduce the burden on existing national grid-based hydropower at competitive costs (prices) than other options by taking away areas where other energy options could be developed as independent grids rather than emphasizing the need for connectivity to the national grid. These independent grids could prove more beneficial to the majority of the people and the current rural electrification scheme being promoted by government. It therefore becomes clear that the various energy options have not been assessed in either a comprehensive or balanced way as part of the evaluation leading up to Bujagali.*

*The East African commission, in a report on the decline of Lake Victoria's water levels, stated that: "**Partner states should make deliberate efforts to reduce dependency on hydropower by developing alternative sources of energy like geothermal, wind, solar, thermal and natural gas within 5 years.**" But, the Government of Uganda, the project developer and the World Bank are proceeding with Bujagali as the least-cost option, yet this has been effectively disputed.*

### **Response 2C: The SEA does not give cost**

*The Requesters are correct in that the SEA does not give costing and other engineering information on the alternatives considered. However, complete information in this regard is found in the PPA Ltd. Economic Study, which has been publicly disclosed, and which was provided to the Requesters in a meeting with IFC officials on February 28, 2007. With regard to the support for independent grid networks, Management also agrees that they form an important element of Uganda's electrification program. This is especially true in light of the extremely low electrification rate (5%) in Uganda. Therefore, when undertaking an assessment of a particular electrification site, the option of whether it should be grid-connected or "off-grid" is always considered. It should be noted that the "dis-economies" of scale of smaller power generators usually result in a decision for grid connection in cases where the community is relatively close to the national grid. However, in regions such as West Nile (northwestern Uganda) and Kisiizi (southwestern Uganda) the analysis demonstrated that off-grid systems were preferable. Both are being supported by the World Bank ERT Project.*

*Nevertheless, expansion of the national grid network remains the least-cost means of connecting most Ugandan customers.*

***Issue 2D** (NAPE 2.2.8 and page 8): **Other factors** The World Bank Group, like the Ugandan government, has skewed its research efforts to consistently promote Bujagali above other options. In the project's first incarnation at the Bank, data was manipulated to justify Bujagali as the "least-cost" option for Uganda after its consultants pointed to other projects as cheaper. While the World Bank's 2002 appraisal of the Bujagali project was over-optimistic in many instances, the analysis of alternatives to the project was consistently pessimistic. This is still a problem with the new BEL Bujagali project. Going back even further, the World Bank used unusually optimistic hydrological data on the Kiira project, and claimed there was little risk to using the optimistic figures (even though most experts at the time believed otherwise). This has resulted in drastic draining of Lake Victoria to low levels close to those in 1924. A comprehensive, independently facilitated and participatory options assessment process is needed for future energy planning in Uganda, especially one that incorporates a rights and risk analysis. More importantly, there needs to be concerted action to develop these resources.*

## **Response 2D: Other factors**

**2D.1** As stated throughout this response, the economic and hydrological analyses conducted for the Bujagali project were undertaken by qualified consultants (PPA, in association with Coyne et Bellier and ECON of Norway). This work has been thorough, has utilized appropriate data and analytical methods, has incorporated suitable alternatives, and has selected a base case hydrology which is conservative (i.e., the “low hydrology” case) and based its analysis on the full available 106 year hydrological record. The analytical work has been closely monitored by World Bank Group task team members and reviewed by the prospective lenders (including the AfDB) and reviewed by Government and industry stakeholders, an independent hydrologist, and Bank peer reviewers. The analyses, contained in the Economic Study, were made public on February 26, 2006. (See Items 1 and 2 above).

**2D.2** The Bujagali project’s economic viability was appraised using conservative assumptions for the base case against a wide range of alternative power generation options. A comprehensive risk analysis for main project determinants was conducted.

The cost estimate of the main hydropower alternative to Bujagali, Karuma, was conducted after consultation with Karuma’s sponsors and using the same methodology as for Bujagali. Karuma was found to be more expensive than Bujagali; in addition, the earliest commissioning date for Karuma would be 2012, about one year later than Bujagali.

The generation expansion plan developed by PPA Ltd also finds that Bujagali is the least-cost option; this conclusion is robust to risk analysis of the main variables.

**2D.3** As mentioned in Item 1 above, the Lake Victoria hydrological record shows a period of high hydrology spanning forty years, from the 1960s to 2000. Based on the 106 year historical record of the hydrological system, there are possibilities of 10-year hydrological cycles that will cause significant changes in available water flows. Lake Victoria levels, and thus the flow of the Nile River, will also continue to fluctuate seasonally, as experienced in the past. Future high flow seasons are also possible, along with the prospects for low flow periods. The Power III Project—which funded Kiira construction—was approved late in this period. The Kiira dam was designed both to improve the overall safety of Nalubaale and also to add new generation capacity to take advantage of high water flows. It was also expected that the Kiira units would ultimately replace the old and inefficient units at Nalubaale. Use of the Kiira units for base-load has improved water usage owing to the greater efficiency of these units.

## **Issue 2E: Affordability (NAPE concern 2.2.9).**

*Bujagali remains an economically risky project, a risk worsened by changing hydrology. The cost of Bujagali to Uganda has long been a contentious issue, and questions have been raised about citizens’ ability to afford its tariffs, the high cost of the project, which has grown considerably, and issues of indebtedness. At one time, the cost of the Bujagali project was reported to be US\$430 million, then US\$550 million and then US\$580 million. Now, it has risen to US\$735 million. The Prayas report of 2002 indicated that the project had been over-priced by more than double the actual costs, which could lead to a national loss of more than US\$20 million in excessive payments each year. In a meeting between the World Bank and NAPE held on the 28<sup>th</sup> February 2007 in Kampala, World Bank acknowledged that the cost of Bujagali project had increased by 30%.*

*It is, therefore, increasingly becoming clear that Bujagali Dam will not meet the basic energy needs of the majority of Ugandans who are now without power and live far from the national grid. Biomass (burning wood) continues to account for more than 90% of the nation’s primary energy use, and only a fraction of the population can afford unsubsidized electricity. Bujagali will feed into a very limited national grid, its power bound mainly for Kampala, Jinja, Entebbe and other urban centers. Therefore, we are convinced that, even if the national grid covers the whole of Uganda, electricity from the Bujagali project would not be affordable. The high cost of the project will further limit funds available for rural electrification and is expected to lead to reductions in subsidies for electricity tariffs for grid-connected users. Uganda already has the most expensive power in the region and tariffs have more than*

*doubled in recent months, thus pushing more people out of the already limited market for electricity. This will therefore negate the country's economic development and efforts for poverty eradication.*

### **Response 2E: Affordability**

**2E.1** *The latest project cost estimate is US\$799 million, including US\$511 for the EPC cost. This compares to an expected EPC cost of US\$315 million in 2000 during the first attempt to develop the project. The main reasons for this increase in EPC cost by approximately 65% are: (i) increase in the cost of metals by an estimated 90% over the last 5 years (metals account for about 40-60% of power generation equipment); (ii) increase in the cost of oil (140% between 2000 and 2006), which raises the cost of transporting equipment to Uganda over more than 1,000 km from the nearest port in Kenya; (iii) a tighter market for power generation equipment: higher global demand combined with consolidation among manufacturers has resulted in higher prices. The AfDB Group and other lenders have taken several steps to ensure that costs of Bujagali reflect current market conditions. BEL conducted its procurement of the EPC contractor under the supervision of the EIB. In addition to the review of bid prices conducted by BEL's Owner's Engineer, the EPC contract price and conditions were reviewed by the lenders with the assistance of their Independent Engineer before finalization. Average end-user tariffs in Uganda almost doubled in 2006 and have reached around US¢17.2/kWh (excluding VAT). This is due to the rising proportion of currently expensive thermal power. The increased price still does not fully cover the cost of generation, transmission and distribution, estimated at US¢25/kWh, requiring government subsidies for the difference. (This would not have been necessary had Bujagali been commissioned by the end of 2005, as originally envisaged.)*

**2E.2** *The levelized wholesale tariff of Bujagali power is US¢9.7/kWh under the low hydrology scenario (or US¢5.7/kWh under the high hydrology scenario) in 2006 real terms. According to the Economic Study, Bujagali's commissioning in 2011 would enable the cost of power to end-users to fall to US¢16/kWh in 2006 money. This would have improved the affordability of power to end users. The alternative sources of power for residential consumers who are not connected to the grid are significantly more expensive: the Economic Study estimates this cost at US¢126/kWh on average. PPA Ltd estimated that expenditure on electricity by grid-connected residential consumers would not exceed 5.2% of household income on average in 2011, which is considered to be an affordable proportion. Affordability will improve further with time as per capita incomes rise.*

*Management acknowledges that this project cannot meet the needs of the remaining 95% of Ugandan households. Other efforts are needed and are underway, such as the ERT Project. As well, the impacts of electricity programs and pricing will be evaluated through a poverty and social impact analysis that will focus on issues of affordability and Willingness-to-Pay.*

### **Issue 2F: Policies (NAPE Concern page 10, para 1).**

*We believe that the absence of an adequate and comprehensive economic and alternative (options) assessment of the Bujagali dam Project violates the AfDB Policies on Economic Evaluation of Investment Operations, Poverty Reduction, among others, which requires the evaluation of projects to ensure that they meet development goals.*

### **Response 2F: Policies.**

*Management believes that the alternatives considered for the economic analysis were complete and appropriate, and in compliance with ESAP (2001) With regard to ESAP, AfDB Management notes that it focuses on the Bank's mission of "sustainable poverty reduction" and explicitly highlights that, "the Bank's support for poverty reduction is focused on actions, consistent with its mandate, to increase opportunity, enhance empowerment, and strengthen security." Within this broad framework, a critical priority is promoting broad based growth, given its proven importance in reducing poverty. Management views the Bujagali hydropower plant as an important element of the infrastructure backbone needed for Uganda to continue its broad based growth in support of poverty reduction.*

**Issue No. 3: Information Disclosure, Transparency and Openness regarding the Bujagali Dam Project (NAPE concern 2.3.2)**

*Issue No. 3 A: Nile Hydrology and Lake Victoria. More transparency and openness is needed on how various options have been evaluated. At least, project proponents should release all documents on the project's economic viability, including all studies on the Lake Victoria/Nile hydrology, the Power Purchase Agreement, and options analysis. The information must be released with adequate time to review before further action is taken on Bujagali. The only document released for review was BEL's SEA, which does not address the overall issue of Lake Victoria's long-term health, other than to assert that Bujagali Dam will be designed based on the "Agreed Curve."*

**Response 3 A: Information Disclosure, Transparency and Openness regarding the Bujagali Dam Project**

*As described in Item 1 above, a thorough hydrological analysis was undertaken as part of the due diligence for the project. This analysis underwent extensive internal reviews and also was discussed in a series of meetings with Ugandan power sector stakeholders. Following the final stakeholder consultation in January 2007 regarding the Economic Study, the conclusions regarding hydrology were publicly disclosed on February 26, 2007. A copy of this report was provided by IFC staff to the Requesters on February 28, 2007.*

**Issue 3B: Power Purchase Agreement (NAPE concerns 2.3.4 thru 2.3.6).**

*The key document that assigns economic risks, the Power Purchase Agreement, was only recently (January 8, 2007) released for public scrutiny at the Uganda Electricity Regulatory Authority's (ERA) Office in Kampala. It does not include the costs of Bujagali dam project, it does not apportion responsibilities, risks and guarantees between the parties regarding the dam project*

*The previous Power Purchase Agreement for AESNP was first kept secret, until after the High court of Uganda ruled that it is a public document that should be made public. This was also the position of the Inspection Panel in 2002, which stated that "It seems evident that full disclosure of the [Power Purchase Agreement] is vital, if the intent is to place the public in a position to analyze, understand, and participate in informed discussion about viability of the Project and its impact on the economy and well-being of Ugandans." When the AESNP Power Purchase Agreement was finally released, it was revealed that it posed unjustifiable risks to the Uganda and government, consumers and taxpayers. Uganda laws require that Parliament must approve the state's obligations under the Power Purchase Agreement. There is no evidence that BEL's Power Purchase Agreement has been debated and approved by Uganda's Parliament, yet it is reported in BEL's SEA to have been signed way back in 2005 by government. BEL's SEA was therefore signed without incorporating the costs of the project related to studies, construction and compensation and resettlement issues, which will definitely be reflected in the tariff of electricity from the Bujagali project. This is not proper.*

**Response 3B: Power Purchase Agreement**

**3.B.1** *Copies of the Power Purchase Agreement and Implementation Agreement were made publicly available at the ERA offices for a 30 day period starting on March 6, 2006 (see Annex 8, Public Notice by the ERA concerning the Bujagali project). Management has been informed by ERA that this disclosure satisfied the requirements resulting from the High Court ruling: Greenwatch (U) Ltd. vs. A.G & Uganda Electricity Transmission Company Ltd. HCCT-00-CV-MC-0139 of 2001 to which Management believes the Requesters refer. However, in the interests of greater transparency, ERA has again made the Power Purchase Agreement and Implementation Agreement publicly available for an open-ended period, starting on January 8, 2007. ERA's disclosure of commercial documents of this nature is a departure from standard industry practice, since such documents are frequently considered to be sensitive and confidential. It is understandable that ERA may wish to retain a measure of control over the circulation of the documents.*

**3.B.2** World Bank Management further has been informed by the regulator that the Power Purchase Agreement, available at its office, is a copy of the documents signed by BEL and UETCL, the transmission company and power purchaser, on the basis of which lenders are currently negotiating the project financing package. The Power Purchase Agreement, in combination with the Implementation Agreement (also disclosed), provides a detailed allocation of responsibilities among BEL, UETCL, and the GoU. The Agreements have been reviewed by the AfDB Group and are consistent in form and substance with international standards.

**3.B.3** While World Bank Management acknowledges that the disclosure of the Power Purchase Agreement is limited to the premises of the regulator's office, it wishes to highlight that such disclosure in itself is highly unusual. In this context, the World Bank Inspection Panel investigation report highlighted that "the Panel finds that according to IDA's policy, there is no specific requirement to disclose contracts to which IDA is not a party. Therefore, in not requiring that the Power Purchase Agreement be disclosed, the World Bank Management's actions have been consistent with IDA's Disclosure Policy."

**3.B.4** With regard to the final tariff, the GoU has followed a two step process for the project wherein the sponsor was selected based on a competitive and transparent process. The sponsor was then required to select the EPC contractor through a competitive process. This process has now been undertaken by the sponsor, and the EPC contractor has been selected. Annex D of the Power Purchase Agreement spells out the methodology for tariff calculation, including the methodology for incorporating the EPC and other project related costs that are considered in calculation of the tariff. In accordance with normal practice, the actual tariff will be determined at the commissioning of the plant.

The GoU will be required to seek all approvals under local laws, prior to the lenders (including the Bank Group) providing any financing for the project.

### **Issue 3C: Policies (page 10, last para)**

We believe that the discrepancies in the Power Purchase Agreement pose a great threat to the Ugandan society and economy and are a contravention of the law of Uganda and violate the World Bank's Policy on Information Disclosure, Accountability, Economic Evaluation of Investment Operations (OP 10.04), Poverty Reduction (OP/BP 1.00), etc.

### **Response 3C: Policies.**

The AfDB Group Policy on Disclosure does not require the Power Purchase Agreement or other such commercial documents to be publicly disclosed, especially those to which the Bank is not a party. However, the lenders Group financing this project encouraged private companies and governments to disclose the maximum information. In response to World Bank Group requests, the sponsor and the government decided on an exceptional basis to make the Power Purchase Agreement publicly available at the ERA's office.

Furthermore, the World Bank Group led consultants carried out the economic evaluation of the project required for investment operations for all the lenders. The report, "Bujagali II – Economic and Financial Evaluation Study" (i.e., the Economic Study) prepared by PPA Ltd., is publicly available as noted above in Item 1.

As explained above, Management considers that it has properly applied its Poverty Reduction in preparing this project.

#### **Issue No. 4: Safety of Dams (NAPEconcern 2.4.0)**

The Requestors state that the failure to address dam safety issues and environmental audits in the SEA violates African Development Bank's Policies and Procedures on safety of Dams and is inconsistent with the Environmental and Social Auditing Procedures (2000),

**Issue 4A:** Bujagali dam design does not adequately consider the safety problems regarding the old Owen Falls (Nalubaale dam), especially now when the powerhouse and bridge have large cracks. BEL's SEA states that a Bujagali Dam Safety Panel (BDSP) shall be formed. Just forming a dam safety panel is not enough. There should have been an integral comprehensive plan and strategies for addressing dam safety issues, such strategies should have included concrete steps to decommission the old Nalubaale and disaster preparedness mechanisms and associated costs. Such strategies are very important; especially since there was no EIA done for Kiira dam and no post-construction audit don for Nalubaale dam. The issue of whether Bujagali Dam would be able to survive a failure of the Owen Falls Dam is still a major concern.

#### **Response 4A: Safety of Dams**

**4A.1** While the AfDB does not have a policy that explicitly addresses dam safety, AfDB Management agrees that dam safety concerns are an integral part of the review of any hydropower development. Dam safety analyses are normally conducted as part of feasibility studies and later as part of detailed design. For large dams an expert panel is normally established to advise on the dam's design, construction, and operation. BEL has developed a TOR to establish a Dam Safety Panel (DSP) and related staffing satisfactory to the lenders' Group. The TOR considers the examination of any safety issues posed by Nalubaale and its impact on Bujagali as well as extensive participation on all technical matters associated with Bujagali. Periodic monitoring of dam operation, including safety, is normally conducted by independent specialists. This work is conducted separately from a project's social and environmental studies, and any recommendations are reflected in the Social and Environmental Action Plans (SEAPs).

**4A.2** The existing Nalubaale dam and powerhouse were constructed in the 1950s and unexpected and significant deterioration subsequently occurred due to the effect of the alkali-silica reaction between the aggregates and the cement in the concrete. The GoU, with the assistance of IDA under the Third Power Project, engaged consultants to review the safety of the dam structure (i.e., a post-construction audit) and to devise a plan and strategy for remedial works to correct deficiencies. These remedial works were concluded under the oversight of an international expert panel.

**4A.3** At the time of the appraisal of Bujagali by AES, the Lenders' Independent Engineer (Harza Engineering, USA) reviewed the reports of the panel of experts for the remedial works of Nalubaale and concluded in its April 2001 report that the structures do not pose an unusual risk to the Bujagali project. The panel advised on the need to continue regular monitoring and dam safety reviews of Nalubaale in a manner consistent with good international practice. The DSP appointed by AES conducted an independent review of Nalubaale remedial works and concluded that "the remedial and strengthening works for the Owen Falls main dam satisfactory as they were planned and will increase the factor of safety to comply with current standards." The current Lenders' Independent Engineer (Colenco International Power, Switzerland) has endorsed the above recommendations of Harza in regards to Nalubaale (Owen Falls).

**4A.4** Monitoring of the Nalubaale structures is also being addressed through the Fourth Power Project. According to the latest Annual Inspection Report (Year 2005), prepared by Lahmeyer International, there is no present risk in the condition and stability of the main dam, but the situation is more serious for the intake structure, the headrace bridge and the powerhouse structure. Lahmeyer concludes that “a long term safe operation of the turbines can not be guaranteed.” In 2005, ESKOM (Uganda) Ltd. was awarded the long-term concession for operating the Nalubaale/Kiira facility. This includes obligations to ensure availability and safety. ESKOM (Uganda) has since taken over the annual inspection duties, and has also initiated remedial works for the intake structures, most recently for unit 8.

**4A.5** It is accepted practice to assess the consequences of failure of large dams and to use the results of the analysis in the formulation of emergency preparedness and response plans. An Emergency Preparedness and Response Plan (EPRP) that includes failure scenarios for the Nalubaale/Kiira and Bujagali is not yet available for Bujagali, but BEL is responsible to the World Bank Group through its SEAPs, which include provision for an EPRP, and compliance with such plans will be part of the financing agreements.

**4A.6** The design of the Bujagali dam has been reviewed by the technical advisors of the GoU, the current Owners’ Engineer (Montgomery Watson Harza) and the Lenders’ Engineer (Colenco Power International). The preliminary dam design, including the selection of the site, seismic design requirements, the general arrangement of the site, the location of the main structures, and the scheme for diversion of the river during construction, are considered appropriate for the site and its construction feasible. This review has also included the evaluation of flood risks and their incorporation in the design of Bujagali and is considered to be consistent with the AfDB policies.

**Issue 4B: Policies. Failure to address dam safety issues in the SEA violates AfDB Policy on Safety of Dams (NAPE concern 2.4.0)**

**RESPONSE 4B: Policies. Failure**

The AfDB has no explicit policy requirements related to dam safety. However, the World Bank’s Operational Policy 4.37 requires a DSP to be appointed to review and advise BEL on matters relative to dam design and safety as part of the implementation of any dam greater than 15 m in height. BEL has established a DSP with TOR and staffing satisfactory to the lenders’ Group. The TOR considers the examination of any safety issues posed by Nalubaale and its impact on Bujagali as well as extensive participation on all technical matters associated with Bujagali. The DSP will provide advice through final design, construction, initial filling, and start-up of the dam, including any design or operational precautions to ensure that the project is consistent with the World Bank OP 4.01, Environmental Assessment and OP 4.04, Natural Habitats. The Nile River is an international waterway, and thus the World Bank’s OP 7.50, Projects on International Waterways has been triggered. In accordance with the policy, the GoU notified all nine upstream and downstream riparian states in 2000 and in 2006, and recently (March 2007) issued a new letter notifying governments of additional information regarding the project, which has been publicly disclosed.

**Issue No. 5 Indigenous Peoples, Cultural and Spiritual Issues**

**The Requesters argue that the AfDB Environment and Social Auditing Operational Procedures (2000) and the IESIA Guidelines (2003) consider indigenous people and cultural issues important in the development of Bank projects, and state that any omission on the Bank’s part in considering the importance of people and cultural property is a violation of the Bank’s policies and procedural guidelines (NAPE concern 2.5.0).**

### **Issue 5 A: Basoga.**

*BEL's SEA considers the project area as not inhabited by indigenous people. It therefore considers Basoga as not being indigenous, yet the Constitution of the Republic of Uganda (third Schedule) considers Basoga as an indigenous people. Has the constitution of Uganda changed? Or is the Constitution of Uganda (1995) not relevant to the Bujagali project?*

#### **Response 5A: Basoga.**

**5A.1** AfDB has no policy that specifically addresses Indigenous people (IP). The AfDB response is based in the context of the World Bank policy OP 4.10 on IP.

*The project has separate programs for addressing the needs of ethnically differentiated communities and other vulnerable groups (e.g. women, youth, disabled persons). According to the Constitution of Uganda (Article 10 and Schedule 3), one must belong to one of the "indigenous communities" (or have a parent or grandparent who does) in order to be considered a Ugandan by birth. The Basoga are part of this list, but so are the 55 other groups of Uganda, including the Baganda who mainly live on the other side of the river. Thus, all natural-born citizens of Uganda are indigenous under the constitution.*

**5A.2** The Basoga are "indigenous" as opposed to foreign in origin; that is, they are autochthonous to Uganda, of as much antiquity, as the other groups. The Baganda, Banyoro, Bakiga, Banyankole, Batoro and others have exactly the same origins and antiquity, and all are farming peoples, together making up the vast majority of Uganda's population.

**5A.3** The AfDB does not dispute the Ugandan constitution's delimitation of who the indigenous ethnic groups of Uganda are. Management considers that a clear demarcation line exists between the Basoga and ethnic groups in other African countries that the Bank has defined as indigenous – such as under-representation in the politics and in the economy of the country, social discrimination and the need for affirmative recognition to ensure survival. The Basoga are a large and influential group within Uganda.

**5A.4** The Africa Region, aligning itself with other World Bank Regions looks beyond the facts of ancient origin, land, and self-definition as "indigenous," and has come to treat some, but not all, peoples of Africa as Indigenous Peoples based on the fact that they are marginalized and vulnerable. In general it follows the deliberations of the African Union's Commission on Human and Peoples' Rights (CHPR – Working Group on Indigenous Populations/Communities) and the traditions that have been established at the UN Permanent Forum on Indigenous Peoples (the "Forum") and the Indigenous Peoples of Africa Coordinating Committee (IPACC), all of which operate with broad governmental support through their respective international bodies.

**5A.5** Finally, it should be further noted that the World Bank Inspection Panel investigation report on the first Bujagali project (page 77) agreed that the Indigenous Peoples' policy should not have been triggered: "There are no minorities involved; thus there is no evidence that the World Bank's policy on Indigenous People (OD 4.20, issued in September 1991) is applicable to this Project." Management considers that as there are no changes since that time, the Bujagali project does not affect Indigenous Peoples as defined by the Bank's policy and specific regional considerations.

### **Issue 5B: Cultural and Spiritual Issues (NAPE concern 2.5.0).**

*Cultural and spiritual issues in the Bujagali project area were inadequately covered in the SEA. It is assumed in the SEA to have addressed cultural and spiritual issues of the affected community.*

*This, then calls for an effective consultation process involving all clans that are culturally and spiritually attached to Bujagali Falls followed by a public hearing.*

## **Response 5 B: Cultural and Spiritual Issues.**

**5B.1** AfDB has no explicit policy on cultural and spiritual issues. However, BEL is committed to complying with World Bank OP/BP 4.11, Physical and Cultural Resources. Community concerns in relation to these issues have been discussed regularly in public consultations, including expanding consultations to the Buganda and Basoga Kingdoms, who are culturally responsible for villages living on the west and east banks, respectively, since the project preparation began in 2000, under the original developer AES and, subsequently, BEL.

**5B.2** The management of cultural and spiritual issues is part of the overall social management plan (part of the SEAP), which will be implemented throughout the life of the project. Implementation will be monitored/supervised by the World Bank Group throughout the loan/contract periods. A Ugandan NGO, "Interaid," was contracted to carry out independent monitoring during AES implementation of its RAP. BEL has committed to independent monitoring, also through Interaid, of all aspects of the project, including those related to cultural heritage.

**5B.3** There have been extensive consultations on various social aspects of the project, including spiritual and cultural issues. Appendix H of the Hydropower SEA report provides information on the consultations.

### **Issue No. 6: Compensation and Resettlement (NAPE concern 2.6.1 to 2.6.5)**

*In the view of the Requestor, the lack of a detailed and updated compensation and community development action plan is violating the AfDB Group's policies on Involuntary Resettlement (2003), Good Governance (2000), etc*

### **Issue 6A: AESNP Resettlement.**

*BEL's SEA states that AESNP, the previous project proponent, completed land acquisition, resettlement and relocation of all residents formerly located in the reservoir area and compensated land owners and other project affected people. However, houses and facilities provided to the resettled communities by AESNP are now dilapidated less than five years after construction, implying that the structures were poorly constructed and would probably soon crumble.*

### **Response 6 A: AESNP Resettlement.**

*The SEA Report states that AES would assume responsibility for resettling project affected people, not that the resettlement program was completed. Implementation of the resettlement plan started under AES. Approximately 4,600 stakeholder contracts have been compensated. Resettlement/compensation could not be fully completed because the project was terminated in 2003. The BIU, which was left in charge by the GoU of community relations until a new developer could be identified, was constrained by limited resources. BEL became involved in the resettlement process in 2006 and conducted the APRAP, which identified legacy issues and actions that need to be undertaken for the project, in compliance with World Bank Group resettlement policies. BEL is also committed to implementing the CDAPs. Recent supervision missions have confirmed that the quality of resident houses is still adequate. The outstanding claims under the resettlement grievance mechanism, do not include any complaints concerning housing quality. Any future claims will be addressed through the grievance mechanism.*

**Issue 6 B: Compensation and Resettlement Frameworks (NAPE concern 2.6.3).**

*The existing compensation and resettlement frameworks are out-dated and do not reflect current economic situations.*

**Response 6B: Compensation and Resettlement Frameworks.**

**6B.1** In 2000, AES prepared and disclosed RAPs for the hydropower project and also for the transmission line. Only implementation of the RAP for the hydropower project and the Kawanda substation (as part of the transmission line) had been initiated in 2001.

BEL has carried out a stocktaking assessment of the past resettlement (i.e., the APRAP) for its Hydropower Project and for the Kawanda substation, which is posted at the World Bank website ([www.worldbank.org/Bujagali](http://www.worldbank.org/Bujagali)) and at the InfoShop. With respect to the transmission line (part of the Interconnection Project) that will be owned by UETCL and is expected to be financed by the AfDB (and would thus be considered an associated facility by the World Bank), a new Resettlement and Community Development Action Plan (RCDAP) has been disclosed at the above-mentioned website and InfoShop.

**6B.2** Both the APRAP and the RAP for the transmission line have taken into account new conditions. For example, the APRAP determined that past resettlement did not provide for vulnerable people and has recommended actions to ensure that these people's needs are addressed going forward.

**Issue 6C: Bujagali Interconnection Project (NAPE 2.6.4).**

*People affected by the Bujagali Interconnection Project were never compensated and resettled. It is therefore important that compensation and resettlement of project-affected people is based on updated compensation and resettlement frameworks that are in line with current economic situation..*

**Response 6C: Bujagali Interconnection Project**

**6C.1** The transmission line RAP prepared by the previous developer, AES, was not implemented because the sponsor withdrew and the project was terminated. The SEA prepared by BEL for UETCL's Interconnection Project includes a clear commitment to resettle adequately any project affected persons in the transmission line area. Land evaluations for the Interconnection Project were completed in late 2006 and early 2007 and formed the basis for compensation in the new RCDAP. The AfDB has posted the Executive Summary of the RAP for the transmission line in its public information center (PIC) and indeed NEMA have stipulated that this must be done in their issued approval of 20<sup>th</sup> April. Land evaluations for the Interconnection Project were completed in late 2006 and early 2007 and form the basis for compensation in the new RCDAP. The arrangements for compensation comprise a carefully designed series of packages to reflect the actual nature of impact to property, living accommodation and holding or household economic viability in the project corridor. In many cases there will be a choice of package option for PAPs, for example in certain cases between a replacement house package in situ or a resettlement house and plot ex situ. Valuations for agricultural land are agreed on a District basis and have been updated and are publicly disclosed.

**Issue 6D: Policies (NAPE concern 2,6,5).**

*The lack of a detailed compensation and community development action plan in BEL's SEA is a violation of AfDB Policy on Involuntary Resettlement (2003), Governance Policy (2000), Stakeholder Consultation & participation (2001), Environmental and Social Audit Guidelines (2000), etc.*

## **Response 6D: Policies**

**6D.1** Management considers that BEL has carried out social and environmental evaluations and documentation that are in full compliance with AfDB policies. The social and environmental assessments were disclosed in the AfDB public information center (PIC), and at a series of locations in Uganda both in Kampala and in the project area in Uganda from 21 December 2006. All such project documentation can also be obtained from the Project website ([www.bujagali-energy.com](http://www.bujagali-energy.com)). The resettlement and environmental management requirements of the SEA and RCDAP will be updated in the project Social and Environmental Action Plan (SEAP) during the inception period of the project. This document will be publicly accessible and will incorporate conditions of approval from NEMA. The SEA/RCDAP incorporates a commitment to the project grievance mechanism which will equally be enshrined in the SEAP.

**6D.2** Any grievances that individuals might have regarding compensation can be referred to the NGO engaged to independently review claims brought by individuals regarding the proposed and agreed packages, or any related matters regarding inequitable implementation. This witness NGO appointed by UETCL will operate independent of project management or government influence in assessing the fairness of any claim and in making its recommendation for redress or otherwise to project management.

These can also be obtained from World Bank website dedicated to the project ([www.worldbank.org/Bujagali](http://www.worldbank.org/Bujagali)).

### **Issue No. 7: Consultation Concerns (NAPE Concern in the letter from Namiya Community, dated 18 February 2007).**

**The Requestors are of the opinion that the failure to address concerns raised and obtain agreements during the consultation process by dam developers violates AfDB's policies on Stakeholder Consultation and participation (2001), Environment Policy (2004), etc.**

**Issue 7A:** While there is evidence of consultations in BEL's SEA, project proponents confuse consultation with true participation in a decision-making process. Consultations with the 240 clans in Busoga and 52 clans of Buganda were not done at all. In addition, the SEA does not indicate how each of the stakeholders' concerns raised during the consultation process are going to be addressed. The failure to address concerns raised and obtain agreements during the consultation process by the dam developer violates AfDB Policies on Stakeholder and Participation (2001), Environment (2003), Environment & Social Audit Guidelines (2003), etc.

### **Response 7A: Consultation Concerns.**

The SEA includes an annex listing issues and concerns raised in each of the public consultations. There is also a Public Consultation and Disclosure Plan (PCDP) discussing past and planned consultation activities. Both the SEA and PCDP are posted at the website: [www.worldbank.org/Bujagali](http://www.worldbank.org/Bujagali) and are also available at the InfoShop. Also, the AfDB has posted the Executive Summaries (in English and French) of the SEA and the RAP in its public information center. The consultation process includes continuous consultations with representatives from communities and clans. While it would be impossible to address "each of the stakeholders'" concerns, at all meetings with stakeholders, the developer has invited community representatives and community members to raise issues with regard to their involvement in the project. For example, at community meetings held on October 5 and 6, 2006, community members made comments with regard to public services and job opportunities, among others.

### **Issue No. 7 B: Naminya Community.**

*Most of the people who were moved in 2002 were not given land titles to their new lands, which caused great uncertainty. Problems that arose with the resettled communities were left unresolved for years after the original project sponsor (AESNP) abandoned the project. It took strenuous lobbying on their behalf by our organizations to get the government to respond to some of the problems. [See below for more detail]. Supervision/preparation missions observed in 2006 that 34 of the 50 homes in Naminya were occupied. To date, 28 of the 34 households have already received their land titles, with the remainder to be settled (see sub-item on Land Titles below).*

### **Issue No. 7C: Land Titles.**

*We were promised that all the resettled people would be given plots of land with land titles. Few people have so far received land titles for their plots after long waiting and protests to government. Many of us are not sure whether or not we shall be able to get land titles for our plots of land. This has caused uncertainty to whether that land we have belongs to us or another person holding the land title, who can easily evict us. We have heard rumours that the land we have belongs to Madhavani.*

### **Response No. 7 B/C: Naminya Community & Land Titles**

*This issue was addressed in the APRAP. As explained above, 28 of the 34 households have received title in Naminya, of which 19 titles have been processed. One title is awaiting selection of a guardian for a minor; another is in probate. Four remain to be settled because of discrepancies in the original land survey. The BIU is working to resolve these discrepancies. BEL is working with the BIU and local authorities to speed up the process. Any land not titled is owned by the Uganda Land Commission; no third parties are involved. This situation was clarified with the community on March 1, 2007.*

### **Issue No. 7 D: School.**

*We were promised a Primary School for our children, but today, our families are increasing and the children do not have any primary school to go to. We have improvised by using one of the vacant houses in the resettlement area as a nursery and primary 1 to 4 classes. But, we are continuously warned to vacate the premises and take our children elsewhere. Where shall we take our children for schooling? The available schools are far away and our young children find it difficult to go there. The nearby school is a missionary and private school and the owners have refused our children to go to attend in that school.*

### **Response 7D: School.**

**7D.1** The resettlement program included provisions for improvement of educational facilities within the project area. This included five schools that were selected for improvement of existing structures, construction of new structures, provision of equipment and improvement of existing sanitation facilities. Because AES withdrew in 2003, only a few of the planned improvements were implemented at Budundo and Kyabirwa Primary Schools. BEL has recognized this gap and lack of implementation in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP. In particular, the Naminya Primary School, St. Stevens Secondary School and Nile Vocational School never benefited from the community development/resettlement programs.

**7D.2** The APRAP identified this issue as one of legitimate concern, although the original commitment was for the school in Naminya to be refurbished in order to accommodate the additional pupils from the resettlement village. Local educational authorities consider that the resettlement village still has too few students to justify its own primary school. Thus, BEL has recommitted to upgrading the existing Naminya school, but also recently committed to building a kindergarten (nursery).

**Issue No. 7E: Health centre**

*We were promised a Health Centre III with maternity ward, laboratory, minor theatre, inpatient wards, but today what we have is a model house with two health personnel which operates 5 days a week and only 3 hours a day. To get this facility was a very long struggle with the help of some NGOs that linked us to Mukono District Local Government. The question is, "When shall we ever get the type of health facility that was promised"?*

**Response 7E :Health centre:**

*The resettlers at Naminya were promised a health center but not a level III one (i.e., with maternity ward, laboratory, etc.). There is an existing level III health center at Wakisi (about 7 km to the north of the resettlement site), and the local authorities say that they do not have the resources to support another one. BEL is committed to further upgrades to the existing health services as part of the CDAP.*

*One of the structures built as a house in Naminya village is now used as a health center, and medicine is available. This existing health center was equipped by the Ministry of Health at the Naminya resettlement community and is an interim solution until BEL begins implementing the Bujagali project, when the health program under the project also will begin. In the pre-construction phase of the project, BEL will convert two vacant houses into accommodations for the health center staff who now commute from Jinja. This will allow operating hours to be increased. BEL's program also includes improvements of Wakisi and Bodondo Health Centers on the west and east banks respectively, a program for HIV/AIDS/STD control and mitigation, as well as a program for vector-borne diseases.*

*BEL recognizes the gap in health services and lack of implementation of the health program in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP.*

**Issue No. 7 F: Water.**

*We were promised water tanks for harvesting rain water on every house, but after using those tanks for less than one year, they started leaking and now majority of them are not functioning. The available 3 functional plastics water tanks were provided by an NGO. There is only one borehole in the community that can not serve the whole community. Even then, it is not centrally located and not easily accessible by the majority of the resettled people.*

**Response 7F Water:**

*7F.1 This issue is addressed in the APRAP. AES installed a drilled well at the entrance of the Naminya site near the health center. AES also built an improved spring catchment in the middle of the site. A pre-existing drilled well is available to the resettlers at the other end of the site. AES also installed rain harvesters, and there are currently 51 rain harvesters at Naminya. The well, spring, and rain harvesters lack maintenance. For example, small parts are not replaced, etc.*

*7F.2 BEL has recognized the gap in water provision and lack of implementation of the water program, especially the fact that the communities need training in maintenance of small technical works. The APRAP identified the gaps and the CDAP has included specific actions to be taken. For example, recent visits to the community have found that the problems appear to be related to the taps in the rainwater tanks. Maintenance of the tanks is the responsibility of the resettlers. However, BEL has committed to replacing the taps and training people in maintaining the tanks. BEL has also upgraded the pump in the well installed by AES. Overall, access to water is above the level found in surrounding communities as well as in planning guidelines for communities in rural Uganda.*

**Issue no. 7G: Housing.**

*The houses that were provided with are sub-standard and incomplete. By the time, people were resettled; the houses did not have kitchens, were not plastered and lacked ceilings. The houses are too small to cater for our families, especially those of us with two wives and many children. To make the matters worse, the houses are now cracked and we fear that they will fall on us.*

**Response 7G: Housing.:**

*AfDB missions have observed and concluded that the standard of housing is satisfactory. Cooking is an outdoor function in rural Uganda. The RAP provided for kitchens to be built outside the main houses, by the owners themselves, following African tradition. The sizes of the houses were calculated based on average family size and are of better quality than the original houses. The new houses are of permanent character and are of a design that was developed with full participation of the project affected households. Post-resettlement expanding families are responsible for providing adequate housing for their family members.*

**Issue no. 7H: Latrines.**

*The latrines that were provided were too small in size and shallow (less than 8 ft deep) and whenever it rains, they are filled with water that floods which could pose danger to our health.*

**Response No. 7 H Latrines:**

*This issue is addressed in the APRAP and concerns six specific latrines. All the existing pit latrines were constructed according to good practice designs at the time. Latrines at six houses were later found to be adversely affected by water inflow, and a different model was installed at these locations. The current conditions of all the latrines will be evaluated during the pre-construction phase, and BEL will consider next steps for addressing any outstanding issues or problems. BEL will also build latrines at the construction site, thus improving sanitation for the project affected people.*

**Issue no. 7 I: Electricity.**

*We were promised electricity, but up to now, we have never been given electricity. Moreover, during the resettlement, some settlers were given plots in the way-leave of the high voltage transmission lines that evacuates electricity from Jinja to Kampala. Later on, these people are being told that they cannot use these plots and yet they are not given alternative plots.*

**Response No. 7 I Electricity.:**

*BEL, together with UMEME, is exploring possibilities for the provision of electricity. BEL will also finance a feasibility study for electrical distribution to the resettlement community, which may convince UMEME to provide a supply. Any future scheme that seeks to respond to the demand for electricity and preferential rates has to take into account the challenge that, BEL, as a producer of electricity, is not allowed to distribute it. In addition, electricity needed in the project impact area for domestic consumption has to be low voltage, whereas the electricity produced by the hydropower project will be high voltage.*

**Issue No. 7 J: Sources of income and food.**

*Where we originally were, we carried out fishing and farming as sources of income, but the plots we were given in the resettlement area are not enough for farming. Moreover, we no longer have access to the river to do fishing, because the river has been fenced-off by the dam developers. This has negatively affected our sources of income and food. The fish ponds that were promised to us have never been put in place.*

### **Response No. 7 J: Sources of income and food:**

**7J.1** Changes in income and livelihoods of project affected people are being monitored through BEL's bi-monthly site visits to resettled families in Naminya and surrounding villages. Project affected people were provided with the necessary information to make informed choices with regard to resettlement packages. The 34 households at Naminya chose to be resettled there and receive a house on one acre of land, in addition to two more acres for farming. Naminya is farther away from the river, but people in the area are nevertheless combining fishing with farming.

The APRAP identified income replacement programs as necessary for the project to meet World Bank Group resettlement standards. These programs are planned over several years following the project's financial closure. Land is extremely limited in the area, so BEL has committed to implement a program of intensified agriculture for increasing yields on available lands and developing markets for produce, including assistance in establishing small business and providing micro-credit.

**7J.2** BEL is committed to honoring all the promises made by the previous developer; however, the construction of a fish pond was not included as part of the resettlement package. With regard to access to the river, the west bank of the river is fenced, but gates are temporarily kept unlocked in order for the population to reach the river on that side. BEL will work with local communities to ensure that access to the river is provided during construction and operation for fishing and other water-dependent uses. BEL will collaborate with NAFFIRI, the Uganda national fisheries institute in Jinja, to develop the fisheries program.

### **Issue No. 7K: Resettlement disturbance package.**

*We were promised a resettlement disturbance package for a period of five years, but up to now, we have never received anything.*

### **Issue No. 7 K: Resettlement disturbance package.**

Each affected household received and agreed to a resettlement/compensation package. This included a one time disturbance allowance/resettlement assistance compensation. A RAP does not normally include a five year resettlement disturbance package. Longer term monitoring and income restoration activities that were planned by AES over a period of several years ceased or were curtailed when AES withdrew. Continuation or completion of these activities, updated to reflect current conditions, is planned by BEL and is addressed in the APRAP and CDAP.

### **Issue No. 7 L: Community centre.**

*We were promised a community centre, but up to now, it has never been put in place.*

### **Response No. 7 L Community centre**

Insofar as can be determined, no formal or other commitment to construct a community center was made by AES. The APRAP does document that a local political leader made a recommendation for such a center during the 2006 consultations.

### **Issue No. 7 M: Market.**

*We were promised a market nearby, but up to now the market has never been constructed.*

### **Response 7M Market.:**

Provisions for new markets and marketing are provided for in the new CDAP, Section 5.3.

**Issue No. 7 N: Environment protection**

*We were promised tree seedlings to plant in our compounds and the settlement area, but up to now we have never received any seedlings, yet the resettlement is on a slope and is bare, without trees.*

**Response No. 7 N Environment protection:**

*Each household received five tree seedlings as part of its package. Most houses at the resettlement site are surrounded by trees. BIU provided additional seedlings as recently as 2005. The prior sponsor did have an agro-forestry program for farmer groups and schools. BEL, as part of its agricultural extension program will provide additional technical advice and assistance for agro-forestry, among other land-based income-generating activities.*

**Issue No. 7 O: Employment.**

*We were promised jobs once construction of Bujagali dam starts. But we need written assurance that we shall get those jobs when construction of the dam starts, particularly we want to know how many of our people will be employed.*

**Response No. 7 O: Employment.**

*BEL has publicly declared that recruitment offices will be opened on the east and west banks. An EPC contractor will manage the entire construction, and the contract between the EPC and BEL stipulates that priority will be given to qualified local people. During construction, around 600 to 1500 workers will be needed. Only about 10% of these jobs, however, will be for unskilled labor and realistically open to local labor. Vocational training, in collaboration with the existing technical schools in the area, will be provided, but this training may not add substantially to the number of local people who can be employed. Realizing the gap between local expectations and likely local recruitment, BEL has recently committed to developing additional job opportunities, including a project to plant trees in a 100 meter belt around the new reservoir and between the Bujagali hydropower facility and Kalagala Falls. International labor and employment rules (i.e., the World Bank Group) as well as local Ugandan rules and company standards will apply.*

**Issue NO. 7 P: Routine maintenance of access roads and other infrastructure.**

*We were promised routine maintenance of our access roads, but up to now, maintenance has never been done.*

**Response No. 7 P: Routine maintenance**

*Again, BEL has recognized the gap in road services and lack of implementation of the road program in the APRAP, and has included specific actions to be taken in the SEAP and the CDAP. The resettlement community was also educated on taking responsibility for road maintenance, as was originally planned. Each household is supposed to maintain the portion of the road adjacent to its plot. Further education may be needed on this issue with the support of the local authorities.*

**Issue no. 7 Q: Visitations and consultations by World Bank, Government and the dam developer.**

*Why is it that whenever World Bank, Government and the Bujagali dam developers visit us, they just pass through without talking to us. They just discuss among themselves and leave. Even when they want to discuss with us, they do not give us ample time for us to prepare ourselves. Does being in a settlement remove our respect of being citizens of this country?*

**Response No. 7 Q: Visitations and consultations by World Bank, Government and the dam developer.**

*The social scientists who have participated in missions, starting in 2000 and continuing to the present have all spent much of their time visiting project affected people in the field, including visits to the Naminya resettlement site. There have been extensive consultations with project-affected persons, and ample disclosure of the project documents. BIU has also acted as a liaison to the community. Appendix H of the Hydropower SEA report, the PCDP, provides information on the consultations. (See also Annex 4.)*

**Issue No. 8: Old and Inconsistent Data.**

*BEL's Social and Environmental Studies (SEA) are based on old data that has little or no bearing to current situation. For example, sections 7.4.1.3 p336, water quality data, climate, air-borne particulate data, among others were done almost ten years ago and do not reflect the current environmental realities, e.g., declining lake and river water levels degradation of wetlands and forests, increased silting, climate change, etc. that have impacts of hydropower production. Fish species that were found to be endemic in the previous AESNP studies were mysteriously not discovered in BEL's SEA, raising doubt on the fish report in BEL's studies. Was it a deliberate attempt on the part of the consultants to manipulate information? Or is it that now the endemic fish species have become extinct?*

**Response No. 8: Old and Inconsistent Data.**

**8.1** *The proposed Bujagali Hydropower Project is a new operation. As such, there has been a fresh assessment of the social and environmental aspects of the project, which has also required drawing upon former studies, where relevant. BEL conducted consultations in January, March and May 2006 related to development of the Terms of Reference (TOR) for the Bujagali project's social and environmental analysis. Participants included government agencies (several with technical input to the SEA scope), other stakeholders, such as tourism operators and local businesses, and NGOs, including NAPE and Save the Bujagali Crusade. These consultation efforts resulted in the final TOR of June 2006.*

**8.2** *The proposed project benefits from the significant social and environmental due diligence that had been performed for the previous project under AES. The current project has also retained its original environmental footprint. Building on the relevant work conducted to date, BEL's consultants conducted further field studies and analyses where the need for updated information had been identified, such as water quality, fisheries, terrestrial ecology, resettlement and compensation, and cultural resources. Other recent information compiled by other specialists on hydrology and river flow was incorporated in the December 2006 SEA. Existing baseline information in such areas as climate, ambient noise, and air-borne particulates is not expected to have changed significantly, and those data are considered representative of current conditions.*

**8.3** *The Fisheries Resources Research Institute (FIRRI) completed four quarterly surveys during 2000 for AES, to assess seasonal conditions during Uganda's short and long rainy seasons, and the short and long dry seasons. Additional fisheries studies for the project were conducted for BEL by the National Fisheries Resources Research Institute (NAFIRRI), based in Jinja, Uganda. The same institute, then called FIRRI, also conducted the studies for AES. For both studies, NAFIRRI/FIRRI's scope of work consisted of compiling baseline data of the water quality and ecology (invertebrate, fish, and macrophyte surveys) of the reach of the Nile River that includes the proposed hydropower plant. NAFIRRI's survey for BEL in April 2006 corresponds seasonally to the survey conducted for AES and was conducted at the same locations.*

**8.4** In its 2000 surveys, FIRRI concluded that there are six keystone species of importance to fisheries; the same keystone species were found by NAFIRRI in the 2006 survey. A total of 35 fish species were found in the study area during the four surveys in 2000, and 21 were found in the second quarter 2000 survey. The April 2006 survey conducted for BEL found 18 species. Such a level of variability (18 vs. 21) is to be expected and is not necessarily indicative of species loss or extinction, but rather variations in data collection, migration and location of species, etc. The reach of the Victoria Nile that will be affected by Bujagali is not considered to be critical habitat for any fish species of conservation importance.

**Issue No. 9: Fauna (Terrestrial & Aquatic).**

*BEL's EIA studies on animals, birds and aquatic life were carried out for very short periods of 1 to 2 months that do not give the variations in species distribution and diversity that usually occur over a period of one year. The failure to adequately conduct environmental assessments violates the AfDB Policies on Environmental and Social Audit Guidelines (2003) ,Environment Policy (2004), etc.*

**Response No. 9: Fauna (Terrestrial & Aquatic).**

*As noted in Item 7 above, the Bujagali project benefits from the considerable baseline social and environmental data gathering for the previous project under AES. Work conducted for BEL was designed to build upon those data and additional studies were undertaken as needed, to confirm or update that baseline. For example, the Terrestrial Ecological Assessment (Plants, Birds and Mammals) was prepared by Makerere University Institute of Environment and Natural Resources in May 2006, based on fieldwork conducted during March 2006. The earlier work for AES was conducted in July and August of 1998. The survey of aquatic life was conducted by NAFIRRI in April 2006 and complements the four quarterly surveys during 2000.*

*The extent and duration of baseline sampling is determined by specialists and can range from a one-time survey to multi-season or multi-year studies. Management considers that the baseline data gathering was satisfactory.*