INDEPENDENT REVIEW MECHANISM
COMPLIANCE REVIEW AND MEDIATION UNIT

PROBLEM SOLVING REPORT

RQ2009/01
Gibe III Hydroelectric Power Project, Ethiopia

Problem-solving/Mediation
between
African Development Bank
and
Friends of Lake Turkana, Kenya

September 2, 2010
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ACKNOWLEDGEMENTS

CRMU would like to express its gratitude for the support it received from the Requestors, Friends of Lake Turkana (FoLT), the African Development Bank’s Management and the Bank’s Country Office in Kenya. The technical information and assistance provided by these parties has immensely facilitated the assessment of the FoLT’s complaint about the Gibe III Hydroelectric Power Project in Ethiopia and the relevant problem-solving exercise which is the subject matter of this report.
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<td>ADB</td>
<td>African Development Bank</td>
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<td>EFTA</td>
<td>Economic, Financial and Technical Assessment</td>
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EXECUTIVE SUMMARY

The Compliance Review and Mediation Unit (CRMU) received, on March 5, 2009, a complaint from Friends of Lake Turkana (FoLT), a local NGO representing communities living along Lake Turkana in Kenya, about the Gibe III Hydroelectric Power Project in Ethiopia. FoLT requested CRMU to undertake investigation and mediation efforts to ensure that affected communities are consulted and their interests are taken into account before the Gibe III project is considered for financing by the Boards of Directors of the African Development Bank Group (ADB).

FoLT’s request raised several issues about the Gibe III Hydroelectric Power Project’s potential serious impact on Lake Turkana, the inadequacy of the project’s environmental and social impact assessments, lack of consultations with people on the Kenya side and the dearth of information about the Gibe III Dam’s impact on the water level of Lake Turkana, and the Dam’s cascading effects and interlinked irrigation schemes.

Under the Operational Rules and Procedures of the Independent Review Mechanism (IRM Rules), CRMU registered FoLT’s request, and the Management provided its response. Consequently, FoLT and ADB (the parties) agreed to pursue a problem-solving exercise facilitated by the Director of CRMU. The problem-solving commenced in Nairobi, Kenya, on June 10, 2009. The main outcome of the problem-solving (which included a scoping meeting and two mediation meetings) is that the Bank’s Management commissioned two studies on the Gibe III Project’s impact on Lake Turkana water level and Public Consultation with the communities of Lake Turkana. The final draft studies were submitted by ADB, on April 21, 2010, to FoLT and CRMU. FoLT provided its comments and critics to these studies on June 21, 2010 and on July 6 and July 7, 2010 respectively.

In the course of preparation of the next mediation meeting between FoLT and the ADB to discuss the foresaid studies, the Bank’s Management on August 6, 2010, informed CRMU that it had received a letter from the Ethiopian authorities expressing that the latter are no longer pursuing the Bank’s financing of the Gibe III project. In light of that, the Management advised CRMU to inform FoLT that the Bank will no longer participate in the problem-solving exercise. The Bank’s Management added that - taking into consideration the comments of FoLT where relevant – ADB will finalize and post the aforementioned studies on the website of the Bank. Accordingly, the Director of CRMU informed the Requestors on August 26, 2010 and prepared this Problem-Solving report in which the Director declares the mediation between the Requestors and ADB to be concluded and provides the following recommendations:

• The mediation between FoLT and ADB, in spite of its unforeseen conclusion, has yielded important results and lessons learnt, inter alia the ADB commissioning of the Hydrology Study of the Impact on Lake Turkana Water Levels and the Public Consultations with Lake Turkana Communities, and FoLT had the opportunity to comment on these studies. Drawing upon the Bank Management’s own proposal, the Director of CRMU recommends that the aforementioned studies be finalized and posted on the website of the Bank.

• The FoLT Request was submitted to CRMU for investigation and mediation, and was registered in the first instance for problem-solving. Since the problem-solving has been
concluded, the Director, in accordance with paragraph 43 of the IRM Rules, could, if warranted, make a recommendation for a compliance review. However, the Director of CRMU has decided not to recommend a compliance review since the Bank will not finance the Gibe III Project in Ethiopia.

Nonetheless, in accordance with paragraph 48 of the IRM Rules, the Director of CRMU has submitted the request to the Chairperson of the IRM Roster of Experts to either support the Director’s recommendation as to not conduct a compliance review or to determine the eligibility of the Request for a compliance review.

Notwithstanding the above, in the event that the ADB at a later stage should decide to reconsider the financing of the Gibe III project, the Requestors could, under paragraph 2 (vii) of the IRM Rules, submit a new request.
I. INTRODUCTION

CRMU received, on March 5, 2009, a complaint from Friends of Lake Turkana (FoLT), a local NGO representing communities living along Lake Turkana in Kenya, about the Gibe III Hydroelectric Power Project in Ethiopia. FoLT informed CRMU that their efforts to discuss the complaint with ADB staff have been stymied, thereby, requested CRMU to undertake investigation and mediation efforts to ensure that affected communities are consulted and their interests and welfare are taken into account before the Gibe III project is considered for financing by the Boards of Directors of the ADB.

The Gibe III project is developed by the Ethiopian Electricity Power Corporation (EEPCO) and comprises a 1,870 MW power plant with a 240 meter high dam creating a water reservoir with a surface area of some 200 km$^2$. The project is located within the Gibe–Omo River Basin around 450 km by road south of the capital Addis Ababa. Downstream of the Dam, the Omo River flows into Lake Turkana on the Kenyan side of the borders between Ethiopia and Kenya. According to the Summary of the project’s Environmental and Social Impact Assessment (ESIA), the power produced will be delivered to an Interconnection System through a 65 km long double circuit 400kV overhead transmission line that will connect the Gibe III to a new substation at Sodo. The power will be used to increase Ethiopia’s own electricity coverage as well as making the power export program of the country viable.\(^2\)

The Requestors claim that the Gibe III Dam will have a serious impact on the flow and volume of the Omo River, which provides some 80% of Lake Turkana’s replenishment flow; the project’s ESIA, including the Additional Study on the Downstream Area, was seriously flawed; and that the impact of Gibe III on Lake Turkana was barely acknowledged in these studies. They further allege that the poor analysis and the exclusion of the Turkana people during the preparation of the project violate a number of policies of the Bank Group.\(^3\)

Under the IRM Rules, the Director of CRMU registered the Request of FoLT, on March 26, 2009, for problem-solving. Nonetheless, the notice of registration of the Request retains the Director’s discretion to recommend, if warranted, a compliance review of the project. In accordance with the IRM Rules, the Bank’s Management Response to the Request was provided on April 24, 2010.

The Management’s Response states that the ADB’s safeguard policies were applied to the project on the Ethiopia side; however, they were not applied on the Kenyan side since no resettlement is contemplated, and that more light shall be shed once specific social-environmental impact studies have been carried out in Kenya.\(^4\)

Following the registration of the Request and upon the receipt of the Management’s Response and the consent of the Requestors and the Banks’ Management, CRMU started the problem-solving exercise.

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2 ESIA Summary, August 27, 2008, Section 2.5.1.
3 Management’s Response submitted to CRMU on April 24, 2009, p. 5.
4 Ibid.,
II THE COMPLAINT-HANDLING STEPS

Following the problem-solving exercise preparatory phase, CRMU organized and facilitated the scoping and the mediation meetings between FoLT and ADB (the parties) with the aim to reach an agreeable solution to the alleged problems. The following sections detail the steps of the CRMU facilitated problem-solving exercise.

1. Registration of the Request

Under the IRM Rules, the Director of CRMU registered the Request of FoLT, on March 26, 2009, for problem-solving. Nonetheless, the notice of registration retains the Director’s discretion to recommend, if warranted, a compliance review of the project. Under the same IRM Rules, the Bank’s Management Response to the Request was submitted to CRMU on April 24, 2009.

2. The Request and the Management Response

The purpose of this section is to elaborate the main issues raised by the Requestors and responded to by the Management. For actual texts and further details, the original copies of the Request and the Management Response are included in annex 1 and annex 2 of this report.

The Requestors say: we [FoLT] believe that poor analysis and exclusion of the Turkana people in project preparation to date has violated multiple Bank’s policies, including the: Environmental and Social Assessment Procedures, Policy on Poverty Reduction, Resettlement Policy, Public Disclosure Policy, and Policy for Integrated Water Resources Management.\(^5\)

The Management Response mentions that the ADB safeguard policies were taken into consideration on the Ethiopia side for the preparation of the project’s ESIA and the Environmental and Social Management Plan (ESMP) which were revised in March 2009. However, the Management informs that the ADB safeguard policies were not applied on the Kenyan side since no resettlement is contemplated, and that more light shall be shed once specific social-environmental impact studies have been carried out in Kenya.\(^6\)

The Requestors say: the Gibe III Dam would have a serious impact on the flow and volume of the Omo River, which provides some 80% of the Lake’s replenishing inflow. We [FoLT] have reviewed the ESIA, including the Additional Study of the Downstream Area, approved by the Ethiopian government in July 2008 and find these documents seriously flawed.\(^7\)

The Management’s Response says that FoLT’s assessment is based on the project’s ESIA of July 2008, in particular the Additional Study of the Downstream Area which, as a result of the due diligence of the lenders carried out in the 3rd and 4th quarters of 2008, were updated and posted

\(^5\) FoLT Request, supra note 1, p. 1.
\(^6\) Management Response, supra note 3, p. 5.
\(^7\) The Request, supra note 1, p.2.
on the website of EEPCO in March 2009. The Management mentions that the project is at an advanced stage, and the updated ESIA addresses several issues already raised by FoLT, and the EEPCO’s ESIA Study for the Downstream Region (January 2009) contains comprehensive analysis to show that the lake hydrologic regime will in fact be improved. The Management adds that its response is based on updated ESIA and yet preliminary since it will be further updated when the two additional studies - the Economic, Financial and Technical Assessment (EFTA) and the review and validation of the ESIA (guided by the ADB/EIB) - become available. The Management Response provides that the EFTA - taking into account the comments of the civil society - will review and supplement the completed work to finalize the assessment of the environmental and social impact of the project. Management adds that the ESIA studies will review the issues considered as not adequately covered by the available studies and the comments of the civil society, identify areas for improvement, and recommend additional mitigation measures for identified issues.

The Requestors say: the impact of Gibe III on Lake Turkana is barely acknowledged, and then only to be dismissed with spurious claims that the project will benefit the Lake. These documents provide little scientific analysis regarding potential changes to the river flow volume, and the chemical balance. Analysis of the impacts of reservoir evaporation rates to downstream volumes also does not seem sound. The Requestors add: no discussion of the duration or methodology of reservoir filling is provided. This could result in a prolonged dry season downstream, where the suggested environmental flow of 25m3/second, a rate equal to the single lowest monthly flow recorded in nearly four decades, could be implemented for well over a year. Such a potential experience could devastate the level of Lake Turkana.

The Management Response provides that the project will regulate the downstream hydrological regime of the Omo-Gibe River Basin by increasing the flows during the dry season and reducing the flows during the rainy season when the water is retained to fill the reservoir. For the reservoir regime, the Management Response says that the regime will include an annual flood release to maintain downstream flood plains for agriculture. During these periods, the energy generation from Gibe III will be limited and the consultants will clarify the expected outage and the best time for flood release as part of the Management’s Power and Energy model of Gibe III. Moreover, the Management Response states that there will be a reduction of the evaporation losses which contribute to the current recession of Lake Turkana. The controlled flood foreseen from the reservoir will coincide with the peak flows from the residual basin to limit the downstream flooding while reproducing the natural average flooding conditions. The Management Response adds that the regulation of the river flow will also induce a more efficient use of water resources by providing reliable and timely water supply during the year and the

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8 Management Response, supra note 3, p.7.
9 Ibid., p.8.
10 Ibid., p.20.
11 Ibid., pp.20 and 22.
12 The Request, supra note 1, p.2.
13 Ibid.
14 Ibid., p. 8.
15 Ibid., p. 21.
16 Ibid., p. 10.
average terminal runoff will therefore benefit the hydrological balance of Lake Turkana.\textsuperscript{17} The Management says the regulation of the river flows induced by the Gibe III dam will contribute to re-establishing a positive hydrological balance in the Turkana transboundary system which is a long-term objective pursued by the riparian countries to ensure equitable benefits to the people relying on lake resources.\textsuperscript{18} The Management Response adds several issues to illustrate that the environmental flow will keep the Gibe downstream aquatic and riverine environment healthy including the planned water release to offset the impact of dam-induced changed flows on downstream aquatic ecosystems; …and designed to mimic the natural occurring flow regime.\textsuperscript{19} The Management Response informs that EEPCO’s responsibility will include monitoring the flow regime and all related ecosystem peculiarities for the different sections of the river and its surroundings including the biological aspects of the estuarine floodplains.\textsuperscript{20}

The Requestors say: \textit{a study by the Africa Resources Working group indicates that the completion of Gibe III could mean a drop in Lake Turkana's depth of between seven and ten meters. Resulting changes in the Lake's chemical balance threaten the fish as well as other species (Nile crocodiles, hippopotamus, etc.) that make Lake Turkana a valuable source of biodiversity}.\textsuperscript{21}

The Management Response says phosphorus, nitrogen, BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) have been measured upstream and downstream of the existing reservoir and at Gibe III site. The phosphorus content upstream and downstream of the Gibe I reservoir is substantially unvaried and is by far lower than 20 mg/l which could be roughly considered a limit to consider the Lake as “eutrophic”. The Lake is probably “nitrogen-limited” considering this common indicator of the tropic status. The existing Gibe I reservoir operation, which well reflects the conditions of the envisaged Gibe III reservoir, indicates that: the most relevant mean water quality parameters (phosphorus, nitrogen, COB, BOD, etc…) will probably not be greatly varied by the reservoir operation.\textsuperscript{22}

The Requestors say: \textit{there is no discussion of impacts from proposed irrigation schemes and two future large dams Gibe IV and Gibe V}.\textsuperscript{23}

The Management Response provides that the envisaged irrigation plans are: (i) Smallholder schemes (financed by Public Developmental Authorities) to benefit 4,000 families; and a phased development of 100 schemes of 20ha each (totaling 2,000 ha), settled by 80 families with 0.25 ha each. (ii) Small Scale Commercial farms (partially financed by Public Developmental Authorities) for individuals to have small scale commercial units which is assumed to benefit 100 farmers that each will, on average, have 3 ha of land to grow some food and high value cash crops. (iii) Large Scale Commercial Farms (not financed by Public Development Authorities) for plantations of cotton, sugarcane, and beef feedlots depending on local and export market demand and prices. The Management assumes that at least 5,000 ha will be developed. It adds that the

\begin{itemize}
\item \textsuperscript{17} Ibid., p.12.
\item \textsuperscript{18} Ibid.
\item \textsuperscript{19} Ibid.
\item \textsuperscript{20} The cost of monitoring is estimated at USD 1.5 million and will be covered by EEPCO, \textit{ibid.}, p.14.
\item \textsuperscript{21} The Request, \textit{supra} note 1, p.2.
\item \textsuperscript{22} Management Response, \textit{supra} note 3, pp. 14-15.
\item \textsuperscript{23} The Request, \textit{supra} note 1, p.2.
\end{itemize}
irrigated agriculture will benefit the people in terms of: increased food, more cash income, schemes for smallholders, financial assistance to individual small farmers, and an enabling environment for large-scale commercial farms which will provide employment.\textsuperscript{24}

With respect to the cascading impacts of the dams, the Management Response says that Gibe IV and V, if they materialize are too far away to be concerned about at this stage.\textsuperscript{25} In addition, Gibe III will eventually be part of a cascade of power plants however with different capacities and design discharges, and the documentation on the influence of the upstream power plants, mainly Gibe II, on the power production of Gibe III will be reviewed. Moreover, the consultants will assess the effect of Gibe I and II on the quantity and timing of the water to be passed to Gibe III.\textsuperscript{26}

The Requestors say: \textit{the economic devastation that would accompany such impacts would almost certainly mean a significant upswing in the violent conflicts that have often engulfed the region's peoples. We [FoLT] note that these oversights directly contradict the ADB's Policy on Integrated Water Resources Management which calls for assessment of transboundary waters and undertaking steps to avoid conflicts resulting from the project impacts.}\textsuperscript{27}

The Management Response provides that the economic devastation referred to in the Management’s view is highly exaggerated and pessimistic.\textsuperscript{28} It adds that the Lake Turkana water level and its hydrologic regime will be maintained and also improved. There are a number of socio-economic benefit programs planned for the lower Omo River-covering agriculture, fish resources and biodiversity, water conservation and capacity building for Woreda institutions.\textsuperscript{29}

The Requestors say: \textit{we [FoLT] wish to note at the outset that we are conscious that, in addition to its impact on the Kenyan environment and peoples, Gibe III will have serious negative impacts within Ethiopia. We [FoLT] regret that we have been unable to make concrete connections with our counterparts on the Ethiopian side of the border. The restrictive nature of the Ethiopian government and the isolated nature of the region have delayed effective interactions. We anticipate that our request will be followed shortly by a complementary request to the CRMU from a number of groups concerned about Gibe III's effects in Ethiopia.}\textsuperscript{30}

The Management Response states that it is fully aware of the issues raised in the international media and issues that have been brought to the Bank’s attention by a number of groups concerned about the project on the Ethiopian side.\textsuperscript{31} The Management mentioned it is confident that the findings of the EFTA and the Review of ESIA will help address any complementary requests to the CRMU since they will allow further consultations and dialogue with all the

\textsuperscript{24} Management Response, \textit{supra} note 3, pp.16-18.
\textsuperscript{25} \textit{Ibid.}, p.21.
\textsuperscript{26} \textit{Ibid.}
\textsuperscript{27} The Request, \textit{supra} note 1, p.2.
\textsuperscript{28} Management Response, \textit{supra} note 3, p. 19.
\textsuperscript{29} \textit{Ibid.}
\textsuperscript{30} The Request, \textit{supra} note 1, p.3.
\textsuperscript{31} Management Response, \textit{supra} note 3, p.19.
stakeholders including the civil society at large. The Management says that it welcomes the opportunity to formally engage with the Lake Turkana communities in Kenya and other appropriate groups in Ethiopia through the mediation efforts planned by CRMU. While no formal consultations have taken place on the Kenyan side, the updated Public Consultation and Disclosure report (January 2009) and issued by EEPCo in March 2009 in our mind [the Management] fulfills the consultation requirements in the Omo River Delta in Ethiopia.

3. The Problem-Solving Exercise Steps

Upon receipt of the views of FoLT and the Management, CRMU commenced the problem-solving exercise which key steps included a scoping and two mediation meetings between FoLT and ADB facilitated and mediated by CRMU. The Scoping Meeting Brief Summary is included in Annex 3 of this report.

3.1 Scoping Meeting

The objective of the scoping meeting between FoLT and ADB (the parties), held on 10–11 June 2009 in Nairobi, Kenya, which was facilitated by CRMU, was for the parties to agree on the methodology of the problem-solving exercise and to articulate the issues for mediation.

Among the several issues raised by FoLT during this meeting, the parties agreed that two issues relating to the Kenya and Ethiopia governments’ agreement on the management of resources and alternative energy schemes for Kenya were outside the scope of the mediation process and concern other stakeholders who were not invited to the mediation in the first place. However, ADB said it will facilitate efforts for these stakeholders to consider these two issues.

The other main issues deliberated on by FoLT and ADB during the scoping meeting included:

- **FoLT argued that no adequate consultation had been conducted with the Kenya Government and no consultation had been undertaken with local communities and other stakeholders on the Kenya side.** The ADB acknowledged, and said it will ensure that a proper consultation is carried out. ADB requested FoLT to provide information and help in identifying communities to be consulted on the Kenya side, and agreed that the consultation report will be shared with FoLT. Accordingly, the parties considered this issue as an uncontestable issue and not to be referred to mediation.

- **FoLT pointed out the potential drop in Lake Turkana water levels and the long scale retreat of the Lake waters rising salinity conditions which would cause environmental perturbation and a decline in microbiological and aquatic ecosystems due to the infill of the Dam.** The ADB disagreed. The parties agreed to refer this issue to mediation.

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33 *Ibid*.
34 The Scoping Meeting Brief Summary is included in Annex 3 of this report.
• FoLT contended that, before the approval of funding of the project, an independent, comprehensive and inclusive ESIA should be conducted on the Kenya side. ADB said it will process the project according to the Bank’s policies and procedures, and it will ensure that the impacts of the Gibe III on Lake Turkana are assessed. The parties agreed to refer this issue to mediation.

• With respect to the way forward, the parties agreed that: (1) ADB shall commission studies on Lake Turkana Water Levels and Public Consultation in Kenya; (2) CRMU shall continue to facilitate and mediate the problem-solving exercise, and (3) other stakeholders could be invited to the mediation upon prior consent of the parties.

3.2 First Mediation Meeting

The first Mediation meeting between FoLT and ADB, mediated by the Director of CRMU, was held on September 1-2, 2009, in Nairobi, Kenya, to discuss the general progress and actions undertaken in relation to the issues that the parties had agreed upon in the scoping meeting. The main issues of the meeting’s discussion were: Lake Turkana water levels, public consultation and comprehensive ESIA to be conducted on the Kenya side.

With respect to FoLT’s concern about the potential drop of Lake Turkana water levels, the rising salinity conditions and the resulting environmental perturbation due to the infill of the Dam, ADB said it has commissioned a study to understand the impact of Gibe III on the Lake and presented the scope and methodology of the said study. FoLT argued that the study does not cover all the concerns raised about Lake Turkana and it will await the final report. The parties agreed that the study will be finalized and circulated to FoLT and CRMU prior to the second Mediation meeting.

As for the consultations with the Kenya government, local communities and other stakeholders on the Kenya side, ADB informed that they had recruited two consultants, on August 6, 2009, to carry out the consultations around Lake Turkana and presented the scope and methodology of the said study. ADB informed that due to security issues and the availability of resource persons, there had been a delay in starting the study process, and for the same reason, there might be a delay in delivering the action plan as scheduled. FoLT raised concerns about conducting consultation before substantiating the impact of the dam, and stated that ADB’s presentation amounts to a letter of comfort not a commitment to resolving issues. They agreed to await the final report before making conclusions on the matter. The Parties agreed that ADB would circulate the public consultation report to FoLT prior to the second Mediation meeting. FoLT agreed to provide support to the consultants in accessing data and Lake Turkana communities.

In reference to its request, FoLT reiterated that an independent, comprehensive and inclusive ESIA should be conducted on the Kenya side before ADB considers the funding of Gibe III, since this is an integral part of its complaint. ADB explained the Bank’s procedures for the preparation of the ESIA. ADB said the need and the scope of the ESIA will be discussed after the results of the hydrological assessment of the impact of the Gibe III dam on Lake Turkana.

The Minutes of the First Mediation Meeting are included in Annex 4 of this Report.
and the public consultation reports are completed. FoLT argued that ADB has a narrow scope by including only hydrology and consultations which are insufficient to determine the impact of the dam on ecological issues that should also be taken into consideration. FoLT reiterated that a comprehensive ESIA remains an essential issue, but agreed to withhold the discussion of this issue until the hydrology and public consultations studies are ready.

3.3. Second Mediation Meeting

The objective of the second mediation meeting, held on November 17–18, 2009, in Nairobi, Kenya, was to discuss the findings of the ADB commissioned studies on Lake Turkana Water Level and Public Consultation with Lake Turkana communities in Kenya. Since the studies were not yet ready, the ADB’s consultants presented the preliminary findings of the two studies. ADB also requested that EEPCO participate in this meeting to present the status quo of the project. FoLT accepted. After the presentation of the findings of the aforementioned studies, FoLT said that they will await the final study reports before being able to express their views on the information presented by the consultants.

EEPCO briefed the participants on the progress that the Gibe III project is making, its environmental and social management and monitoring plan, and referred to the visit of the Kenya government delegation to Ethiopia and the project’s site.

FoLT reiterated their request for a full ESIA to be conducted for the Lake Turkana area. ADB said the hydrology study’s initial results indicate benefits of the project, but additional work is needed to be conducted to confirm. ADB said that when having the final report of the hydrology study, it will make a final decision on whether there is a need to conduct an ESIA.

The parties agreed that ADB circulates the final studies on Lake Turkana Water Level and Public Consultations to FoLT and CRMU by no later than 29 February 2010, and that CRMU should continue to facilitate and mediate the process, if deemed necessary, with assistance of external mediators.

After the meeting, the ADB requested an extension of the date of submission of the studies due to difficulties encountered by the ADB’s consultants. FoLT agreed. The studies were circulated to FoLT and CRMU by ADB on April 21, 2010.

3.4 The Results of the Mediation

The main results of the mediation are CRMU’s facilitation of discussion between FoLT and ADB including the ensuing outcome of the two studies on Lake Turkana water levels and Public Consultations with the Lake Turkana’s communities. Since these studies are yet in draft, the below sections sum up their main findings and recommendations and FoLT’s corresponding comments.
The Updated Draft Report on the Assessment of Hydrological Impacts of Ethiopia’s Omo Basin on Kenya’s Lake Turkana Water Levels

The Report’s Conclusions and Recommendations

The Draft Report on Hydrological Impacts of Ethiopia’s Omo Basin on Kenya’s Lake Turkana Water Levels describes that Lake Turkana receives sporadic rainfall averaging an estimated 200 mm/year at Lodwar, increasing to the north, and diminishing to the south. With the exception of the Omo, most rivers are seasonal, experiencing flash floods and no sustained flows. The lake is a closed basin, and the water is gradually but progressively becoming more saline through constant relentless evaporation, although the process of increasing salinity is slowed down due to chemical processes and deposition that remove salts.

Although saline, the lake has a flourishing varied fish population comprising 48 species, 10 of which are endemic, 23 of which are important for human utilisation. The fish are not affected by naturally increasing salinity, and are known to flourish in very much more saline conditions.

In terms of fisheries, the health of the littoral zone matters and the natural annual fluctuations in Lake level serve to cyclically inundate and expose the littoral zone. If the Lake levels fall more than 3.1 meters below the zero datum, Ferguson’s Gulf will be dry. The filling of the dam [Gibe III] has the potential to dry up Ferguson’s Gulf, the most productive fishing areas on the Lake. Hence the Gibe III filling proposals should be reviewed to mitigate against this happening unnaturally.

The Lake experiences massive evaporation at a rate equal to the annual inflow of the Omo River. The Lake sustainability depends entirely on what happens within the Omo Basin. Local people utilize the Lake for water supply, and fishing is a valuable alternative livelihood and food source in this harsh environment. The Turkana Lake/Omo River delta zone with its soils and fresh water sustains a population of agro-pastoralists who also engage in fishing.

The report says that the impacts of the Omo Basin schemes on Lake Turkana have not previously been assessed. The proposed regulated Omo flows will alter the flood inflow patterns upon which the Lake fish depend. The impacts of the proposed regulated flows have not been fully and scientifically quantified, and the fisheries resource of the Lake has not been updated. Developments within the Omo Basin, which remove water for consumptive use, especially through irrigation abstraction, will severely impact the Lake through reduced inflows and a reduction in lake levels, potentially by 40 metres. The report states that the

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36 The above paragraphs only summarize the conclusions and recommendations of the Hydrology Report however their actual texts are included in Annex 6 of this Problem-Solving Report. For full reference, the Hydrology Study is cited” the Updated Draft Report on the Assessment of Hydrological Impacts of Ethiopia’s Omo Basin on Kenya’s Lake Turkana Water Levels” prepared by Dr. Sean Avery, (Draft Nov 2009 and Updated Draft April, 2010) [hereinafter, “Hydrology Study” ].

37 Ibid., Section 4-1.

38 Ibid.

39 Ibid, Executive Summary, p. VIII.

40 Ibid, Section 4-1.

41 Hydrology Study, supra note 36, Section 4-2, paragraph (11).
extent and effects of the reduced flows have not been fully assessed. Furthermore, it notes that irrigation abstraction is not provided by Gibe III, as the dam is developed solely to generate power, but indirectly, the regulated flow sequence from the dam is expected to stimulate small-scale irrigation.\textsuperscript{42}

According to the report, the filling of the Gibe III dam is planned over a period of three years, and it states that the volume required to fill the dam is equivalent to about a 2 metre drop in Lake Turkana’s level. The report states, the dam alone will not alter the annual water volume inflow, except insofar as losses that occur within the Gibe III reservoir. Hence, as long as the reservoir losses are proved minimal, once filled, Gibe III alone will not cause Lake levels to fall.\textsuperscript{43}

The report says that the real danger to Lake levels lies with other consumptive use projects within the Omo Basin, namely extensive irrigation development, which is independent of Gibe III. Reduced levels in the lake will result in recession of the Lake shoreline, and the Omo River will deeply incise below its present delta channel bed levels. The water table will drop, and this will impact existing agricultural practices. The effect of this has not been studied. The value of the land area exposed through lake recession has also not been assessed.\textsuperscript{44}

The report recommends that the hydrology study presented should be taken forward and refined to validate the assumptions made on rainfall and evaporation. In addition, a river gauging station should be re-established immediately on the Omo River at Omorate. Rainfall measurements throughout the Basin should continue. The Lake level gauge at Ferguson’s Gulf should be restored to routine reliable monitoring status, with a permanent reference datum established on the shore above the highest water level.\textsuperscript{45}

Furthermore, the report recommends that the flood patterns of the Omo River need to be studied in terms of flow volumes and durations. The impact of changes due to catchment degradation needs to be addressed as the presence of dams can assist by regulating the flashy runoff that results from catchment degradation. Moreover, the proposed regulated flow sequence from Gibe III needs to be reviewed to take into account the anticipated benefits of increased food security arising from changes in agricultural practices.\textsuperscript{46}

The report recommends that the impact of the construction of the proposed Gibe IV and Gibe V dams on the proposed Gibe III regulated flow sequences needs to be evaluated to determine the revised flow that will reach Lake Turkana, including stating how the ecological flood will be managed in these circumstances. The impacts of Gibe III, IV and V and other developments, and the impact of a regulated flow sequence on water quality and nutrient/sediment transport to the Lake need to be assessed.\textsuperscript{47}

\begin{footnotesize}
\begin{enumerate}
\item Ibid.
\item Ibid.
\item Ibid., Section 4-2.
\item Ibid.
\item Ibid., Section 4-3.
\item Ibid.
\end{enumerate}
\end{footnotesize}
Moreover, the report recommends that the potential water utilisation within the Basin for irrigation needs to be reviewed, and the impact on Lake Turkana’s levels can then be refined based on this information.\textsuperscript{48}

The report recommends that the status of Lake Turkana’s fisheries resource needs to be updated to determine changes that have taken place since the detailed studies were done 30 years ago. The fisheries resource will have been impacted by catchment degradation since that time, by changes in runoff and sediment runoff patterns, and by population pressure and associated increased fishing, and its regulation, as well as livestock grazing of littoral zones. In addition, the impact on fisheries of all proposed developments in the Omo Basin, in terms of flow and nutrient flow, needs to be studied and mitigation measures identified. Bathymetric surveys of the northern end of the lake should be conducted to identify changes that may have taken place in the last 30 years. The present shoreline should also be mapped from satellite imagery and compared with the original surveys.\textsuperscript{49}

Finally, the report recommends that a full evaluation of the economic value of the Lake as a “resource” should be produced. In addition, a thorough socio-economic and livelihood evaluation survey of the Lake dependant communities should be undertaken. The impact of present proposed and planned developments in the Omo Basin needs to be evaluated, and agreement to be reached on the way forward for the Basin and the Lake. An integrated basin development ESIA is required.\textsuperscript{50}

\textit{ii. FoLT Concerns and Critiques of the Report on Assessment of Hydrological Impacts of Ethiopia’s Omo Basin on Kenya’s Lake Turkana Water Levels}

CRMU and ADB received FoLT’s concerns and critiques\textsuperscript{51} of the Hydrology Study on June 21, 2009 and July 7, 2009. The following paragraphs illustrate some of FoLT’s key comments and critiques.

FoLT asks about the water level in the context of the study concerns about the “ecological flood”. In addition, they want to know about the steps that will be taken to ensure that the releases will be sustained given the conflict of interest with power generation. They also ask about whether or not independent quantitative studies on environmental flood, cumulative impacts and irrigation schemes of the Gibe Dam will be undertaken. In addition they ask whether a geological study to determine leakage through the reservoir and a study to determine the impacts on Lake Turkana from the changes in sediment flows and water inflows will be undertaken. They also ask about whether or not the project will be put on hold until all of this information can be analyzed. Finally, they state that, “Given the immensity of the potential impacts on Lake Turkana outlined in the hydrology report, we want to know if the funders are

\textsuperscript{48} Hydrology Study, \textit{supra} note 36, section 4-3.
\textsuperscript{49} \textit{Ibid.}
\textsuperscript{50} \textit{Ibid.}
\textsuperscript{51} FoLT critiques of Hydrology Study received by CRMU and ADB on July 6, 2010 through email and the original text of the message is included in Annex 7 of this report.
willing to put themselves in a position to decide whether the Lake should or should not be sustained, and if so, at what water level should that be?”.52

FoLT says it is true that most of the waters of Lake Turkana are lost through evaporation but possible loss of water down to the water table should also be taken into consideration. They add that Lake Turkana is semi saline and not saline as construed by the study. Moreover, they say sixty (60) fish species have been reported to inhabit Lake Turkana, much more than those reported by the study. Lake Turkana is a fish diverse than represented in the hydrology study document.53 In FoLT’s opinion, the statement that the fish are known to tolerate very much higher levels of salinity is misleading since no essays have been carried out on this subject, and KMFRI studies indicate species specific response to increased salinity in Lake Turkana i.e. in the Ferguson’s Gulf even robust species like Oreochromis niloticus had impaired growth, skin ulcerations, poor quality of fish flesh and enhanced susceptibility to various forms of infections and mass kills.54

FoLT argues that, it should not be assumed that since the hardy and robust Oreochromis niloticus (Nile tilapia) is surviving in the Crater lakes levels then the rest of species, particularly those of commercial importance like Labeo, Barbus, Citharinus, Distichodus, Synodontis, etc. would be tolerant.55 In FoLT’s opinion the consultant’s assumption that Lake Turkana is all about fisheries has no basis as there are several other biota that depend on the Lake (birds and crocodiles etc...). Therefore the full impact of changes within the Omo Basin on the flora and fauna should be evaluated and not just fisheries as recommended.56

FoLT says it should be noted that there is absolutely nothing like “natural” Lake level fluctuation especially when considering the current global warming and other changes at the behest of anthropogenic based activities. To validate the consultant’s argument on flood pulses, it would have been appropriate to include comparisons/references to similar approaches to enable assessment of their functionality.57

FoLT argues that the report fails to highlight the dependency of Lake Turkana on rainfall from Ethiopian Highlands and the importance of annual floods in sustaining the Lake levels and salt balance. The generalization of the climate data is also misleading because according to records on the ground, the driest years in Turkana were 2008 and 2009, while the period when a combination of good rains (El Nino) coupled with good rainfall in Ethiopia led to the Lake having the highest level was in 1998-2000.58

FoLT adds that explicit importance of Lake Turkana to the Kenyan economy is lacking in the introduction of the hydrology report. There should have been also emphasis on importance of the Prehistoric and Heritage sites; the national parks; Omo delta as international migration routes for birds; and the Oxbow lakes in the Omo delta both in Kenya.59

52 FoLT’s comments emailed to CRMU and ADB on June 21, 2009 a copy of which is included in Annex 8 of this Report
53 Ibid., p.2.
54 Ibid.
55 Ibid., p.3.
56 Ibid.
57 Ibid., p.4.
58 FoLT Critiques, supra note 51, p.4.
59 Ibid.
FoLT informs that the water pools are never used as sources of drinking water by local people and observations also show that even livestock do avoid drinking such waters. Therefore to state that “lake salinity levels can continue...and that if the lake level fell concentration of salts would double, the water would be potable to livestock, and still just tolerable to humans” is to misrepresent the facts and shows lack of intimate knowledge of the local situation by the consultant.\(^{60}\)

**b. The Study Report on Socio – Economic Analysis and Public Consultation of Lake Turkana Communities in Northern Kenya**

**i. The Report’s Conclusions and Recommendations**

The study notes that this report can not be entirely conclusive without first looking at the hydrological reports which shall be factual in determining the expected effects of the Gibe III dam project on Lake Turkana.\(^{61}\) It also points out that the communities along Lake Turkana have negative attitude towards the project. This is due to inadequate factual information and misconception about the project which has brought uncertainty and fear among communities.\(^{62}\) The majority of the interviewed communities were unaware of the project and the few who knew had obtained their information from activists including FoLT and the media. Their fears hinge upon reduction of water of Lake Turkana as a result of the Gibe III dam.\(^{63}\)

The study further informs that the communities highly depend on Lake Turkana for fishing, domestic water, farming, transportation, tourism, marine and wildlife conservation and security as it acts as a shield between rivalry communities and also for recreation.

It provides that several mitigation measures were suggested during the public consultation, however, these measures could be costly since the people already live in hard conditions and first they need their living standards to be raised to acceptable levels before proceeding with mitigating the impacts of the Gibe III project. The study points out that several stakeholders around Lake Turkana are making deliberate efforts to reduce poverty and engage the communities in wealth creation activities.\(^{64}\)

The study indicates that Lake Turkana is visibly shrinking by notable distances, at some places it has retreated for a couple of kilometres, for example at Eliye Springs, and Elmolo bay in Loiyangalani. It adds that good practices show that concluded treaties by several countries on Trans-boundaries protect water and conserve the environment for posterity of the nations.

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\(^{61}\) The Study Report on Socio – Economic Analysis and Public Consultation of Lake Turkana Communities in Northern Kenya prepared by Anna Stella Kaijage and Niceta M. Nyagah, Dec. 2009 [hereinafter, “Public Consultation Study”]. It is worth noting that the above paragraphs only summarizes the conclusions and recommendations the actual texts of which are included in Annex 9 of this Report.


\(^{63}\) *Ibid.*

\(^{64}\) *Ibid.*
Therefore, there must be a treaty in place to protect Lake Turkana and River Omo from future degradation.  

The study recommends that in the case that the dam will be used for other than power generation, such as for irrigation, then a full ESIA must be carried out on the entire catchment of Lake Turkana including the Lake’s communities on the Kenyan side.  

The study points out that the hydrological report should be a predetermining factor to the authenticity of the fears of the community, since water is the main factor and issue behind this public consultation study. There should be monitoring of Lake Turkana’s hydrology since nothing has been done to determine the reasons why the Lake is shrinking.  

The study recommends that a Multinational Symbiotic Management Authority comprising Ethiopia, Sudan and Kenya shall be formed to pursue matters involving River Omo and Lake Turkana. This Authority must have a representation at the grass root level to pass information across communities.  

The study mentions that gaining public acceptance and support of the project by the communities is essential and the communities’ interests, fears and expected benefits should be included in the ESMP. Accordingly, it adds that the local communities of Lake Turkana should fully understand the Gibe III project and its benefits to embrace possible mitigation measures and to ensure that both the communities’ developmental needs are taken care of and the success of the project.  

The study recommends the formulation of trans-boundary waters treaty between Kenya and Ethiopia. In addition, it provides that more peace initiatives and deliberated efforts to disarm communities are needed in the region to enable economic activities in Lake Turkana. The study says that if the presence of Gibe III does not leave both Kenyan and Ethiopian communities worse off, then the two governments must ensure that the communities around Lake Turkana benefit from the electricity.  

Finally, the study recommends that a continued public consultation process should be steered by a joint committee consisting of Ethiopia and Kenya governments, financing institutions with the representation of NGO’s, CBO’s, FBO’s, MP’s of the affected communities, the district councils and localities. The proposed committee shall be responsible for evaluating the monitoring process of the regulation of water usage beyond the needs of the dam. The study adds that the Ethiopia’s Panel of Environmental and Social Advisers for monitoring purposes could be emulated in Kenya.  

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65 Consultations Study, supra note 61, p.188.
66 Ibid.
67 Ibid., p. 189.
68 Ibid.
69 Ibid.
70 Ibid.
71 Ibid.
ii.. FoLT’s Comments and Critiques of Lake Turkana Public Consultation Study

FoLT’s comments and critiques of the Public Consultation study were submitted to ADB and CRMU on June 21 and July 7, 2010, of which a summary is provided below to illustrate FoLT’s main points of view.72

FoLT considers that the report has factual errors when it talks about the two different annual rainfall rates for Turkana; the type of electricity used by communities; the percentage of Illeret tribes farming activities since perceived nomadic; and the partial information about the Turkana Basin Institute’s work.73

FoLT raises concerns about the poor analysis of: the Government support of fishing and communities shares therein; the information about social amenities which does not reflect the severity of problems in the region; the contribution of pastoralists to Kenya’s GDP; and the significance of fishing in the area at the national level.74

FoLT considers the consultation process as inappropriate due to the fact that the consultants have misinformed the communities by saying there will be “enough water” whereas the fear of water loss is one of the key reasons that FoLT has the mediation with ADB, and at the time of the public consultations there was no research on the potential impacts of the dam on the Lake.75

FoLT says the consultant’s recommendations are misguided rather are over-assumptions on the kind of mitigation, and more-so the thought that these measures would be implemented, or if implemented they can justify the construction of the dam. Although the study suggested mitigation measures are well intended, they are not well thought out, based on numerous assumptions, and in some instances are naïve.76

FoLT considers the consultants’ statements that the communities’ fears could be addressed by explaining the Gibe Project to them as paradoxical for two reasons. First, the consultants explicitly acknowledge that the basic fears regarding a loss of water are validated. FoLT says, the Draft Hydrological Impacts Assessment, which has meanwhile been prepared, warns that the filling of the Gibe III reservoir will likely dry up Ferguson’s Gulf, the Lake’s most productive fishing area. Second, the hydrology report also warns that the planned water abstraction in the Omo Valley, not least in the context of the new reservoirs for Gibe III - V, could lead to a drop in the lake level of 40 meters and turn Lake Turkana into “two small puddles, one of which will dry up”.

FoLT says that the consultants stated at several instances that the project will need the consent of the affected communities in order to move forward, but at the same time, they implicitly and

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72 FoLT’s comments and critiques of consultation study were submitted electronically to ADB and CRMU on June 21 and July 7, 2010, their actual texts are included in annex 10 and annex 11 of this report.


explicitly make clear that ADB should ignore such consent.\textsuperscript{77} In FoLT’s opinion a meaningful consultation process would require that the findings have an impact on the outcome of the decision whether or not a funder should finance a project. FoLT argues that the consultants make it abundantly clear that they consider the funding of the Gibe III Project by the ADB to be a foregone conclusion, and that the consultation is indeed, as the affected people feared, a “mockery exercise”.\textsuperscript{78}

FoLT says that the consultation report identifies project risks, mitigation measures and makes recommendations. In spite of their importance, FoLT argues that these measures and recommendations appear at times useful, heavy-handed, and ridiculous at another. For instance, the consultants recommend that these mitigation measures be funded or supported by government agencies, the military apparatus, international organizations, other donors, and NGOs, including FoLT, and do not propose that their costs be part of the budget of Gibe III project.\textsuperscript{79}

\textbf{IV \hspace{1em} KEY DEVELOPMENTS}

In the course of preparation of a joint meeting between FoLT and the Bank’s Management to discuss the hydrology and the public consultations studies, the Management informed CRMU on August 6, 2010, that it had received a letter from the Ethiopian authorities stating that the latter are no longer pursuing the Bank’s financing of the Gibe III project, and instead they demanded the Bank to reallocate the required financing to other national programs. In light of that, the Management advised CRMU to inform FoLT that the Bank will no longer participate in the problem-solving exercise. The Bank’s Management also informed that - taking into consideration the comments of FoLT where relevant – it will finalize and post the aforesaid studies on the website of the Bank. In light of these key developments, the Director of CRMU informed FoLT, on August 26, 2010, that the problem-solving exercise with ADB will be concluded.

\textbf{V \hspace{1em} CRMU DIRECTOR’S RECOMMENDATIONS}

\begin{itemize}
\item The mediation between FoLT and ADB, in spite of its unforeseen conclusion, has yielded important results and lessons learnt, \textit{inter alia} the ADB commissioning of the Hydrology Study of the Impact on Lake Turkana Water Levels and the Public Consultations with Lake Turkana Communities, and FoLT had the opportunity to comment on these studies. Drawing upon the Bank Management’s own proposal, the Director of CRMU recommends that the aforementioned studies be finalized and posted on the website of the Bank.
\item The FoLT Request was submitted to CRMU for investigation and mediation, and was registered in the first instance for problem-solving. As the problem-solving has been concluded, the Director, in accordance with paragraph 43 of the IRM Rules, could, if
\end{itemize}

\textsuperscript{77} FoLT Critiques, \textit{supra} note 72, p. 3.
\textsuperscript{78} \textit{Ibid}.
\textsuperscript{79} \textit{Ibid.}, p. 4.
warranted, make a recommendation for a compliance review. **However, the Director of CRMU has decided not to recommend a compliance review since the Bank will not finance the Gibe III Project in Ethiopia.**

Nonetheless, in accordance with paragraph 48 of the IRM Rules, the Director of CRMU has submitted the request to the Chairperson of the IRM Roster of Experts to either support the Director’s recommendation as to not conduct a compliance review or to determine the eligibility of the Request for compliance review.

Notwithstanding the above, in the event that the ADB at a later stage should decide to reconsider the financing of the Gibe III project, the Requestors could, under paragraph 2 (vii) of the IRM Rules, submit a new request.
ANNEXES
Annex 1

The Request

Friends of Lake Turkana
P.O Box 128
Lodwar
friendsoflaketurkana@gmail.com

February 4th 2008

Mr. Per Eldar Sovik
Compliance Review and Mediation Unit (CRMU)
African Development Bank,
P.O. Box 323, Office 6C-EPI C 1002
Tunis Belvedere, Tunisia

**by email: p.sovik@afdb.org**

RE: Request for CRMU Review of AfDB's Gibe III Dam

Dear Mr. Sovik:

I am writing in my capacity as chairperson of Friends of Lake Turkana (FoLT), a community association formed in 2008 in response to threats to the viability of the world's largest permanent desert lake in northwestern Kenya and southwestern Ethiopia. FoLT's membership consists of people from the Lake Turkana region, where an estimated 300,000 people rely in some way on the lake for their livelihood and survival; virtually all of them are from ethnic groups often described as "indigenous." (These groups include the Rendille, Samburu, Turkana, Elmolo, Dassanach, Ariaal, and Gabbra.) These peoples are usually described as pastoralists, but their lifestyles also include cultivation and, in some cases, fishing – activities which are possible only because of the lake. Indeed, even our herding activities are intimately bound up with the fragile ecosystem in which Lake Turkana is a dominant element.

We understand that the Executive Board of the African Development Bank (AfDB) is tentatively scheduled to consider financing to the Government of Ethiopia for the Gibe III hydropower dam on February 25, 2009. We believe that poor analysis and exclusion of the Turkana people in project preparation to date has violated multiple Bank policies, including its: Environmental and Social Assessment Procedures, Policy on Poverty Reduction, Resettlement Policy, Public Disclosure Policy, and Policy for Integrated Water Resources Management. We wish to formally request that the Compliance Review and Mediation Unit (CRMU) of the African Development Bank intervene in the Bank's pending consideration of finance for the Gibe III hydroelectric project on the Omo River in Ethiopia.

The Gibe III Dam would have a serious impact on the flow and volume of the Omo River, which provides some 80% of the Lake's replenishing inflow. We have reviewed the Environmental & Social Impact Assessment, including the Additional Study of the Downstream Area, approved by the Ethiopian government in July 2008 and find these documents seriously flawed. Indeed, the impact of Gibe III on Lake Turkana is barely acknowledged, and then only to be dismissed with spurious claims that the project will benefit the lake. These documents provide little scientific analysis regarding potential changes to the river flow, volume, and chemical balance. Analysis of the impacts of reservoir evaporation rates to downstream volumes also does not seem sound. There is no discussion of impacts from proposed irrigation schemes and two future large dams, Gibe IV and Gibe V
No discussion of the duration or methodology of reservoir filling is provided. This could result in a prolonged dry season downstream, where the suggested environmental flow of 25m³/second, a rate equal to the single lowest monthly flow recorded in nearly four decades, could be implemented for well over a year. Such a potential experience could devastate the level of Lake Turkana.

A study by the Africa Resources Working group indicates that the completion of Gibe III could mean a drop in Lake Turkana's depth of between seven and ten meters. Resulting changes in the lake's chemical balance threaten the fish as well as other species (Nile crocodiles, hippopotamus, etc) that make Lake Turkana a valuable source of biodiversity. The economic devastation that would accompany such impacts would almost certainly mean a significant upswing in the violent conflicts that have often engulfed the region's peoples.

We note that these oversights directly contradict the AfDB's Policy for Integrated Water Resources Management (see specifically Section 4.2.2, which calls for assessment of transboundary waters and steps to avoid conflicts resulting from project impacts).

We did not learn about Gibe III from the Kenyan or Ethiopian government, official project developers or from the African Development Bank. Indeed we believe that no effort has been made by anyone involved in the project to officially inform or consult with the populations that would be affected by Gibe III's impacts to Lake Turkana. Instead, we learned about the construction of Gibe III through concerned academic researchers. We have since worked with international NGOS, namely International Rivers, Campagna per la Riforma della Banca Mondiale and Bank Information Center, to gather and analyse project information, and to engage with Bank staff regarding our concerns.

Our efforts to discuss this matter with relevant AfDB staff, led by Ms. Terri Hathaway of the organization International Rivers, have been stymied. Facilitated by Ms. Hathaway, we began corresponding with Mr. Emmanuel Nzabanita on December 11 2008, requesting a conference call during which our questions and concerns could be addressed. After numerous delays in setting up this conversation, we were distressed to receive a note from Mr. Nzabanita on January 30, 2009 in which he regretted that "we are unable to hold the teleconference involving various organizations as suggested" – though no explanation for that inability was offered. He instead offered a short list of responses to some of the issues that had been raised in anticipation of the call. We found his responses selective and grossly inadequate. We are particularly concerned that Bank staff have so far ignored concerns we have raised since December regarding impacts to Lake Turkana, the lack of transboundary agreements, and the lack of consultation with affected peoples. (The memo sent by Ms. Hathaway and Mr. Nzabanita's response may be viewed at http://www.internationalrivers.org/en/africa/gibe-3-dam-ethiopia/gibe-3-discussion-afdb-goes-nowhere.)

Since November 2008, FoLT have been working diligently to learn from the Kenyan government the extent of consultations and agreements between it and the Ethiopian government, both with regard to the impact of Gibe III on Kenya's environment and peoples and the widely-reported presumption that much of the energy generated by Gibe III will ultimately be sold to Kenya. We have made progress in pushing inquiries at the parliamentary and ministry level; when we have firm answers, and, hopefully, official documentation, we will of course avail these to the CRMU.

We wish to note at the outset that we are conscious that, in addition to its impact on the Kenyan environment and peoples, Gibe III will have serious negative impacts within Ethiopia. We regret that we have been unable to make concrete connections with our counterparts on the Ethiopian side of the border; the restrictive nature of the Ethiopian government and the isolated nature of the region have delayed effective interactions. We anticipate that our request will be followed shortly by a complementary request to the CRMU from a number of groups concerned about Gibe III's effects in Ethiopia.
We are therefore requesting that CRMU undertake, with urgency, investigation and mediation efforts which will ensure that affected communities are consulted and their interests and welfare taken into account before the Gibe III project is submitted to the AfDB Executive Board for consideration. We make this request on behalf of the Kenyan communities living in the vicinity of Lake Turkana, but also strongly believe that communities living in the Omo River delta region in Ethiopia have not been adequately consulted, are inhibited from learning and speaking about the project, and should receive the same consideration we are now seeking from the AfDB.

Sincerely,

Ikal Angelei
Chairperson
Friends of Lake Turkana
Annex 2

Management Response

AFRICAN DEVELOPMENT BANK   BANQUE AFRICAINE DE DEVELOPPEMENT

AFRICAN DEVELOPMENT BANK MANAGEMENT RESPONSE TO CRMU REQUEST FOR COMPLIANCE REVIEW AND MEDIATION FOR THE GIBE III HYDROLECTRIC POWER PROJECT, ETHIOPIA

April 2009
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<tr>
<td>ADF</td>
<td>African Development Fund</td>
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<td>AfDB</td>
<td>African Development Bank</td>
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<td>CRMU</td>
<td>Compliance Review and Mediation Unit</td>
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<td>EEPCo</td>
<td>Ethiopian Electric and Power Company</td>
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<td>EFTA</td>
<td>Economic, Financial and Technical Assessment</td>
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<td>Hydroelectric Power Project</td>
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<td>Intergovernmental Panel on Climate Change</td>
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<td>Independent Review Mechanism</td>
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<td>IRP</td>
<td>Independent Review Panel</td>
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<tr>
<td>m³/s</td>
<td>Cubic meter(s) per second</td>
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<td>National Environmental Management Authority</td>
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<td>Non-Governmental Organization</td>
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MANAGEMENT RESPONSE TO REQUEST FOR
COMPLIANCE REVIEW AND MEDIATION FOR THE GIBE III HYDROELECTRIC
POWER PROJECT (HPP)

1. Introduction

1.1 The Compliance Review and Mediation Unit (CRMU) received on the 5th of March 2009 the Request for the review of Gibe III Hydroelectric Power Project in Ethiopia which is under consideration for financing by the African Development Bank (AfDB). The Request - dated 4 February 2009 - was submitted by the Friends of Lake Turkana (FoLT), a Kenya based nongovernmental organization (NGO), representing some of the Lake Turkana communities: Turkana, Dassanach, Rendille, Gabbra and Elmolo. According to the CRMU, the Request fulfills the preliminary requirements for registration under the Independent Review Mechanism (IRM) Operating Rules and Procedures; and pursuant to paragraph 19 and 20 of these IRM Rules, CRMU Director notified the Bank’s Board of Directors and the President that the Request has been registered in the IRM Register of Requests on 26 March 2009 for problem solving. The Register of Request is published on the AfDB website at www.afdb.org/irm.

1.2 According to the AfDB Environmental and Social Assessment Procedures (ESAP) screening criteria, the Gibe III project is a Category ‘1’ project, for which a full scale environmental and social impact assessment (ESIA) is required. The preliminary ESIA study reports were completed in April 2008 and were reviewed by the Bank, the World Bank (WB), the European Investment Bank (EIB) and other interested parties. Subsequently, revised reports based on the comments made by the above mentioned entities were issued in January 2009. The full reports are available on the website of the State owned electricity utility, Ethiopian Electric Power Company (EEPCo) (http://www.eepco.gov.et/), and also in the AfDB’s office in Tunis, and its field office in Addis Ababa. As required by the ESAP, interim Executive Summary of ESIA and Resettlement Action Plan (RAP) of the Gibe III Hydroelectric Power Project were disclosed in August 2008 and updated in April 2009.

1.3 The following AfDB safeguard policies dealing with environmental and social issues related to the project were taken into consideration for the preparation of the ESIA and Environmental and Social Management Plan (ESMP) reports:

- Bank Group’s Policy on the Environment
- Environment and social assessment procedures (ESAP) for Public Operations and Integrated Environmental and Social Impact Assessment guidelines
- Policy on Involuntary Resettlement
- Policy on Gender
- Policy and Guidelines on Cooperation with Civil Society Organizations (CSOs)
- Bank Group’s Policy on Disclosure of Information
It should, however be noted that, AfDB safeguard policies were not applied on the Kenyan side since no resettlement is contemplated. On the other hand, all of these policies were invoked on the Ethiopian side leading to the revisions of the ESIA and RAP reports in March 2009. More light shall be shed once specific social-environmental impact studies have been carried out in Kenya.

1.4 The Requesters claim that their request is “in response to threats to the viability of the world’s largest permanent desert lake in northwestern Kenya and southwestern Ethiopia. They furthermore argue that “The Gibe III Dam would have a serious impact on the flow and volume of the Omo River, which provides some 80% of the Lake’s [Lake Turkana] replenishing inflow”.

1.5 With reference to the project’s ESIA, including the additional study of the downstream area, approved by the Ethiopian Government in July 2008, the Requesters state that they “find these documents seriously flawed” and that “the impact of Gibe III on Lake Turkana is barely acknowledged, and then only to be dismissed with spurious claims that the project will benefit the lake.” Furthermore, they argue that “These documents provide little scientific analysis regarding potential changes in the river flow, volume, and chemical balance” and that “The economic devastation that would accompany such impacts would almost certainly mean a significant upswing in the violent conflicts that have often engulfed the region’s people”.

1.6 The Requesters believe that poor analysis and exclusion of the Turkana people in project preparation to date has violated multiple AfDB policies, including: the ESAP, Policy on Poverty Reduction, Resettlement Policy, Public Disclosure Policy, and Policy for Integrated Water Resources Management.

1.7 The Requesters say that they have been in contact with the AfDB’s staff responsible for project preparations. They sent the staff a request to convene a conference call during which they would like to raise their questions and concerns. However, according to the Requesters, this conference call was delayed several times. Finally they received a note from the Bank on 30 January stating that “we [the Bank staff] are unable to hold the teleconference involving various organizations as suggested”. Instead of the teleconference, the Requesters claim that they received a written explanation to their questions which they found “selective and grossly inadequate”. In their conclusion, the Requesters demand that: “CRMU undertake, with urgency, investigation and mediation efforts which will ensure that affected communities are consulted and their interests and welfare taken into account before the Gibe III project is submitted to the AfDB Executive Board for consideration”.

1.8 On the basis of the preliminary review of this Request, CRMU has decided that, at the first instance it will pursue the matter through a problem-solving (mediation) exercise between the Bank’s management and staff and the representatives of the Requesters. In accordance with paragraph 31 of the IRM Operating Rules and Procedures, the Bank’s Management must provide CRMU by no later than 24 April, 2009 with a written evidence that it has, or intends to comply with the Bank Group’s relevant policies and procedures.
1.9 This report is a management response to the CRMU request. It first gives a brief background on the project followed by the Management Response to the issues raised by the FoLT. Much of the management response is derived from the latest EEPCo’s ESIA reports. The response also discusses other additional studies underway to validate and identify gaps in the existing studies. The Management will therefore update its response after finalizing the additional studies currently underway.

2. Project Background

2.1 The Gibe III HPP is proposed to be an 1870 MW hydropower project in the Omo-Gibe river basin in Ethiopia (the Project). The Project site is located about 80 km downstream from the confluence of the tributary Gilgel-Gibe and the Gibe River situated 503 km south of Addis Ababa, in Wolayta-Dawro province. At its completion, Gibe III will be the largest hydropower project in Ethiopia. This power plant will be the third project on the Omo-Gibe river basin, which has in operation Gigel Gibe I (184 MW) and currently under construction, Gilgel Gibe II (420 MW).

2.2 The proposed power plant is expected to generate on average 6,250 GWh/annum of energy. For the construction of Gibe III, EEPCo has entered into an Engineering, Procurement and Construction turnkey contract (EPC contract) with Salini Costruttori S.p.A. (Italy) on a sole source basis with the understanding that the Electro-mechanical and Hydro-mechanical works will be undertaken by international competitive bidding. The EPC contract is estimated at Euro 1.45 Billion. Salini Costruttori S.p.A. also constructed Gilgel Gibe I and is currently building Gilgel Gibe II.

2.3 The EPC contract also includes access roads and a new road from Chida to Sodo. The project also includes a power transmission component, to be executed in parallel to the EPC contract.

3. Primary Developmental Objectives of the Project

3.1 Ethiopia has one of the lowest electricity access rates in the world with only 12% of Ethiopians connected to electricity. The condition in rural areas is even more abysmal, with only 2% access rate. About 90% of the population depends on biomass energy because of lack of any alternative solutions for energy. Hydropower potential in Ethiopia is estimated to be one of the highest in Africa and over 300 sites have been identified for possible development.

3.2 To meet its increasing demand, Ethiopia has embarked on an accelerated electrification program to increase the rate of population access to electricity to 50% by 2010. In addition, the Government of Ethiopia ("GoE") would like to monetize their vast hydropower resources by exporting the power to the sub region, especially to Kenya. EEPCo is preparing itself to export about 100 MW to Djibouti, 200 MW to Sudan, and about 1000 MW to Kenya in the medium term. The proposed project supports these objectives of GoE by providing large amounts of primary and secondary energy to the grid to meet both the objectives, increasing supply to the

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80 About 5,300 GWh/annum is expected to be generated on a firm basis.
81 Selection of Salini Costruttori S.p.A was initially through International Competitive Bidding.
domestic grid for increasing access and exporting excess electricity to the sub region, to meet the
demands for electricity in neighboring countries in an environmentally and socially sustainable
manner.

4. Management Response to CRMU Request

4.1 General response

- It should be recognized at the outset that as indicated in the FoLT’s own request and
associated concerns, their assessment is based on the information contained in the project’s
ESIA of July 2008, in particular the Additional Study of the Downstream Area. As a result
of the due diligence carried out by the lenders during the third and fourth quarters of 2008,
the ESIA studies were updated and the final reports have been made available on the
EEPCo’s website since March 2009. These studies address in detail several of the issues
raised by the FoLT.
- The issues raised by the FoLT (full document attached in Annex 2) are grouped where they
are interrelated, and the corresponding management response is provided below. It should be
reiterated that this constitutes a preliminary response which will be updated when the EFTA
and the Additional ESIA studies become available.

4.2 Management Response to the Issues raised by FoLT Based on the Available studies

4.2.1 Issues Raised by FoLT:

Issue No. 1a: The Gibe III Dam would have a serious impact on the flow and volume of
the Omo River

Issue No. 1b: potential changes to the chemical balance due to reservoir evaporation

4.2.1.1 Issue No. 1a: The Gibe III Dam would have a serious impact on the flow and volume of
the Omo River, which provides some 80% of the Lake's replenishing inflow. We (FoLT) have
reviewed the Environmental & Social Impact Assessment, including the Additional Study of the
Downstream Area, approved by the Ethiopian government in July 2008 and find these documents
seriously flawed.

Indeed, the impact of Gibe III on Lake Turkana is barely acknowledged, and then only to be
dismissed with spurious claims that the project will benefit the lake. These documents provide
little scientific analysis regarding potential changes to the river flow, volume, (and Issue 1b
chemical balance – discussed in Management response No. 1b below). Analysis of the impacts
of reservoir evaporation rates to downstream volumes also does not seem sound.

4.2.1.2 No discussion of the duration or methodology of reservoir filling is provided. This could
result in a prolonged dry season downstream, where the suggested environmental flow of
25m3/second, a rate equal to the single lowest monthly flow recorded in nearly four decades,
could be implemented for well over a year. Such a potential experience could devastate the level
of Lake Turkana.
4.2.1.3 A study by the Africa Resources Working group indicates that the completion of Gibe III could mean a drop in Lake Turkana's depth of between seven and ten meters. Resulting changes in the lake's chemical balance threaten the fish as well as other species (Nile crocodiles, hippopotamus, etc) that make Lake Turkana a valuable source of biodiversity.

Management response No.1a:

4.2.1.4 The FoLT concerns outlined above are highly exaggerated. EEPCo’s work documented in detail in the ESIA Study for the Downstream Region (January 2009) and is summarized below containing comprehensive information and analysis to show that the lake hydrologic regime will in fact be improved.

4.2.1.5 The main beneficial impact of the project on the Omo-Gibe River Basin’s water resources resides in its contribution to the regulation of the downstream hydrological regime, especially in the river delta. In broad terms, there will be an increase in the flows during the dry season and a reduction of the flows during the rainy season, when the water is retained to fill the reservoir. The most relevant beneficial effects will occur during the highly rainy and dry years. The current hydrological regime, modified by the deforestation of the upper watershed, shows frequent critical events in the river delta having:

- Large and sudden floods (peak flows up to 5200 m³/s, return period 30 years, Gibe III site);
- Extended drought periods (August average flows down to 820 m³/s, year 1987, Gibe III site);

4.2.1.6 Floods occurred in 2006 (with return period of less than 10 years) caused destructive effects on human and animal life, private assets and public infrastructure in the river delta, while the extended droughts period 1986-1987 originated a famine crisis for humans and wild life. The plant will allow the complete regulation of the river flows reducing the highest peak floods and avoiding extended drought periods by means of:

- The reservoir live capacity of 12300 Mm³ (Comparable to the mean annual inflow volume of 13800 M m³);
- The large outlet works (Two middle outlet with Qmax = 1080 m³/s each, one ecological outlet and nine spillway radial gates);

4.2.1.7 The outlet works are planned to guarantee a remarkable flexibility of the plant operation. The discharge rules can be adapted following the requirements both of the energy production and of the downstream environment.

4.2.1.8 The following graphs illustrate the comparison between the monthly flows (at the Gibe III site) before and after the dam construction based on the most significant operating scenario envisaged. The analysis considers the discharges recorded during a 38 years period (1964 - 2001) simulating the operation of the plant.
Figure 1: Monthly flows at Gibe III site: average 1964-2001

The graph below shows the average flows (38 years period). The subsequent graph shows the maximum discharges of a highly rainy year (year 1988).

Figure 2: Monthly flows at Gibe III site: year 1988 (max flows)
4.2.1.9 Average flows during the month of August currently range from 820 m$^3$/s to 2360 m$^3$/s (Gibe III section, 38 years flow records). While operating the Gibe III plant the complete regulation of the downstream releases is allowed by the turbine outflows, up to a maximum of about 1000 m$^3$/s, together with the large outlet works discharges.

4.2.1.10 A controlled flood is foreseen from the reservoir during the months of August / September to coincide with the peak flows from the residual basin. This release is intended to limit the downstream flooding to the required extent, in duration and in areas, while reproducing the natural average flooding conditions. The planned discharge from Gibe III Hydroelectric facility will have the same magnitude of the average-year maximum flows on the Omo river downstream stretch. While moving downstream along the Omo River, towards Lake Turkana, a distance of over 700 km, the effects of the Gibe III flow regulation decrease following the contribution of the discharges from the residual basin.

4.2.1.11 The graph below shows the average flows of the Omo River at Lake Turkana (38 years mean). The subsequent graph shows the minimum discharges of a highly dry year (1988).

![Graph showing monthly flows at Lake Turkana](image)

**Figure 3: Monthly flows at Lake Turkana: average 1964-2001**
4.2.1.12 The long-term benefits will include the reduction of the unproductive evaporation losses taking place in the floodplains after the floods retreat. These losses largely exceed the expected total evaporation from the proposed Gibe-3 reservoir. The water surface when the reservoir is full is about 210 Km2 while average temperatures are about 20°C (annual mean), varying between 15°C and 30°C, with a rainfall in the range of 1300 mm. Compared with the total area of the Lower Omo River Valley’s unproductive marshlands (about 80 square Km), and the extremely hot and arid climate of that region, with total rainfall less than 500 mm, the evaporation losses from the proposed reservoir appear negligible. Evaporation losses in the swampy depressions of the floodplains are particularly relevant in extreme high-flow years when the magnitude and duration of the floods also causes disastrous effects on the communities. In contrast, no appreciable evaporation losses take place in the low-flow years when the Lake Turkana system suffers however from serious hydrological deficits.

4.2.1.13 The regulation of the river flow will also induce a more efficient use of water resources, by providing reliable and timely water supply during the year, for the traditional flood-recession agriculture on the riverbanks. The increased average terminal runoff will therefore benefit the hydrological balance of Lake Turkana. The lake represents obviously a major asset in the region not only for evident environmental reasons but also for the fishery and tourist activities. Due to the decreasing inflow from the rivers feeding this inland-contained hydrological system, the levels of Lake Turkana show a worrying marked tendency to decrease with its surface area consequently gradually shrinking in the medium - long term. This results in the perceived progressive retreat of the shoreline that implies the reduction of the exploitable waters for the Ethiopian fishing boats fleets.
4.2.1.14 The regulation of the river flows induced by the Gibe III dam, reducing the evaporation losses, contributes to re-establish a positive hydrological balance in the Turkana transboundary system. This is in fact the long-term objective jointly pursued by the riparian countries through high-priority dialogue and negotiations, for the system to be restored to the equitable benefit of the people relying on lake resources. The main beneficial impacts of the Gibe III reservoir operation on the downstream hydrological regime are therefore as follows:

- Control of the large and sudden floods occurring during the wet years (up to 5200 m³/s at Gibe III with a return period 30 years);
- Reduction of the extended drought periods (as the 1986-1987 ones);
- Reduction of the evaporation losses which contribute to the current recession of the Lake Turkana;

4.2.1.15 The large flexibility of the plant, due to the substantial live capacity and outlet works, allows modifying the operating rules of the reservoir following the requirements of the energy production and of the downstream environment.

River flow regulation for environmental protection

4.2.1.16 An environmental flow, meaning a necessary flow of water to keep the Gibe downstream aquatic and riverine environment healthy, is a prerequisite that has been kept into consideration within the present study. Such a planned water release is required in order to offset the impact of dam-induced changed flows on downstream aquatic ecosystems; as far as possible, planned environmental flow releases are designed to mimic the natural occurring flow regime. Under this concept, the Omo River flow resulting from the Gibe-3 Hydropower development, will consist of normal (operational) environmental base flow, as well as high-flow-season controlled flooding combined together with the normal flows from the lower Omo watershed.

Minimum Environmental Flow

4.2.1.17 During the first filling of the reservoir, a temporary environmental outlet is envisaged through the dam body to allow a small outflow of between 30 and 70 m³/sec during the first months of the rainy season; and the middle outlet with a maximum release of 800 m³/s when the reservoir reaches 755 m a.s.l. In the unlikely event that the plant will not be in operation, a minimum ecological flow of about 25 m³/s will be released by means of the outlet device in the powerhouse expressly designed for the purpose. The discharge of 25 m³/s basically corresponds to the lowest monthly average dry season flows encountered during the period 1964-2001 (March 1973). This is considered more appropriate to guarantee the health status of downstream lacustrine environments beyond and above the existing minimum environmental discharge requirement of 15 m³/s as prescribed by the Employer’s Requirements of the EPC Contract. This proposed discharge, identified on the basis of existing hydrological records, is to be adopted as a provisional measure to ensure sustainability of riverine ecosystems pending more appropriate parameters as resulting from the foreseen activities on geomorphological and ecological river response (cfr. chapter 6) as elaborated within an appropriate hydraulic model (cfr. Para. 6.1.3), with gradual passage between purely hydrological to environmental techniques being considered as standard international practice. The intake of the ecological outlet is placed
at about mid height of the reservoir (el 800 m a.s.l.). This is being planned since water stratification is usually evident in deep reservoirs and such an arrangement will minimize the release of low O2 and low temperature water from the hypolimnion of the reservoir, thus avoiding damages to the downstream riverine environment as observed in several hydropower plants. The ecological flow will therefore maintain the minimum natural dry season conditions immediately downstream of the dam. The relevant discharges coming from the perennial effluents in the residual basin will substantially contribute towards restoring the natural conditions further downstream. Where the plant will be continuously inoperative for some days the large middle outlets will allow the full release of required downstream environmental flows. The required discharges vary during the year and the operating rules will be also established according to the duration of the required stop in energy production.

**Wet -season controlled flooding**

4.2.1.18 A controlled flood release is foreseen from the reservoir during the month of September (or end of August) to coincide with the peak flows from the residual basin. This release is intended to reproduce the natural average floods conditions while limiting the downstream flooding to a required extent, in duration and in areas.

The envisaged characteristics of these floods (duration, outflows) are:

**Period:** September (or last two weeks of August)

**Flows:** 1000 – 1200 m$^3$/s (at Gibe III)

**About:** 1600 m$^3$/s (at Lake Turkana)

**Duration:** 10 days (peak flow)

The period corresponds to the last weeks of the natural hydrological floods and slightly varies each year depending on the contributions from the residual basin Gibe III - Turkana. The discharges are in the range of the monthly average natural flows at Turkana during the month of September (Q=1500 m$^3$/s) as illustrated in the Figure 3 above.

**Daily Flow Variation Acoustic Warning System**

4.2.1.19 The first section of the river downstream Gibe III dam will experience consistent fluctuation of water levels within the riverbed in the course of normal (24 hrs) hydroelectric operations. Although, due to local geomorphology, no permanent human settlement / activities are located in areas interested by the fluctuating water levels, this does not mean that humans, especially in the proximity of villages, may not approach the river for different usages or for crossing it. To this aim, a long-term warning system constituted by sirens will be placed and operated in river sections located in the immediate proximity of nearest villages and around major river crossing to signal in advance occurrence of rising waters in a number of priority spots (provisionally estimated in 50 – 100 locations) along the Omo river first 200 km downstream Gibe III Dam. The sirens will advise differently for Large Water Releases (Controlled Flooding) and Ordinary Discharges occurring daily as a result of Dam operations by mean of distinct warning signals to the understanding of which the residing population will be trained beforehand. The Warning Units will be remotely trigged by the Dam Control Station, on a pre-organized time sequence according to the river water speed, possibly coupled with water
level gauges systems reacting to rising water levels placed in the immediate proximity of warning units. Sonic Devices and water level gauges with ultrasonic sensors will be operated by solar panels.

**Environmental Monitoring**

4.2.1.20 Planning of downstream monitoring activities will also be EEPCO’s responsibility and will include development and implementation of a Baseline Monitoring Program against which annual monitoring will later on be referred. This Program is to comprise the layout of a river hydrodynamic model, which will duly consider links between the present flow regime and all related ecosystem peculiarities for the different sections of the river and its surroundings, including biological aspects of the estuarine floodplains. Incoming or actualized data will help to evaluate appropriateness (effectiveness and efficacy) of the proposed mitigation actions including environmental water releases, thus providing elements to update its operational aspects and substantially contributing to adaptive environmental management.

4.2.1.21 EEPCO will set-up an environmental and social monitoring system at the lower Omo. This will be a first step to guide the establishment of a proper baseline information databank for the Lower Omo which needs to be laid out in detail at the feasibility level and subsequently executed by EEPCo, to include identification and monitoring methodologies for relevant:

- Physical aspects;
- Ecological aspects;
- Socio-economic and ethnographic aspects;

The cost of monitoring to establish baseline environment is estimated to be USD 1.5 million and will be covered by EEPCO.

4.2.2 **Management Response No.1 b: Chemicals:** Phosphorus, nitrogen, BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) have been measured upstream and downstream of the existing reservoir and at Gibe III site.

4.2.2.1 The following graphs (Figure 5) indicate that measured BOD and COD values, while possibly reduced by the Gibe reservoir, do not substantially vary along the Omo River. The phosphorus content upstream and downstream the Gibe I reservoir is substantially unvaried and is by far lower than 20 mg/l which could be roughly considered a limit to consider the lake as “eutrophic”. The nitrogen -while probably relevantly increasing within the Gibe I reservoir, also remains unvaried along the Omo River. The lake is probably “nitrogen-limited” considering this common indicator of the tropic status.

4.2.2.2 Phosphorus, nitrogen, BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) have been measured upstream and downstream of the existing reservoir and at Gibe III site. The following graphs (Figures 6 and 7) indicate that measured BOD and COD values, while possibly reduced by the Gibe reservoir, do not substantially vary along the Omo River.
4.2.2.3 The phosphorus content upstream and downstream the Gibe I reservoir is substantially unvaried and is by far lower than 20 mg/l which could be roughly considered a limit to consider the lake as “eutrophic”. The nitrogen -while probably relevantly increasing within the Gibe I reservoir, also remains unvaried along the Omo River. The lake is probably “nitrogen-limited” considering this common indicator of the tropic status.

4.2.2.4 The existing Gibe I reservoir operation, which well reflects the conditions of the envisaged Gibe III reservoir, indicates that: The most relevant mean water quality parameters (phosphorus, nitrogen, COB, BOD, etc) will probably not be greatly varied by the reservoir operation.

Figure 5: Nutrients upstream and downstream Gibe I and at Gibe III (March 2008)

Figure 6: Biological oxygen demand upstream and downstream Gibe I and at Gibe III (March 2008)
4.2.3 Issue No 2a: There is no discussion of impacts from proposed irrigation schemes and 2b) two future large dams, Gibe IV and Gibe V

4.2.3.1 Management response 2a): There are possible types of interventions in irrigated agriculture to be implemented in case the envisaged annual release and the artificial floods from the reservoir prove insufficient to fully reproduce the current conditions for flood-recession agriculture. In this way the project is expected to provide alternative sources of survival at least in terms of food crops i.e. grains (maize and sorghum), beans and forage crops, and other cash crops. The envisaged potential scenarios for irrigation are mainly in three categories:
(i) **Smallholder irrigated schemes (totally financed by Public Developmental Authorities):** After construction of the dam a number of families that will be interested in and capable of growing irrigated crops can only be estimated at this stage. However, based on the envisaged technical assistance measures, it can be assumed that 20% of those currently engaged in recession cropping i.e. 4,000 families would be involved. A phased development of 100 irrigated schemes of 20ha each (totaling 2,000 ha), settled by 80 families with 0.25 ha each, will eventually be developed. The 100 schemes will be divided over the four weredas, in proportion to the amount of flood recession crop area that has been lost. This relatively small size of scheme (20 ha) is proposed because it will have several advantages: (a) it will be small enough to be managed eventually by the smallholders themselves, (b) it will be easier to phase construction so that units are operational more quickly, (c) units could be more easily fitted into upstream areas where land levels may be more variable, and (d) should a pump break down it will affect fewer people and be less of a disaster.

(ii) **Small Scale Commercial irrigated farms (partially financed by Public Developmental Authorities):** It is anticipated that the more ambitious individuals, with perhaps some management skills, capital and maybe an existing small farm, irrigated by windmill or small pump, would wish to have a small scale commercial unit. It is assumed that 100 such farmers would take advantage of the regulated water supply and that each will, on average, have 3 ha of land. These would mainly grow bananas and vegetables as high value cash crops, but also some food crops.

(iii) **Large Scale Commercial Farms (facilitated -not financed- within local development plans by Public Developmental Authorities):** Extensive areas of level land with a reliable, regulated water supply from the river should attract private investment in large scale irrigated commercial farms or plantations. Cotton and sugarcane, as well as beef feedlots growing maize for silage, are possibilities, depending on local and export market demand and prices. Omo Valley Agro-Industry Plc., situated not very far away from the lower Omo valley, at Biralle is successfully growing 2,700 ha of cotton, irrigated from the Weito River. Cotton and sugarcane both lend themselves to the contracting of out-growers, which will provide further opportunities for small-scale farmers. Feedlots will provide a market for surplus cattle, especially at times when grazing is scarce. It remains to be seen however if the traditional aversion of pastoralists to selling cattle is going to change, although, as mentioned earlier, a recently established livestock market in Omo Rate is attracting traders who buy cattle for sale in the highland urban areas. While cotton may sound plausible, sugarcane is probably the least likely to attract investment initially, because of the high costs associated with constructing a factory, roads etc. as well as the costs of developing a large enough area to justify such infrastructure and water requirements. The table below shows some idea of the water and labor requirements from such large-scale irrigated commercial farms:
<table>
<thead>
<tr>
<th>Type</th>
<th>Water Requirements</th>
<th>Labor (employment potential)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000 ha cotton plantation</td>
<td>800 mm/annum over 5 months</td>
<td>125 m/days/ha = 250,000 man days</td>
</tr>
<tr>
<td>5,000 ha sugarcane plantation</td>
<td>1,500 mm/annum over 12 months</td>
<td>100 m/days/ha = 500,000 man days</td>
</tr>
<tr>
<td>200 ha Beef Feedlot</td>
<td>Maize silage: 600 mm/crop over 4 months – twice a year</td>
<td>300 m/days/ha = 60,000 man days</td>
</tr>
</tbody>
</table>

4.2.3.2 Locations and areas of interventions in irrigated agriculture: All the irrigation development will be situated in the Kebeles which rely on flood-recession cropping at present. Large commercial plantation schemes will almost certainly be situated in the lower reaches of the river, in Dasenech Wereda, where larger areas of level land are available and the banks are not too high for efficient pumping. Distribution of small-scale irrigation schemes will be by Weredas, roughly in proportion to the current amount of post flood cropping.

4.2.3.3 The anticipated development of commercial plantations will almost certainly be situated on the plains of Dasenech Wereda near the Omo River delta, where large areas of flat land are available. It is not possible at this stage to be exact, but for the sake of argument we can assume that at least 5,000 ha will be developed, with cotton plantations being the most likely cash crop. The proposed interventions in irrigated agriculture will benefit the people in terms of increased food, more cash income and better nutrition. These will include the creation of irrigation settlement schemes for smallholders, initially managed by the authorities and eventually by farmer associations, financial assistance to individual small scale commercial farmers, and an enabling environment for large-scale commercial farm development, which will provide employment.

4.2.3.4 Implementation and Follow-up Steps: The assumption made is that two years will be required for surveys, studies, construction drawings, cost estimates and tender documents preparation. The implementation phase will last 3 years, during which woreda and kebele officials, as well as beneficiary farmers will benefit from continuous capacity building and on-the-job training. Such assistance will start in the first year with training in project preparation and contract management, and will continue after implementation for one additional year, mainly on maintenance and irrigation management including financial aspects. The total duration for the envisaged measure to become fully operational will hence be 6 years.

4.2.4 Management response 2b) Gibe IV and V, if they materialize are too far away to be concerned about at this stage.

4.2.5 Issue No.3: The economic devastation that would accompany such impacts would almost certainly mean a significant upswing in the violent conflicts that have often engulfed the region’s peoples. We note that these oversights directly contradict the AfDB’s Policy for Integrated Water Resources Management (see specifically Section 4.2.2, which calls for assessment of transboundary waters and steps to avoid conflicts resulting from project impacts).
4.2.5.1 Management Response No.3: The economic devastation referred to in the Issue No. 3 in the Management’s view is highly exaggerated, pessimistic and mischievous attitude of some of the NGOs. Management response No. 1 demonstrates that the Lake Turkan a water level and its hydrologic regime will be maintained and also improved. There is a number of socio-economic benefit programs planned for the lower Omo River. E.g.:

- Agriculture (improved rain-fed and irrigation),
- Fish resources and biodiversity,
- Capacity building for extension services in agro-forestry, water conservation, improved crop variety, crop diversification, conservation farming, pest control, etc., and
- Other socio-economic development activities (Capacity Building for EMU, Woreda institutions strengthening, Conflict prevention and resolutions, training program, regular information meetings, coordination measures for food aid, community awareness programs, information system, cooperative support, agriculture in-Service, training Programs, etc.)

4.2.6 Issue No.4: We (FoLT) wish to note at the outset that we are conscious that, in addition to its impact on the Kenyan environment and peoples, Gibe III will have serious negative impacts within Ethiopia. We regret that we have been unable to make concrete connections with our counterparts on the Ethiopian side of the border; the restrictive nature of the Ethiopian government and the isolated nature of the region have delayed effective interactions. We anticipate that our request will be followed shortly by a complementary request to the CRMU from a number of groups concerned about Gibe III's effects in Ethiopia.

4.2.6.1 Management Response No.4: The Management is fully aware of the issues raised in the international media and issues that have been brought to the Bank’s attention by a number of groups concerned with the Ethiopian side of the project. The management is confident that the findings of the additional studies mentioned above will help address any complementary requests to the CRMU. Both studies will also include and allow further consultations and dialogue with all the stakeholders including the civil society at large.

4.2.7 Issue No.5: We (FoLT) are therefore requesting that CRMU undertake, with urgency, investigation and mediation efforts which will ensure that affected communities are consulted and their interests and welfare taken into account before the Gibe III project is submitted to the AfDB Executive Board for consideration. We make this request on behalf of the Kenyan communities living in the vicinity of Lake Turkana, but also strongly believe that communities living in the Omo River delta region in Ethiopia have not been adequately consulted, are inhibited from learning and speaking about the project, and should receive the same consideration we are now seeking from the AfDB.

4.2.7.1 Management response No.5: The Management welcomes the opportunity to formally engage with the Lake Turkana communities in Kenya and other appropriate groups in Ethiopia through the mediation efforts planned by CRMU. While no formal consultations have taken place on the Kenyan side, the updated Public Consultation and Disclosure report (January 2009) and issued by EEPCo in March 2009 in our mind fulfills the consultation requirements in the Omo River Delta in Ethiopia.
4.3 Key Additional Studies and Information

The Management Response is largely based on the latest ESIA reports. Additionally, there are two other key studies that would also bear on the issues at hand: (i) the Economic, Financial and Technical Assessment (EFTA) which is currently underway with guidance of the AfDB and EIB; and (ii) a review and validation of the ESIA studies whose terms of reference (TOR) are under consideration by the AfDB and EIB. The purpose and the status of these two studies are summarized below. The Management would compliment its response when the studies are finalized.

EFTA Study

4.3.1 A joint venture consortium of Mott MacDonald of UK and Sogreah of France along with sub-consultant AG Consult of Ethiopia has been contracted by the AfDB and the EIB to undertake the EFTA Studies of the Gibe III Hydropower Project in Ethiopia. These studies will be used by the AfDB in their post-appraisal of the Project and are also intended to act as an independent review of the scheme as one indicator to private sector banks in assessing whether or not to provide funds for the civil works and hydro-mechanical plant contracts.

4.3.2 EEPCo and its EPC contractor have previously undertaken technical, financial, environmental, and social due diligence of the Project and the Project is at an advanced stage. The emphasis of the EFTA assessment will be to review work already completed by others, supplemented by any additional input, with objective of reviewing and finalizing the assessment of the environmental and social impact of the project, at the same time taking into account the comments made by Civil Society so far. Additional recommendations will be made, where necessary.

4.4 Relevant Contents of the TOR of the EFTA Study

4.4.1 Hydrology

1. Review the historic hydrological record for the Omo River at the Project site and analysis undertaken by the Owner’s Engineer (“OE”) to assess its adequacy and reliability when compared to the capacity of the reservoir and the operational requirements of the Project.

2. Review the impact of Gibe III to assure optimal operation of the hydropower projects (in a cascade or otherwise) already developed and to be developed on the Omo Gibe river basin.

3. Review the historic hydrological record for the Omo River to assess its propensity for flooding.

4. Review, if any, riparian release obligations proposed in the ESIA/ESMP which are deemed necessary to appropriately mitigate downstream impacts, both during reservoir impoundment and operation.

5. Review the quality of the water with regard to the potential effects it can have on the structure and equipment of the Project and as input to the EIA.
6. Review simulations based on historic hydrologic records with a weekly model (taking into account seasonal effects) of the reservoir, water inflow and outflow, and plant operations.

7. Review the potential impact that climate change in the region could have on the project based on latest available scientific information from the Intergovernmental Panel on Climate Change (IPCC) and others. To this extent, the Consultant will review the work undertaken by the World Bank regarding climate change assessment of the subject river basin in Ethiopia.

The hydrological risks are related to possible insufficient or non-representative measured data where no gauging station was available; changes in the water use in the basin or more regional changes, in relation to global warming; and variability of the annual inflow.

4.4.2 Cascading Effects from Gibe I and II

Predicted energy generation for Gibe III is based on the monthly averages for the 38 year inflow period from 1964-2001. However, Gibe III will eventually be part of a cascade of power plants with different storage capacities, installed power and design discharges. The documentation that includes the influence of the upstream power plants, mainly Gibe II, on the power production of Gibe III will be reviewed.

Gibe II will become operational with live storage of 1.2 million m$^3$ and a rated discharge of 102 m$^3$/s. If this discharge was to be achieved at all times, the outflow of Gibe II and hence guaranteed inflow into Gibe III would be higher than the average inflow into the Gibe III during the dry season, especially from January to April. This could lead to a higher firm energy produced at Gibe III but would ultimately depend on the operation of Gibe II.

Likewise for the wet season, the inflow into Gibe III reservoir could be reduced due to upstream damming and lower average inflows than previously recorded might be experienced. However, it is assumed that the contribution from tributary rivers during the wet season is dominating the total inflow into Gibe III and this will be looked at during the following stages of the research.

4.4.3 Annual Flood Release

Part of the reservoir operating regime will include an annual flood release to maintain downstream flood plains for irrigation and farming. The review will examine when and for how long these flood release patterns will occur and be maintained, but it is obvious that during these periods energy generation from Gibe III will be limited. Again, the consultants will be able to provide the client with a clear analysis of the expected energy outage as well as the possible best time for flood release as part of our Power and Energy model of Gibe III.
4.4.4 Gibe III in a Cascade

Gibe III is the third hydro scheme to be built on the River Omo. From initial review of the documents supplied, there are tentative plans to built Gibe IV and Gibe V. The consultants will assess the significance of these schemes on Gibe IV. As an example, initial review indicates that a controlled flood will need to be created each year to enable the population downstream to continue their working practices. This requirement may change should one or more downstream schemes be developed. The assessment will also need to include the effect of Gibe I and II on the quantity and timing of the water to be passed to Gibe III.

4.4.5 Hydrological Assessment - Runoff and Floods

Studies regarding the hydrology of the Inflows and the floods are available in the Basic Design Reports Vol. 1 to 4 dated May 2006 and in the Level 1 reports related to the hydrology of extreme floods (June 2007) and the Sedimentation (April 2007).

These reports will be subject to thorough analysis to confirm the data used in the development of the scheme, to validate the methodology used, and better assess the hydrological risks. The review will include an assessment of whether appropriate allowance for any riparian release identified in the environmental and social documentation has been made.

4.4.6 Potential Climate Change

The work that has been undertaken by the World Bank on climate change in the river Omo region of Ethiopia will be reviewed and compared with available scientific research by the IPCC and others. As a hydro scheme does not give off heat any effect is likely to be due to the change in the flow pattern of the river and the consequential effect on habitat, crop and natural vegetation growth, and animal numbers.

4.4.7 Dam Safety and Panel of Experts

Although current procedures for EIB and AfDB do not require the establishment of a Dam Safety Review Panel as a pre-condition to financing, it is understood that this may be changed in the future. The requirements for the panel of experts are well established in other major hydro project around the world and the consultants will review these to establish our recommendations. The proposed dam at Gibe III with a height of 240 m is classed as a “large dam” in terms of the World Bank classification and the consultants will take account of the World Bank requirements when carrying out this review. The Panel would usually comprise experts in structures, hydrology, geology and geotechnics but the actual panel for Gibe III may be extended to cover aspects other than dam safety. The consultants will also comment on the monitoring procedures that should be in place, such as frequency of regular visits and whether ad hoc visits may be necessary at key milestones. The consultants will then discuss the concept with EEPCo and the Banks to try to reach a consensus.
4.5 Independent Review and Validation of ESIA Studies conducted for the Project

4.5.1 Terms of Reference (TOR) for the review and validation of the ESIA Studies for the Gibe III Project are under review by the AfDB and EIB to conduct an independent review of the environmental and social impact assessments of the Project. The review will address issues considered or perceived as not adequately covered in the available studies, or where there is a need for a second opinion. This study will be carried out by a consortium of consultants with international experience in similar large infrastructure projects and with the adequate skills that match the key review parameters. The TOR is based on the Part 1 report ‘Analysis of Gaps in ESIA studies’, which was issued by the EIB on 22 March 2009 as draft, pending comments from EEPCo. It covers the Project with the following components: Dam and Reservoir Area, Downstream Area, Transmission lines to the existing electrical grid and the Chida-Sodo Road.

4.5.2 The expected report will present additional analysis of the Environmental and Social Impact of the Project and identify any areas of improvement, recommend potential additional mitigation measures for identified issues, and as a whole represent an independent view of the overall impact of the Project to the key stakeholders. Comments made by the civil society will be reviewed.

4.5.3 The study will be done concurrently with the EFTA Study. While the full TOR can only be disclosed after the approval of the Bank’s legal Department, the study will contain the following key components which will complement the EFTA study and provide additional information some of which will address FoLT’s concerns.

4.5.5 The overall objective of this Project ESIA assessment will be the following:

- Update the available ESIA studies to mitigate perceived weaknesses to give increased confidence to the GoE, EEPCo, and the Lenders,
- Provide second opinions on issues, including comments from Civil Society,
- Improve the links with analyses and assessments made in respect to the economic, financial and technical aspects of the project,
- Facilitate the communication processes and information dissemination to the Banks and the Public.

4.5.6 The study will specifically address but not limited to:

- Adequacy of compensation flow (environmental minimum flow, high pulse flow and artificial flooding), also during impoundment,
- Review of Omo river flow and downstream flood simulations, impact of geological situation, seismic risks and possible reservoir leakages; impact of climate change effects (this is already in the EFTA Study),
- Cumulative impact analysis (Gibe-Omo River Basin), in particular with respect to the downstream area and cross border impacts, (This is already in the EFTA Study)
- Impact on the Lower Omo Delta and Lake Turkana during construction, impoundment and operation; review with Kenyan Authorities and related agreements,
Assess net impact on water level of Lake Turkana with and without project considering the large surface of lake and the evaporation rate currently being experienced,

- Impact on semi-nomadic households, Tribes, Indigenous People and other vulnerable groups, and related compensation measures; confirmation that free, prior and informed consent has been achieved,

- Impact on fishery aspects, compensation and community development aspects,

- Health Aspects and related GoE commitments for sustainable operation with provisions for funding,

- Impact of proposed irrigation schemes on the water flows,

- Impact on Tourism,

Impact on recessional agriculture,

5. Conclusions

Management has been taking all necessary actions to ensure that the Gibe III Hydropower project conforms to its environmental and social safeguards. The reports submitted by EEPCO have been meticulously reviewed and comments have been made on the reports. In response, EEPCO has undertaken or is undertaking additional studies to ensure full compliance. Management has requested EEPCO for details of the plan for dam filling and when the report is received, it will be analyzed to ensure that there Dam poses no serious risk to the down stream users. In the meantime, Management welcomes the opportunity for mediation as suggested.
ANNEX 3

Brief Summary of Scoping Meeting

SCOPING MEDIATION MEETING FACILITATED BY COMPLIANCE REVIEW AND MEDIATION UNIT
10 June 2009, Nairobi

I. INTRODUCTION

Upon receipt of the request of Friends of Lake Turkana (FoLT) complaining about the potential negative impact of GIBE III Hydroelectricity Project in Ethiopia which is considered for financing by the African Development Bank (ADB), the Compliance Review and Mediation Unit (CRMU) in pursuant to the rules of the Independent Review Mechanism (IRM) registered the request on 26 of March 2009 for problem-solving exercise.

CRMU discussed with FoLT and ADB [hereinafter, the ‘parties’] the possibility of organizing a scoping mediation meeting as an opportunity to discuss the issues by the requestors and to agree on issues that could be referred to the problem-solving exercise (mediation). The parties agreed to attend the scoping meeting held on 10 June 2009 at the ADB Country Office in Nairobi with the facilitation of CRMU.

The scoping meeting was opened by Mr. Per Eldar Sovik, the Director of CRMU, who addressed the participants on the IRM mandate and functions, and asked the parties to review and approve the agenda of the meeting included in Annex I of this brief summary.

Upon the parties signature of the Information Disclosure Attestation signed by ADB, FoLT and CRMU, the meeting followed the agreed upon agenda.

II. The FoLT CONCERNS

FoLT present their concerns which are listed below and detailed in Section IV of this brief summary which includes the Outcome Discussion Table.

The FoLT concerns are:
1. Consultation.
2. Hydrology of Lake Turkana.
3. Independent, comprehensive and inclusive Environmental and Social Impact Study.
4. Kenya and Ethiopia Governments should agree on management of water resources.
5. Wildlife and forest preservation.
6. Fishery including Resources, livelihoods and Rights of Turkana communities.
7. Depletion of natural resources will trigger intertribal and transboundary conflicts.
9. Threat to commercial exploitation and tourism in Lake Turkana.
III. ADB Presentation

The ADB presentation covered a general background on the ADB orientation, roles and expected benefits from its financed projects in its member countries. The presentation also demonstrated the ADB role in considering financing GIBE III and its related ADB social and environmental assessment procedures. The main issues emphasized by the ADB presentation can be summarized as follows:

- Since 2006 ADB out of due diligence and compliance with its own policies—rather than responding to complaints—has asked the project sponsor to review and update the project documents including the ESIA to ensure that the downstream impact of the project considered.
- The project has three components: the civil work, the hydro mechanical and the electromechanical component which is the component being considered for financing by the ADB.
- The ADB loan will be provided to the Government of Ethiopia and the Ethiopian Electrical Power Company (EEPCO) is the executing agency.
- ADB has noted the FoLT concerns and is willing to facilitate resolution of issues raised to the extent possible.
## IV. OUTCOME OF PARTIES DISCUSSION

<table>
<thead>
<tr>
<th>ISSUES RAISED BY FOLT</th>
<th>RESPONSE BY ADB</th>
<th>PROBLEM CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No adequate consultation with the Kenya Government and no consultations with</td>
<td>a. ADB indicated that to the best of its knowledge no adequate consultation</td>
<td>Uncontestable</td>
</tr>
<tr>
<td>local communities and other stakeholders on Kenya side.</td>
<td>with government and no consultation with communities has been conducted in</td>
<td>issue not to be referred to mediation.</td>
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<td></td>
<td>Kenya. ADB will ensure that proper consultation is carried out.</td>
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<tr>
<td></td>
<td>b. ADB requested FoLT to provided information and help in identifying communities</td>
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<td></td>
<td>to be consulted on Kenya side.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. The consultation report will be shared with FoLT.</td>
<td></td>
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<tr>
<td>2. The potential drop in Lake Turkana water levels. The long scale retreat of the</td>
<td>ADB disagrees.</td>
<td>Issue to be referred to mediation.</td>
</tr>
<tr>
<td>lake waters rising salinity conditions would cause environmental perturbation and a</td>
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<tr>
<td>decline in microbiological and aquatic ecosystems due to the project arising from the</td>
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<tr>
<td>infill of the Dam.</td>
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<td></td>
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<tr>
<td>3. Before the approval of funding the project an Independent, comprehensive and</td>
<td>ADB will process the project according to its policies and procedures. The ADB</td>
<td>Issue to be referred to mediation.</td>
</tr>
<tr>
<td>inclusive ESIA should be conducted on the Kenya side such as not limited to:</td>
<td>will ensure that the impacts of Gibe 3 on Lake Turkana are assessed.</td>
<td></td>
</tr>
<tr>
<td>a. Wild Life and Forest preservation.</td>
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<tr>
<td>b. Fishery Resources, Livelihoods and rights of communities around Lake Turkana.</td>
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<tr>
<td>c. Competition over scarce natural resources would trigger intertribal and</td>
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<tr>
<td>transboundary conflicts.</td>
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<tr>
<td>4. Kenya and Ethiopia governments should agree on management of water resources.</td>
<td>Sovereign issue - ADB will facilitate efforts in order for this issue to be</td>
<td>Issues to be resolved by other</td>
</tr>
<tr>
<td>5. Alternative energy generation schemes for Kenya, such as solar and wind, etc.</td>
<td>considered</td>
<td>Stakeholders</td>
</tr>
<tr>
<td></td>
<td>This is an issue for the Kenya Government.</td>
<td>Issues to be resolved by other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>stakeholders</td>
</tr>
</tbody>
</table>
V. How to Proceed

1. The parties agreed that CRMU should continue to facilitate and to conduct mediation of the issues that the parties have agreed upon as indicated in the above table. CRMU informed the parties of the possible engagement of an external mediator help.

2. Timing of the problem-solving exercise: The parties agreed that CRMU will consult the parties after two months as of the date of the scoping meeting (10 June 2009) to set the date of the upcoming mediation meeting.

3. Other stakeholders to be invited to the process: Parties agreed that the mediation will be between FoLT and ADB and that before the mediation meeting the parties will share the list of participants to take part in the mediation process.

<table>
<thead>
<tr>
<th>For FoLT</th>
<th>For ADB</th>
<th>For CRMU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikal Angelei</td>
<td>Amadou Thierno Diallo</td>
<td>Per Eldar Sovik</td>
</tr>
<tr>
<td>Chairperson of FoLT</td>
<td>Manager, Energy and ICT-ADB</td>
<td>Director of CRMU and Facilitator</td>
</tr>
<tr>
<td>Date: 12/06/09</td>
<td>Date: 12/06/09</td>
<td>Date:</td>
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SCOPING MEETING BETWEEN THE REQUESTERS, FRIENDS OF LAKE TURKANA (FoLT), AND THE AFRICAN DEVELOPMENT BANK (ADB) IN NAIROBI ON 10 JUNE, 2009

TENTATIVE AGENDA:
1. **Introduction**
   a. Presentation of Participants
   b. The purpose of the Scoping Meeting
   c. Information disclosure
   d. Brief on CRMU’s mandate and procedures
   e. Agenda, expected outcome of the Scoping meeting from CRMU’s side

2. **Presentation by FoLT**
   - The Request, including any new developments since the Request was registered by CRMU on 26 March 2009
   - Elaborate on the expected solutions by the ADB to the issues raised in the Request

3. **Break for tea/coffee, and consultations, if necessary**

4. **Presentation by ADB**
   - The ADB’s involvement in the Gibe III project, including new developments since the ESIA were published
   - Respond to the issues/problems raised by FoLT

5. **Lunch Break**

6. **Mapping or categorization of problems into:**
   - Uncontestable or issues that can be agreed upon as no longer relevant for the problem-solving
   - Conflicting issues that can be sought resolved by the Parties (FoLT and ADB)
   - Conflicting issues that require the involvement of other stakeholders
   - Other categories of problems.

7. **Break**

8. **How to proceed – options of problem-solving**
   - Mediated process
     o By CRMU, or
     o By outside mediators
     o Alternative problem-solving
   - Timing of the problem-solving exercise
   - Other stakeholders to be invited to the process?

9. **Brief Summary of deliberations and issues agreed or disagreed upon by the Parties** (FoLT and ADB) to be drafted by CRMU, and discussed, amended and agreed upon by the Parties as the outcome of the Scoping meeting

10. Depending on the outcome of the Scoping meeting, an agenda and time for the next meeting/mediation exercise.
Participants List

Representatives of Friends of Lake Turkana (FoLT)
1. Ikal Angelei - Chairperson FoLT
2. Richard Leaky - Advisor to FoLT
3. Joshua Angelei - Member FoLT
4. Andrew Apenya - General Secretary BMU
5. Leah Ewoi - Councilor Kalkol
6. Atonia Paul - Environmental Advisor
7. Samia Omar - Member FoLT
8. James Keya - Maritime Lawyer and Member FoLT
9. Hon. Josphat Nanok, MP-Turkana South

Representatives of the African Development Bank (ADB)
11. Amadou T. Diallo - Manager Energy and ICT Division, ADB
12. Emmanuel Nzabinta - Principal Power Energy, ADB
13. Yogesh Vyas - Lead Environmentalist, ADB

Representatives of the Compliance Review and Mediation Unit (CRMU)
14. Per Eldar Sovik-Director, CRMU
15. Adila Abusharaf-Principal Compliance Officer, CRMU
Annex 4

First Mediation Meeting
Nairobi, September 1-2, 2009

I. Introduction

The objective of the mediation meeting is to discuss the general progress and actions undertaken in relation to issues agreed upon by FoLT and the ADB in the scoping mediation meeting held on 10-11, June 2009 in Nairobi. The issues are included in the brief summary of the scoping meeting (annex 1) and are summed up as: Lake Turkana Water Level and Environmental and Social Impact Assessment. While the public consultation was uncontestable, the parties agreed to integrate it in the meeting discussion as a key component of the mediation process.

In line with the mediation meeting agreed upon agenda (annex 2), the Bank made two presentation respectively on Lake Turkana Water Level and Public Consultation with communities to FoLT and CRMU (list of participants in annex 3).

II. The Potential Drop in Lake Turkana Water Levels. The long scale retreat of the Lake water and rising salinity conditions would cause environmental perturbation and a decline in microbiological and aquatic ecosystems due to the project arising from the infill of the Dam

In order to have a better understanding of the impact of the Gibe III dam on the Lake Turkana, the Bank has commissioned a hydrological assessment study. Initial findings were presented during the mediation meeting.

The presentation provided the sources of data (including AFDB / EEPCO to provide Omo Basin Master Plan (Woodruff Report), Salini to provide Lake Turkana inflow sequences, KMFRI to provide lake level and climatic sequences). All Salini technical reports have been obtained, an extensive internet data mining has been done.

Initial findings are detailed in the ADB power point presentation a copy of which was handed to FoLT and CRMU.

Next steps of hydrology study include:
Obtaining Omo Basin Master Plan
Obtaining Turkana inflow sequences from Salini
Producing verified lake level sequence (KMFRI data - already requested)
Model lake level sequence and simulate historic inflows to the lake (from all sources including the Omo)
Determining planned abstractions from the Omo River, including other hydropower projects such as Gibe IIIV
Create simple lake water balance model and simulate the effect of reduced inflows on lake levels over time
Analyzing flood events at Gibe III and present a flow duration curve with which to compare the proposed "mitigation flood" with actual floods in terms of duration.
Reporting on the findings of study by end of October, 2009.

FoLT Comments
After the ADB presentation, FoLT raised a number of concerns and questions which were responded to by the ADB. FoLT stated that the hydrology does not cover all the concerns raised on this issue. FoLT also stated that the presentation amounts to a letter of comfort not a commitment to resolving the issues as FoLT awaits the final report.

Follow up
ADB will share a copy of the hydrology report with FoLT prior to the next mediation meeting.

III. Public consultations with Kenya Government and no consultations with local communities and other stakeholders on Kenya side

Two consultants were recruited by ADB on 6 August, 2009 to carryout the public consultations around Lake Turkana. ADB presented the status of the scoping mission and the methodology to be used. A copy of the presentation was handed to FoLT and CRMU.

ADB indicated that there was a delay in starting the process due to security issues in the area and the availability of resource persons.

The presentation focused on the objectives of public consultations, which are mainly to consult with the communities living around Lake Turkana and those dependent on the lake resources; and to systematically inform the communities about Gibe III project and its likely impact on the Omo River and subsequently Lake Turkana.

The Consultants have so far covered parts of the western side of the Lake and they have contacted a number of stakeholders at national, district and community levels. They identified main tribes on Eastern Side (Elmolo, Dassanach, Gabra, Redille, Samburu and Turkana). The western side is predominantly inhabited by Turkana tribe. They have made initial assessment of the communities subsistence activities detailed in the copy of ADB power point presentation.

Next Steps of the public consultations include:

The consultants will provide the ADB with a full inception report (including detailed preliminary findings from the scoping study; definite methodology well informed by the scoping study; an indication of key issues to be addressed during the detailed study; a clearly stipulated work plan; and lists challenges and lessons from scoping study).

While dates might change due to reasons beyond the control of the consultants, below is the indicative action plan:

September 1: Completion of research instruments (household questionnaires, various check lists, meta card) and project information briefs for public consultations.
September 13: Travel to field starting with stakeholders at Marsabit, North Horr to meet Gabbra Community, thereafter travel to Illeret to meet Dassanach Community.

September 23: Travel to National Park and Loiyangalani to meet Rendille, Elmolo and Samburu.

September 28: Travel to Maralal and Lodwar to meet Turkana Community.

October 2: Begin with stakeholder Consultations.

End of October: Final Report

Consultants will organize three workshops targeting different communities, Kenya and Ethiopia government if possible, NGOs, Gibe III Project Office to disseminate the final findings and give recommendations on mitigation measures if needed to enhance the welfare of Turkana communities.

FoLT Comments
FoLT commented on the issues presented and raised concerns about conducting consultation before substantiating the impact of the dam.

FoLT stated that the presentation amounts to a letter of comfort and not a commitment to resolving the issue. FoLT awaits the final report before making any conclusions on the matter.

Follow-up
FoLT agreed to provide support to consultants in accessing data and communities.

ADB will share a copy of the final report with FoLT prior to the next mediation meeting, and will also invite FoLT to participate in the dissemination workshops.

IV. Before approval of funding the project an independent, comprehensive and inclusive ESIA should be conducted on the Kenya side such as a not limited to: a. wildlife and forestry preservation; b. fishery resources, livelihoods and rights of communities around Lake Turkana; c. competition over scarce natural resources would trigger intertribal and transboundary conflicts.

FoLT emphasized the importance of discussing ESIA in this mediation meeting as one of the main issues agreed upon to be referred to mediation in the last scoping meeting, held on 11-12 June 2009. FoLT is of the view that is one of the integral issues of their request.

ADB team explained the Bank’s procedures in relation of preparation of ESIA. The Bank reiterated that the need and scope of an ESIA would be discussed in the context of the results of the hydrology assessment of the impact of the GIBE III Dam on Lake Turkana, the public consultations report and in conformity with the Bank’s policies and procedures.

FoLT Comments
FoLT insisted that based on already existing and preliminary information, the current approach by ADB has a narrow scope by including only hydrology and community consultations. FoLT
stated that these approaches are insufficient to determine the significance of the ‘impact’ of the Gibe III e.g. the exclusion of the ecological issues. Therefore, an ESIA remains essential and the issue is the same and will be discussed further when the Hydrology and Public Consultation reports are ready.

As a response to the above comment, the ADB indicated that the Bank is not taking a narrow scope and the ADB team explained that there is a process to be followed. The nature and magnitude of the impacts of the Gibe III Dam has to be assessed first before any follow up actions are decided. That’s the purpose of the independent hydrology study commissioned by the Bank.

**Next Steps of the Mediation Process**

1. Hydrology report will be produced in the end of October, 2009
2. Public consultations report by the end of October, 2009
3. Tentative date of next mediation meeting November 17/18, 2009, in Nairobi.
4. FoLT and ADB hereby agree on the contents of this brief summary of the mediation meeting (1-2, September 2009, Nairobi) facilitated and mediated by CRMU.

---

Joshua Angelei  
Chairperson of FoLT  
Date: 2 Sept 2009

Amadou Thierno Diallo  
Manager, Energy and ICT-ADB  
Date: 02/09/2009

Per Eldar Sovik  
Mediator and Director of CRMU  
Date: 2/9/2009
AGENDA
MEDIATION MEETING BETWEEN THE REQUESTORS, FRIENDS OF LAKE TURKANA (FoLT), AND THE AFRICAN DEVELOPMENT BANK (ADB), NAIROBI 1-3 SEPTEMBER 2009

1. INTRODUCTION (BY CRMU)
   a. Program agenda review & adoption
   b. The purpose of the Mediation Meeting(s)
   c. The parties to agree on the mediation procedures

2. Management updates on issues referred to mediation in last scoping meeting on 10-11 June, 2009
   i. The Potential Drop in Lake Turkana Water Level. The long scale retreat of the Lake waters rising salinity conditions would cause environmental perturbation and a decline in microbiological and aquatic ecosystems due to the project arising from the infill of the Dam
      a. Presentation by ADB of Management
      b. Comments by FoLT
      c. Afterward steps to be agreed upon by parties on this specific issue (possibility to be part of mediation resolution)
   ii. No Adequate consultations with Kenya Government and no consultations with local communities and other stakeholders on Kenya Side
      a. Presentation by ADB of Management
      b. Comments by FoLT
      c. Afterward steps (possibility to be part of mediation resolution)
   iii. Before approval of funding the project an independent, comprehensive and inclusive ESIA should be conducted on the Kenya side such as not limited to: (a) wildlife and forestry preservation; b. fishery resources, livelihoods and rights of communities around Lake Turkana; c. competition over natural resources would trigger intertribal and transboundary conflicts
      a. FoLT Concerns
      b. ADB Comments
      c. Afterward steps

3. Afterward Steps, either after deliberation during Day one, Day two or three
   a. Agreement on mediation resolution (deadlines of further actions, etc.)

DAY TWO & DAY THREE
AGENDA PENDING ON THE NEED FOR FURTHER DISCUSSION/ACTIONS TO BE AGREED UPON, ETC
List of Participants

**FoLT**

Dr. Ojwang, William, Ecologist  
Mr. James Keya, Lawyer  
Mr. Joshua Angelei, Chairperson of FoLT and Lawyer  
Ms. Samia Omar, Executive Member FoLT  
Mr. Ian Okundi, Engineer  
Dr. Richard Leakey, Expert

**ADB**

Mr. Amadou Thierno Diallo, Manager  
Mr. Yogesh Vyas, Lead Expert  
Mr. Emanuel Nzabanita, Task Manager  
Mr. Noel Kulemeka, Socio-Economist  
Dr. Sean Avery, Consultant

**CRMU**

Mr. Per Eldar Sovik, Director  
Ms. Adila Abusharaf, Principal Compliance Officer
Annex 5
Second Mediation Meeting

MEDIATION BETWEEN FRIENDS OF LAKE TURKANA (FoLT) AND THE AFRICAN DEVELOPMENT BANK (ADB)

SUMMARY OF PRESENTATIONS/DISCUSSIONS OF 2ND MEDIATION MEETING
17 NOVEMBER 2009, NAIROBI-KENYA

1. INTRODUCTION

Mr. Per Eldar Sovik, the Director of CRMU, opened the meeting, and asked the FoLT and the Bank to review the agenda, and to discuss the Bank’s request to appoint a professional mediator.

1.1. FoLT and ADB approved the agenda.

1.2. ADB verified that the request of hiring a professional mediator is mainly to step up the mediation process in a way to help the parties agree on the way forward, and not to engage an external mediator.

1.3. FoLT and ADB agreed that CRMU continues to facilitate and mediate, but it may seek external professional assistance if deemed necessary.

1.4. ADB requested that the Ethiopian Electricity Power Corporation (EEPCO) - the GIBE III project promoter which was in Kenya for another ADB meeting - participate in the meeting to present the status quo of the project. FoLT accepted, and EEPCO attended the meeting on the agenda item no. 2.2 besides making its presentation (ref. item 3 below).

2. PRESENTATION OF STUDIES ADB AGREED TO CONDUCT

2.1. Presentation of the ADB Commissioned Study on Lake Turkana Water Level

The Bank’s consultant presented the preliminary findings of the study on Lake Turkana Water Level. The consultant noted that some parts of the study are yet to be completed as well as some additional data has to be retrieved to confirm some of the findings. The said data will be compiled from Kenya, Ethiopia and Italy. The study is expected to be finalized and circulated by FoLT and CRMU by no later than 29 February 2010 for comments and discussion. FoLT and CRMU obtained a copy of the study power point presentation. ADB proposed that the study be discussed over a video conference call. Once the study report is submitted, CRMU will communicate with FoLT and ADB to agree on the mode and the venue(s) of the next mediation meeting.
2.2. Presentation of the ADB Commissioned Study on Public Consultations in Lake Turkana

The Bank’s two consultants presented the study on public consultations conducted in Turkana including the genesis of the data they collected on the social and economic activities of the different tribes of the Lake Turkana area. The presentation encapsulated plethora of issues concerning the views of local communities towards the GIBE III project including some misconception of the project which they believed is due to misinformation compounded with the high illiteracy rates among consulted tribes. The socio-economic activities categorized according to consulted tribes include: pastoral, fishing, basket weaving and trading of cattle in return of food products. It is noted that tribal raids, pollution of Lake water, poor infrastructure, and the aridity as well as diseases encroach on the living, societal and economic conditions of these tribes. The consultants noted that the study is yet to be finalized as further treatment of quantitative data is needed. FOLT and CRMU obtained copies of the study power point presentations. It was agreed that ADB will circulate to FoLT and CRMU the complete study report by no later than 28 of February 2009 for comments and discussion.

2.3 FOLT Comments

FoLT commented that they consider the presentations as information only and will await the final study reports before being able to express their views on the information presented.

FoLT raised the concern of communities in the Omo River Delta relayed by International Rivers that the river water is shrinking. FoLT wanted to understand if that is due to the derailment of river water course for construction of the GIBE III Dam.

3. Presentations by the Ethiopian Electricity Power Corporation (EEPCO)

EEPCO briefed the participants on the progress that GIBE III is making - and its environmental and social management and monitoring plan. Notably putting the condition for releasing artificial floods to help maintain the agricultural subsistence activities of communities, the majority of them according to EEPCO rely on food relief over 9 months sometime for one year. The artificial floods according to EEPCO will also maintain the Omo River feed to Lake Turkana. EEPCO also referred to the mission of the Kenya government to Ethiopia including the Kenyan delegation visit to the project site. FoLT and CRMU obtained copies of EEPCO’s power point presentations.

4. Environmental and Social Impact Assessment of GIBE III on Lake Turkana

4.1 FoLT reiterated their request for a full ESIA to be conducted for the Lake Turkana area.

4.2. ADB said the hydrology study’s initial results indicate benefits of project, but additional work is needed to be conducted to confirm. When having the final report of the Hydrology study ADB will make a final decision on whether there is a need to conduct an ESIA.
5. Agreed Upon Steps Forward

5.1. ADB will circulate the study report on Lake Turkana Water Level and the study report on Public Consultations to FoLT and CRMU by no later than 28 February 2010. If warranted, these studies will be discussed over a video conference call.

5.2. FoLT and the Bank agreed that CRMU continues to facilitate and mediate the process, but CRMU may seek external professional assistance if deemed necessary.

List of participants:

Ms. Samia Omar, Friends of Lake Turkana (FoLT)
Mr. James Keya, FoLT

Mr. Amadou T. Diallo, African Development Bank (ADB)
Mr. Emanuel Nzabanita, ADB
Mr. Yogesh Vyas, ADB

Mr. Sean Avery, Consultant to ADB
Ms. Nicefa Myagul, Consultant to ADB
Ms. Anna Stella Kaijage, Consultant to ADB

Ms. Azeb Asnake, Gibe III Project Coordinator, EEPCO
Mr. Abdulkahim Mohammed, DGM Generation Construction, EEPCO
Mr. Dejene Woldemariam, Managing Director Mid-Day, Consultant to EEPCO
Mr. Taffese Mesfin, EPARDA, Consultant to EEPCO

Mr. Per Eldar Sovik, Compliance Review and Mediation Unit (CRMU)
Ms. Adila Abusharaf, CRMU
Annex 6

Study: Assessment of Hydrological Impacts of Ethiopia’s Omo River Basin on Kenya’s Lake Turkana Water Levels

EXECUTIVE SUMMARY

1. This report was undertaken for the African Development Bank, and presents a thoroughly researched review of all the data previously published in connection with Lake Turkana’s hydrology. The Consultant, Dr Sean Avery, has been based in Kenya for over 30 years, and has an intimate knowledge of the project area, having travelled the area extensively throughout that time.

2. Various major studies on the lake fisheries have been undertaken:
   a) 1930-31: Cambridge University Expedition on East African lakes.
   b) 1930-32: The Mission Scientifique de l’Omo took place
   c) 1972-75: Lake Turkana Project, Institute of Aquaculture, University of Sterling, UK, with Kenya’s Fisheries Department. Lake Turkana was at that time the last of the world’s major lakes whose bathymetry had not been measured. A research vessel built in UK was launched in 1971.
   d) 1985-88: Turkana Limnology Study - Norwegian Institute for Water Research (NIVA) and the Kenya Marine Fisheries Research Institute (KMFRI). This was the last major fisheries study to have been undertaken on the lake itself. Recommendations were proposed on monitoring to better understand the nutrient supply of the Omo River. The dependence of the lake’s fisheries on the Omo River fluctuations and nutrient supply were clearly established.

3. A major study of the geothermal energy and geology of the northern sector of the Kenya Rift Valley was undertaken by British Geological Survey from 1988–92, and the project area included Lake Turkana.

4. The above studies provide a wealth of information on the lake and its interesting aquatic ecology at that time, but there is very little on the hydrology of inflowing rivers. Apart from the Omo River, these rivers are seasonal, typical of arid areas, and difficult to monitor.

5. Lake Turkana is located in Kenya’s northern semi-desert arid lands, bordering Ethiopia, and with the Sudan border not far away. The catchment area is 130,860 km². The lake is notably Africa’s fourth largest lake, and the world’s largest desert lake. The lake is sustained by the inflows of Ethiopia’s Omo River, which alone provides 90% of the lake inflow. The Omo River is Ethiopia’s second largest river system, accounting for 14% of Ethiopia’s annual runoff, and being second only to the Blue Nile. Lake Turkana is a closed basin, hence the inflows are totally evaporated over time, and the waters are saline, barely potable, and unsuitable for agriculture. However the lake has a thriving fish population, which provides a valuable source of protein and livelihood to people living in perhaps Kenya’s most climatically challenged area. The lake is also a destination for tourists.

6. Studies reported in 1982 (Hopson et al) that Lake Turkana is inhabited by 38 species of fish, 18 of which are either endemic or Nilotic. 12 species are riverine and specific to the Omo River.
30 species are Soudanian, and hence are to be found in rivers extending from West Africa to the Nile.

7. The key environmental factors affecting fish in Lake Turkana were reported to be:
   a) Salinity of the water.
   b) The lake’s prevailing NW winds control the lake currents, which drift the zooplankton to western shores, and the currents sustain the lake in its well-mixed and well-oxygenated condition.
   c) The lake’s water temperature is stable, with stratification at depth.
   d) And, most important, the annual flooding influx of the Omo River, which stimulates fish spawning, and whose effects govern the lake’s ecology.

8. Naturally induced increasing water salinity levels are believed not critical, as the fish are known to tolerate very much higher levels. However, any changes to the flood regime of the Omo River will directly impact the breeding of 70% of the lake’s “more important” species. The floods inundate areas upstream within the Omo catchment from which nutrients are derived. The floods cause the lake to rise and inundate littoral zones. These inundations submerge terrestrial vegetation that provides necessary refuge habitat in a lake otherwise devoid of benthic vegetation (due to its salinity). The floods dilute salinity levels, and spread a plume of sediment rich water. The plume spreads to the central sector of the lake, and the reduced visibility caused by the plume encourages fish to migrate closer to the lake surface and towards the shores.

9. 23 of the fish species are considered “more important”. Of these, 10 species spawn in the Omo River or in major river mouths, 6 species spawn in littoral zones of the lake dependant on seasonal rises in the lake from the flood regime. 7 of the important species breed in the open lake. Hence the spawning of 16 of the lake’s “more important” species is dependant on the Omo flood volumes and the cyclical lake rises which inundate the littoral areas of the lake. The littoral areas of the lake are important for the fish and the value is dependant on the levels of stock grazing of these zones, as the vegetation provides necessary refuge when inundated. In recent years, the shoreline vegetation is likely to have been heavily grazed, which in turn will have negatively impacted the success of fish breeding. On the other hand, the livestock droppings are a source of nutrients.

10. Lake level was not listed amongst the “key environmental factors” by researchers. This is because the levels were expected to fluctuate within 2 to 3 metres of the levels in 1972, which reflects the natural cycle. However, if the lake level drops 10 metres, this is 28% of the lake volume, a large reduction. Any volume reduction reduces the fisheries habitat volume, and causes an increase in salinity through concentration of salts.

11. In terms of fisheries, the health of the littoral zone matters and the natural annual fluctuations in lake level serve to cyclically inundate and expose the littoral zone. If lake levels fall more than 3.1 metres below the zero datum, Ferguson’s Gulf will be dry. The Gulf is one of the most productive fishing areas on the lake. In fact the production measurements in 1988 were reported as being amongst the highest recorded. The filling of Gibe III reservoir is likely to cause the Gulf to dry up. Hence the Gibe III filling proposals should be reviewed to mitigate against this happening unnaturally.

12. Hence, fisheries resources depend not only on sustainable harvesting of the fish resource, but also on effective management of the dependant water resource, and on its catchment and riparian zones. Kenya’s riparian zones are protected by law, and no development, tillage or cultivation is in theory permitted. The traditional riverbank cultivation practices along the Omo River banks would be illegal in Kenya, and from a hydrological catchment management perspective, they should be discouraged. However, enforcement is a challenge, and in Kenya, there remains widespread and often damaging exploitation of the riparian zone.
of lakes and rivers, to the detriment of the water resources as a whole. Lake Turkana faces the same challenges.

13. The Lake Turkana region is a harsh semi-desert area with fascinating cultural diversity, and the scenery is of great beauty. It is a very rewarding destination for the enterprising traveller. However, the people of the area live a marginal existence in a climatically challenging area. The lake waters are saline and are barely potable.

14. The lake hydrological monitoring has been neglected in recent years, in spite of recommendations concerning the importance of these. There are rainfall records for isolated rainfall stations around the lake. Historic lake level measurements have been sporadic, and there has been no measurement at all of runoff into the lake. However, there is a sufficient record, thanks to various researchers, with which to establish that the lake was once very much higher than today.

15. The Lake Turkana region has for years fascinated archaeologists, palaeontologists, anthropologists, and geologists, and understandably so. The formation of the Rift Valley commenced 20 million years ago. The sedimentary history provides a fascinating insight into the climate change that has occurred over the past 5 million years during which a lake has existed in Turkana. The Omo River once flowed SE to the Indian Ocean. The Rift Valley floor since dropped, and a lake formed, which filled and overflowed into the Nile (NW of the contemporary lake).

16. In the last 9,500 years, the lake has risen and fallen reflecting major climate changes. The sedimentary history shows that the lake was once 80m higher, with a very much larger surface area, with the delta 100km north of where it is today, and links to the Nile system existed (9,500 years ago). Sedimentary records show that the lake fell to within 15m of today’s level (6,200 years ago), before rising again to 70m (3,500 years ago), and perhaps the lake again linked with the Nile system 7,000 years ago. (Source: Butzer et al, 1971, summarised by Hopson et al, 1982).

17. The contemporary lake today sits close to the zero metre water level, at about 365m above mean sea level. The lake is a closed basin. The Sudanian fish species found in the lake today originate from former times when the lake was linked to the Nile. These fish species are found across rivers to West Africa.

18. In recent history, the contemporary lake peaked in the 1896, when it was 15 metres higher than today. The lowest level for this period was reached in the 1940s and 1950s when the lake fell 18 metres below its 1890s peak. A similar low was reached in 1988. The lake today is 14.5 metres below its 1895 peak, and well above its historic low points.

19. Hence the lake has very wide range of “natural” level fluctuation.

20. Runoff patterns in the Omo River have changed noticeably in the last twenty years. Forests and vegetation have been cleared in the Omo Basin through human activity, and as a consequence, runoff has become more variable, with much more rapid response to rainfall. Without effective catchment management, the overall runoff volume can be expected to continue to increase with catchment degradation. The increased runoff rates are also accompanied by accelerated soil erosion, and sediment runoff into rivers for conveyance downstream. The effects of this are seen in the changes over time of the areal extent of the Omo delta. Sediments are deposited where the Omo River waters are slowed on entering Lake Turkana, and this controls the development of the delta.

21. The Omo River sustains the lake at present water levels by providing the water input needed to offset the large water volume evaporated from the lake surface. In addition, the Omo River carries nutrients into the lake. The flood pulses of the river have many positive effects. The floods flush the river, they
replenish off-stream depressions and swampy areas, they lead to cyclical changes in lake level within a year, the pulses stimulate fish behaviour and movements, and the pulses also change lake currents, and these currents distribute nutrients throughout the body of the lake.

22. Lake Turkana is dependant on the Omo River for almost 90% of its inflow. The river is the lake’s umbilical cord. If the Omo River inflow is cut, the lake level will fall. The lake is almost entirely within Kenya, whereas the Omo River is entirely within Ethiopia. Hence management of the basin and lake water resources presents trans-boundary challenges.

23. This study collates all the readily available climatic and hydrological data. The purpose is to assess the impact of current developments within the Omo Basin, on Lake Turkana’s levels. Previous studies have been conducted on the Omo Basin, and in some detail related to the specific developments, but those previous studies did not venture to assess impacts over the border in Kenya, on Lake Turkana.

24. This study has confirmed that Lake Turkana is almost entirely dependant on the Omo River, as stated by previous studies. The Gibe III hydroelectric power project is under construction and this project alone will need an equivalent of over two metres on Lake Turkana in order to fill its reservoir. Thereafter, the scheme must release water in order to generate the power for which it is designed. The releases will be regulated, hence, whilst the annual volume of water inflow should in theory not alter, the pattern of inflows will alter. Plus, the regulated flow is expected to stimulate irrigated agriculture downstream. This is an indirect effect of the dam, which will inevitably cause flows to the lake to diminish. This effect has not been quantified. The dam will regulate 65% of the water that is needed by Lake Turkana. The dam will create a 200km² reservoir storing 15 km³ of water, which is roughly the mean annual flow needed to sustain Lake Turkana. The Gibe III reservoir will forever capture all bed load sediment transported by the river to this point, and will store water for approximately a year, leading to changes in water quality. The removal of bed load sediments will stimulate erosion of the river downstream. None of these impacts have been quantified.

25. The geological study of the Gibe III reservoir basin was still in progress in 2009 when this draft report was produced. Until the findings are agreed, it will not be possible to conclude debate regarding the losses that might occur due to the high water pressures resulting from the 243 metre high dam, and the potential seepage losses underground, and potential impact on water available downstream. Concerns have also been expressed about seismic impacts than can result from the huge superimposed load that comprises the stored water volume.

26. An ecological flow and an annual ecological flood release of ten-day duration have been proposed from Gibe III. This shows commitment from EEPCO, but these proposals are not yet supported by any quantified scientific evaluation. For instance, what is the significance of the ten-day flood pulse duration? Can the river and lake ecology be sustained by a single short flood pulse, or does it need several such flood pulses, and for what duration are such pulses needed? What are the nutrient levels at the moment, and how will they be affected by regulation? What will be the impact on ecological releases of the downstream cascade of developments? What assurance is there that the releases will be sustained given the conflict of interest with power generation?

27. Nor have the impacts of Gibe IV and Gibe V been addressed. These schemes are under study and are downstream of Gibe III, and are part of a planned cascade of projects on the river, which will interfere with the proposed ecological flow releases from Gibe III. Nor have the long-term plans for water abstraction within the Basin been addressed in terms of the impact on Lake Turkana. This study has demonstrated that with the potential abstractions that might be implemented, the lake could drop 40 metres, and could ultimately be reduced to two small puddles, one of which will dry up, and the Omo delta would extend 60 km further in to Kenya than it does today. This would present many challenges.
Hence, an integrated trans-boundary basin impact assessment is needed in order to put Gibe III into proper perspective.

28. The ecological flow proposals for release from Gibe III imply that Lake Turkana’s sustainability is important. However, no scientific quantitative studies have actually been presented to decide whether the lake should or should not be sustained, and if so, at what water level should that be? The filling of the dam has the potential to dry up Ferguson’s Gulf, the most productive fishing area of the lake.

29. A World Bank Concept Note has described the importance of development within the Omo Basin, and has stated in regard to Lake Turkana that there is “no significant use of the lake’s waters”. The same Note considers that it would be relatively easy to obtain a “no objection” from the Kenya Government, and that if there is donor funding involved, Kenya “can benefit from the Project”. The Gibe III Project process is consistent with the World Bank Concept Paper proposals. In 2009, the Kenya Government signed an MoU with Ethiopia to buy power from Gibe III, hence is supportive of the Project, but an inter-governmental environmental monitoring committee is not yet in place.

30. The Gibe III project commenced construction without benefit of an environmental and social impact assessment. Studies have since been carried out, but within Ethiopia only. Positive impacts on the lake’s hydrology have been claimed, but there was no basis for this. The challenging transboundary issues were clearly reported in the 1996 Omo-Gibe Basin Integrated Development Master Plan, but were beyond the scope of that report, and hence were not addressed.

31. There are concerns that there is past experience that any ecological flow rules may be disregarded to suit other more pressing national needs. For instance, an environmental audit of the Gibe I project, undertaken by Ethiopian professionals, reported that although compensation flow releases had been stipulated for that scheme, no compensation flows were being released. There is potential for a conflict of interest with the needs for power generation, as stated earlier.

32. This study has overcome the absence of river flow data for the hydrological assessment of Lake Turkana by computing river discharges from lake level fluctuations. This study has successfully utilised satellite radar altimeter readings of the lake level, which are observed at 10-day intervals. Hence the Consultant has demonstrated a very useful tool for ongoing lake inflow monitoring, and the assumptions should be refined by additional ongoing study.

33. This study confirms the vulnerability of the lake to catchment degradation and especially the proposed water developments within the Omo Basin. If irrigation development proceeds as planned, the lake will diminish. Whether this is of consequence should be the subject of a separate study and consultations with the Kenya Government and stakeholders.

34. In order to make reasoned decisions, the following is concluded and recommended:
   a) The hydrological study presented in this report is conclusive in regard to immediate changes that can be expected from Gibe III, also indirect impacts. This study also looks at the hydrological impacts of the other basin developments. Although independent of Gibe III, they fall within the basin development framework, and it is important to assess these impacts in order to put the Gibe III impacts into a proper perspective. These assessments can be refined, to validate the assumptions made on rainfall and evaporation. Once the geological studies are concluded, the findings on seepage losses need to be incorporated and the impacts considered.
   b) A river gauging station should be re-established immediately on the Omo River at Omorate.
   c) The lake level gauge at Ferguson’s Gulf should be restored to routine monitoring status, with an immovable permanent reference datum.
d) The flood patterns of the Omo River need to be studied in terms of flow volumes and durations. The impact of changes due to catchment degradation need to be addressed as the presence of dams can assist by regulating the flashy runoff that results from catchment degradation.

e) The proposed flow sequence from Gibe III needs to be reviewed taking into account river channel transmission losses, and the abstractions arising from the proposed changed agricultural practices to improve food security.

f) The impact of the downstream proposed Gibe IV and V schemes on the Gibe III ecological flow sequences need to be determined as the Gibe III ecological flows and flood will be intercepted.

g) The potential water utilisation within the Basin needs to be reviewed in the light of the proposed Gibe IV and V schemes, and other schemes, and the impact on Lake Turkana’s levels can then be refined based on this information.

h) A scientifically proven and appropriate method of assessing ecological flows in the Omo needs to be chosen and utilised.

i) The status of Lake Turkana’s fish resource today needs to be reviewed, as changes will have taken place since the detailed studies were done 30 years ago. The fish resources will have been impacted by catchment degradation since that time, by changes in runoff and sediment runoff patterns, and by population pressure and associated increased and unregulated fishing, and livestock grazing of littoral zones.

j) The full impact of changes within the Omo basin on fisheries should be evaluated.

k) A full evaluation of the economic value of the lake as a “resource”, and its contribution to microclimate, should be produced, and a decision reached on the lake’s future.

l) A thorough socio-economic and livelihood survey of the lake-dependant communities should be conducted once the full impact of development proposals is quantified.

m) An updated integrated basin-wide environmental & social impact assessment is needed.
1. The hydrological report expresses concerns about the “ecological flood” planned to help maintain downstream ecosystems and livelihoods. Dr. Avery notes that "no scientific quantitative studies have actually been presented to decide whether the lake should or should not be sustained, and if so, at what water level should that be?"

2. We want to know what steps will be taken to ensure that the releases will be sustained given the conflict of interest with power generation.

3. Will an independent quantitative study to determine the details of an environmental flood be undertaken?

4. Will an independent quantitative study to determine the cumulative impacts of all the Gibe dam developments and related irrigation off takes be undertaken?

5. Will a geological study to determine leakage through the reservoir be undertaken?

6. Will a study to determine the impacts on Lake Turkana from the changes in sediment flows and water inflows be undertaken?

7. Will the project be put on hold until all of this information can be analyzed?

8. Given the immensity of the potential impacts on Lake Turkana outlined in the hydrology report, we want to know if its funders are willing to put themselves in a position "to decide whether the lake should or should not be sustained, and if so, at what water level should that be?" Will you commit to taking responsibility for the impacts on Lake Turkana e.g. drying and potentially by half?
Annex 8

FoLT Summary Critique of the Report

ASSESSMENT OF HYDROLOGICAL IMPACTS OF ETHIOPIA’S OMO BASIN ON KENYA’S LAKE TURKANA WATER LEVELS

The document is well written and outlines explicitly pertinent issues regarding potential impacts of the damming on the hydrology of Lake Turkana. This is in contrast to an earlier observation that constructions on the Ethiopian side would have almost negligible effect on Lake Turkana and its biota including fisheries. The consultant insights in the document reiterate the need for Environmental Impact Assessment of the GIBE III project on the Kenyan side to address in particular ecological and socio-economic consequences already expressed by the stakeholders. Although the scope of the task was specifically on potential impact on Lake Turkana’s water levels, the consultant broaden the study to provide a more holistic view of the situation in the region vis a vis the construction of the GIBE III HEP.

Background information on Lake Turkana

Information captured is broad and all inclusive despite dearth in information on Lake Turkana compared to other great lakes of Africa. The consultant was thorough in bring out all required background information to enable comprehensive hydrological situation analysis of the lake and the region at large. As noted in the documents this was done through consultations with relevant key stakeholders who readily provided some of the baseline information cited in the document.

Issues noted are;

1. page VI, 5 line 7 “Lake Turkana is a closed basin, hence the inflows are totally evaporated over time, and the waters are saline” It is true most of the waters of Lake Turkana are lost through evaporation but possible percolation (loss) of water down to the water table should also be taken into consideration in the water budget of the lake and the water balance model. No major sub-surface flow as reported by Dunkley et. al., does not mean complete lack of flow. In addition Lake Turkana is semi saline and not saline as construed.

2. 6. Sixty fish (60) species have been reported to inhabit Lake Turkana (see Fishbase, 2005), much more than those reported in 1982 by Hopson et. al. For instance Hopson et al. report did not discern Mormyrid species of Lake Turkana. There are close to six different Mormyrids from the Omo Delta (Ojwang per. Observation). In summary Lake Turkana is a fish diversity power house
than represented in the document and that almost all species in the lake rely on the replenishment of nutrients and dilution effect by the river which has a cascading role of stimulating general lake productivity.

3. The statement that “naturally induced increasing water salinity levels are believed not critical, as the fish are known to tolerate very much higher levels” is misleading as no assays have been carried out to test stress levels of fishes in Lake Turkana. Furthermore studies conducted by KMFRI and others (see Stewart, 1988) indicate species specific response to increased salinity in Lake Turkana i.e. in the Ferguson’s Gulf even robust species like Oreochromis niloticus had impaired growth (stunted), skin ulcerations, poor quality of fish flesh and enhanced susceptibility to various forms of infections and mass kills. This phenomenon was also observed in the fish farms constructed by the Italian company Impressa Inc near Kalokol in early 1990s where water pumped into fish ponds with conductivity of between 7000 - 9000 μS/cm and characteristically high algal density produced stunted tilapia fish that were not acceptable even to the local people. In general, increased salinity also has a tendency to change the composition of the plankton particularly in the gulf where the main copepod known to support the open lake fishery is usually replaced by a carnivorous species resulting in massive algal blooms with serious consequences on dissolved oxygen levels and general conditions in the Gulf.

The report fails to register that the northern portion of the lake is the backbone of the fishery, and that it supports a large proportion of human and pastoral activities and settled human population. The consultant should have noted that salinity levels/conductivity in Lake Turkana varies in a north south gradient, lowest near the Omo delta and highest in the southern Basin. Similarly fish production, diversity and abundance is the complete reverse, being lowest in the southern basin and highest in the northern basin. Consequently any abstractions or activities that alter the water chemistry of northern sector will be deleterious to the lake fishery.

In addition, it should not be assumed that since the hardy and robust Oreochromis niloticus (Nile tilapia) is surviving in the Crater lakes at over 10000 mg/l levels then the rest of species, particularly those of commercial importance like Labeo, Barbus, Citharinus, Distichodus, Synodontis, etc which are less hardy would tolerate higher levels. It is also not true that fishes within the crater lakes are the same as those found in the main lake (page 2-36). The Crater lakes, specifically the Crocodile Lake, support mostly O. niloticus (probably a sub species) and two other species (Haplochromis sp and Clarias sp.) which were reportedly sampled by Hopson (1982) and have never been recorded ever since. Nonetheless the one or two species surviving in
the highly saline waters cannot be representative of the diversity in the open lake. Furthermore, Mormyrids are not the only electro-sensory fishes in Lake Turkana that are likely to be affected by high conductivity levels (page 2-38). Other Lake Turkana fishes with characteristic electric discharges include *Polypterus senegalus* and *P. bichir*.

As already alluded to, parasites infestation (intra and inter-species) levels on fishes of Lake Turkana is a big concern but with more stressed fishes the level of infestation and parasites loads per fish is likely to increase resulting in loss of fish quality and lower prices for fisherfolks.

4. 10. The statement that Lake Level is not a key environmental factor by researchers requires citation otherwise the statement has no basis. It is one of the factors that determine several other physico-chemical variables other than salinity in the lake. The variables in turn determine the distribution and abundance of biota therein. The consultant also assumed that Lake Turkana is all about fisheries. There are several other biota that depend of the lake: birds, crocodiles, other reptiles etc. Therefore the full impact of changes within the Omo Basin on the flora and fauna should be evaluated and not just fisheries as recommended.

5. 19. It should be noted that there is absolutely nothing like “natural” lake level fluctuation especially when you consider the current global warming and other changes at the behest of anthropogenic based activities.

Climate change will impact on ecosystems but more on already stressed ecosystems. Arid areas will become more arid. Water abstraction in a system which currently has high evaporative rates will likely stress it even further.

6. 26. To validate the consultant argument on flood pulses, it would have been appropriate to include comparisons/references to similar approaches to enable assessment of their functionality. Otherwise it is a pretty shallow argument for proponents of ecological flows such as EEPCO.

7. 2.7.3 Lake level data and altimeter datasets

The report fails to highlight the dependency of Lake Turkana on rainfall from Ethiopian Highlands and the importance of annual floods in sustaining the lake levels and salt balance. Lake Tanganyika and Victoria which have been used to compare the lake are poor measures as their sources of water are either stable convectional rainfall or stable perennial rivers.
Regarding the general decline in lake level data allegedly contradicted by the smoothened satellite data, actual measurements on the ground reveals critical variations which the satellite data misses out. For instance, in 2009 despite a show by the altimeter readings that the general lake level was dropping, a rise was witnessed on the ground and recorded with a peak in mid October, albeit at a lower level than the year before. This was also validated by the depth profile of the Ferguson’s Gulf which was lower in 2009 than a similar period in 2008.

2.9.4
The generalization of the climate data is also misleading because according to records on the ground, the driest years in Turkana were 2008 and 2009, while the period when a combination of good rains (El Nino) coupled with good rainfall in Ethiopia led to the lake having the highest level was in 1998-2000.

8. Explicit importance of Lake Turkana to the Kenyan economy is lacking in the introduction. There should have been emphasis on importance of the
  - Prehistoric sites/Heritage sites
  - The national parks
  - Omo delta as international migration routes for birds
  - The Oxbow lakes in the Omo delta (Getikonyi and Budoni) both in Kenya

9. The dam is the fourth highest dam in the World and it is prudent that recommendation are made for regular seismic surveys to avoid very grave consequences for people living downstream of the dam incase of the dam coming down crumpling due to earthquakes.

10. Portability of the lake water
    At the moment, Lake Turkana water is used by the locals principally to water their livestock and for domestic use during periods of drought. In areas where riverbeds of seasonal streams occur, the preferred sources of water are shallow wells dug in the beds. Otherwise pools of water usually left behind by the receding lake levels have conductivities of between 4000 \( \mu \text{S/cm} \) - 9,000 \( \mu \text{S/cm} \) very soapy and highly saline. These pools are never used as sources of drinking water by local people and observations also show that even livestock do avoid drinking such waters. Therefore to state that “lake salinity levels can continue to increase naturally and still remain within theoretically tolerable limits of portability, ........and that if the lake level fell 20 concentration of
salts would double... and even at this level, the water would be potable to livestock, and still just tolerable to humans” is to misrepresent the facts and shows lack of intimate knowledge of the local situation by the consultant.
CONCLUSION AND RECOMMENDATIONS

CONCLUSION

- This report cannot be entirely conclusive without first looking at the hydrological reports which shall be factual in determining the expected behaviour of River Omo, Lake Turkana and the expected effects on the levels of water in Lake Turkana.

- The communities along Lake Turkana have negative attitude towards Gibe III dam project. This is due to inadequate factual information, misinformation and misconception about the project. The misinformation and misconception about Gibe III project has brought much uncertainty and fear among communities.

- Majority of the stakeholders from the communities where consultations took place were not aware of Gibe III project. However, the few who knew about Gibe III reported to have knowledge of the Gibe III project from activists including Friends of Lake Turkana, from the media, from members of the parliament, etc.

- The communities reported to have high dependence on Lake Turkana for fish, domestic water, income from fish selling, flood farming, transportation, tourism, marine and wildlife conservation, as a source of nutrition (Maasai roots), security as it acts as a shield between rivalry communities and also for recreation.

- Lake Turkana water level is shrinking as a result of many factors which includes drought and climatic changes and others not yet established.

- The validity of the above fears are strongly hinged upon uncertainty and speculated reduction of water of Lake Turkana as a result of the construction, subsequent filling, management and operational regime of Gibe III dam and the Omo River, most of these fears stay validated as long as there is no detailed analysis and studies to prove otherwise.

- In as much as several mitigation measures have been suggested during public consultation processes, the population around the Lake will make mitigation measures on the impacts of Gibe III costly and demanding. This is because there are almost half a million people on the western and about two hundred thousand on the eastern side. This vast population in a rather hostile desert and arid environment where relief is a common thing and sustainability is yet to be achieved, will benefit most by first returning the living standards to acceptable levels, then proceeding with mitigating the impacts of Gibe III project.
The people can only be empowered to fully utilize the available natural resources for poverty reduction in a sustainable way. Several stakeholders around Lake Turkana are making deliberate efforts to reduce poverty and engage the communities in wealth creation activities.

The consultant noticed Lake Turkana is visibly shrinking by notable distances, the marks of the previous positions of the lake are visible as you travel along the shores, at some places it has retreated for a couple of Kilometres, for example at Eliye Springs, and Elmolo bay in Loiyangalani.

Good practises show that treaties on Trans-boundaries have been affected in several countries with most water bodies now being protected in an effort to conserve the environment for posterity of the nations. There must be a treaty in place to protect the Lake Turkana and River Omo from future degradation.

**RECOMMENDATIONS**

- **In case the dam is used for other uses**, other than generation of hydro-electric power, such as irrigation, then a full ESIA must be carried out on the entire catchment of Lake Turkana including Lake Turkana communities on the Kenyan side.

- Hydrological report should be a predetermining factor to the authenticity of the fears of the community, since water is the main factor and issue behind this public consultation and socio-economic study.

- Multinational Symbiotic Management Authority comprising Ethiopia, Sudan and Kenya be formed to look at all the matters involving River Omo and Lake Turkana. The monitoring should be from the catchments areas of Omo River to Lake Turkana. This management authority must have a representation at the grass root level to pass on communication both from the community and to the community.

- There should be a law and agreement drafted between Kenya and Ethiopia, with International enforcement on the management of shared water bodies. The two governments should follow the example of River Nile and management of Lake Victoria water. Water must be used for electricity only and should not be interfered with for other purpose such as irrigation.

- During the filling up of the dam the water must be left wholly for hydropower and a constant flow to Lake Turkana must be ensured to flow southward into lake Turkana while great care to ensure that between the dam and the lake, the population does not divert the water for other uses rather than maintaining adequate inflow into Lake Turkana.

- Kenya and Ethiopia should not just enter into a framework of cooperation but abide to an internationally brokered treaty between Kenya and Ethiopia under the auspicious of the UN and IUCN.
Gaining Public Acceptance, The principle that dams and other water and energy infrastructure development should enjoy public acceptance is increasingly widely accepted, both on practical grounds (experience shows that public acceptance is essential if the outcome of development projects is to be equitable and sustainable) and as a central concomitant of a rights based approach to development. Since concerns, interests, fears, and expected benefits should be included in the Environmental and Social Management Plan (ESMP)

The consulted stakeholders strongly feel that Kenya has other resources that could generate power instead of importing hydropower from Ethiopia, which is likely to cause environmental impacts on Lake Turkana and its communities. The potential alternative energy sources available include wind power, solar, atomic energy. The Northern part of Kenya is rich in wind power. There is already a wind power project at Lake Turkana where the ADB is a co-financier. Hydropower is the least costly and cleanest option for the four countries at the moment - Ethiopia, Kenya, Djibouti and Sudan

For indigenous peoples living around Lake Turkana, free, prior, informed consent to developments that affect their lands is now firmly entrenched in international law and recognised as such by the UN. Although both industry guidelines and the World Commission on Dams recommend a consensual approach to dam building based on negotiation, with accompanying procedures to ensure that the most vulnerable stakeholders are actively engaged in decision-making. Therefore consultation and information process should be emphasized to ensure that the local communities of Lake Turkana fully understand the Gibe III project, its benefits and role in economic development for the entire region, and to embrace the possible mitigation measures to ensure that their developmental needs are taken care of and the success of the project.

Involvement in environmental management authorities such as NEMA, and their counterpart in Ethiopia and other stakeholders in all the decisions affecting Lake Turkana and its environs

Formation of trans-boundary waters treaty between Kenya and Ethiopia, and subsequent adherence of the internationally laid down diplomatic channels for consultations on projects whose effects and impacts transcend national boundaries. The diplomatic route is also being advocated by the Ethiopians

More peace initiatives in the region to enable economic activities around and about Lake Turkana. Since the misinformation and misconception about Gibe III project has brought much uncertainty among a people struggling to find peace, thus bringing mistrust at grass root level to both the Kenyan Government and the Ethiopia Authorities among the Lake Turkana communities

There must also be deliberate efforts to disarm the indigenous people and further curb the proliferation of illegal arms in the area. The governments must also make deliberate efforts to stop livestock raids which leave women and children devastated and communities and settlements destroyed. This could be achieved by tagging livestock with transmitters that could enable satellite tracking of movement of livestock thus making it easy to track livestock after raids and curb the activity.
• Introduction of taxation on herds of livestock so to reduce overstocking that in turn has led to environmental degradation and conflicts over grazing land.

• Efforts and strategies should be put in place by the concerned authorities to curb arms proliferation which has heighten livestock raids and subsequently increased insecurity thus in one way or the other deterring any development activities.

• If presence of Gibe III does not leave both Kenyan and Ethiopian communities worse off, then the two governments must ensure that the communities around Lake Turkana benefit from the electricity.

• Monitoring and study of Lake Turkana hydrology since there is no study that has been done to particularly determine the reasons why the lake is shrinking, so most of the information from advocacy groups is based on assumptions that the main reason is reduced waters in River Omo.

• Both countries subscribe to the Desertification Convention. Kenya is now a signatory to the Ramsar Convention. One of the proposed national actions is to accede to the Ramsar Convention and to undertake joint trans-boundary wetland conservation programmes for the Lake Turkana/Omo River transboundary wetlands. Such treaties must be evoked and worked upon in making a framework for cooperation on this Gibe III matter. The two governments should workout modalities based on the existing treaties.

• There should be continued public consultation process being steered by a joint committee involving both countries and financing institutions and stakeholders, with a direct communication hierarchy to the grass roots via National Committees consisting of representation of NGO’s, CBO’s and FBO’s plus MP’s of the affected communities, down to the district, Location and Sub-Location levels with open and efficient free communication channels across the hierarchies.

• The above proposed committee shall be responsible in evaluating the monitoring process to make sure each team of experts drawn from the two countries do effective monitoring and up to date information on all monitored parameters, which shall regulate water usage beyond the needs of the dam. Actually Ethiopia has already put in place a Panel of Environmental and Social Advisers for monitoring purposes. This could be emulated in Kenya.

• Several studies have suggested and proposed plans to use the waters of River Omo for artificial flooding to compensate for the loss of natural recession farming along Omo River. It is important that the Ethiopian Authorities clarify the magnitude of conceived artificial flooding farming and its likely impacts on levels of water of Lake Turkana and the communities. Such documents were those included in the Ethiopian Electric Power Corporation website on Gibe III which clearly indicated that irrigation would be one of the major mitigation measures downstream in lieu of recession agriculture. This has come out as one of the greatest sources of concern among the consulted stakeholders around Lake Turkana and officials.
Numerous Factual Errors
The factual errors of the report also need to be corrected before it gets approved e.g.
1. They present two different annual rainfall rates for Turkana (pp 103 versus executive summary information)
2. They say batteries are used for electricity (pp 15) but do not specify if it’s solar power, torches etc.
3. The state that 39% of those from Illeret farm (pp 19). This is false…they forget that the Daasanach in Illeret are nomadic so some of those interviewed may be talking about what they do in Ethiopia. Many of those they researched must be those originating from Ethiopia. I wonder if they specified to the surveyors to differentiate who was a permanent resident of Illeret and who was not. They should have clarified these facts by seeing the farms themselves. It is obvious they didn’t go see those farms. If they had visited them, they would have clearly seen that the ones in Illeret are not successful, especially due to lack of rains or non-saline water.
4. The facts about the organizations working in the region are very partial. For example on pp 139, the information about the Turkana Basin Institute (TBI) only talks of the work being done on the west of the lake, not the east.

Poor
The report also had no adequate detail to confirm the overall importance of the use of the lake resources on the national or regional level e.g.
1. Claim Government have been supporting fishing through boats etc (pp 18) but fail to present information on where this support has been received in terms of towns or communities. For example, there is no support whatsoever for Illeret other than a 25,000 grant to buy a boat for the school that is now sitting idle. They should list all facts of what these specific support programs they found are i.e. names of projects, locations, amount of support etc.
2. It only states the social amenities found, but not those that are not found. For example, they say one dispensary is found in Illeret but fail to mention the nearest hospital is 480 km away, or that a primary school can be found, but forget to mention the nearest secondary school is 250km away. Adding these additional facts makes a big difference in showing the severity of problems in the region.
3. Neglect to mention more about the Elmolo source their water from the lake (pp 103).
4. The report states about livestock being numerous in the region but fail to have adequately researched the topic to show what percentage of GDP these livestock support. Data shows the that pastoralism contributes to approximately 10% of Kenya’s GDP 82.
5. Similarly, the report fails to link the current significance of fishing in the area to the national level e.g. fish transported from the Lake per year compared to that consumed by Kenya per year…that would provide a relatively good comparison.
6. In addition, it mentions farming in Illeret with great praise but fail to acknowledge that the presence of a farm does not equate the success of it in its output. To quote “a notable farming village is Nango’lei in Illeret” (pp 134). They neglected to highlight the level of output which would have shown them that due to increasingly poor climate, the locals now have minimal output and have increasingly started to rely on fishing and pastoralism instead.

Issue 3 – Improper process of Consultation
It is appalling that the consultants can claim that the locals are misinformed about the impacts of the lake and then go ahead to “explain that….the levels of water at the river shall be regulate to ensure there is enough water.” (pp. 33). Under what authority and facts can the consultants take it upon themselves to present this information to the public when it is a known fact the reason we are having the mediation meeting in the first place is that this is not currently evidenced. At the time these consultants were visiting the communities, there was no existing research on the potential impacts of the dam on the lake so they were highly unprofessional by presenting themselves as though they knew for a fact that the water would be “enough”. We don’t’ think they are experts in that field and were out of line in making those statements.

Issue 4 – Misguided Recommendations
The recommendations were misguided and rather over-assumptions on the kind of mitigation, and more-so the thought that they would be implemented, or if implemented, that they can justify the construction of the dam. Although their suggested mitigation measures are well intended, they are clearly not well thought out, are based on numerous assumptions, and are naïve to a number of facts e.g.

- “Reduction in number of fish… train fishermen on better fishing techniques, provision of refrigeration to preserve the harvested fish for better market”. Teaching them how to fish after they have already disappeared will return the number of fish in the lake. And also question what the use of these fridges will be if there is no fish in the lake.
- “Unpleasant and uncomfortable weather… plant more trees”…
- “Inadequate water and loss of income…. commercial packaging and selling of water”…. If the communities cannot even afford to buy food currently, when the water becomes scarce, I would be surprised if they can afford to buy that as well.
- “Increase in crime activities… increases presence of security apparatus, and jail…”. This is such an absurd recommendation that rather than prevent the increase in crime, we find ways to deal with it.
- “Rural urban migration… evenly distribution of resources in the non urban centres.” If the consultants benefitted in any way from this visit to the Lake Basin, they should have easily seen how the area is one of the most neglected in the whole of Kenya. So for them to make such a recommendation, it is as if they had in no way developed a deeper understanding of the region by visiting it.
- “Child labour… introduce school feeding programs”. After reading this it occurred to me that perhaps the consultants did not do enough research to realize that school feeding programs already existing in the region, the issue is, there are no enough schools to implement the program.
- “Loss of government revenue”… This issue was not clearly defined or understandable.
- “Human wildlife conflict…. transfer the wildlife to other national parks”. This is very laughable. Conservation in Kenya does not work this way. I bet it doesn’t work this way in most countries in the world. You can’t just pick up all the animals, birds, and bugs in a park and transfer them to another part of the country.
- “Communities conflict…. ensure that the movement of livestock can be tracked via satellite”. This sounds more like a sci-fi wish list than an actual feasible solution to the problems.
- “Closure of departments like fisheries and tourism etc… develop human resource rather than just depending on natural resource.” It appears the consultants have forgotten that humans need food and water to survive, which are both natural resources.
- “Wastage of resources… look at development activities that do not necessarily depend on the lake.” It is doubtful that such a venture will return back the dollars and time already invested by the organizations. Plus the organizations have been working on the ground for decades; a change
in their programs would mean a loss of community trust, thus taking them just back to square one, but more so 10 steps back.

- “Endangered species on Lake Turkana…replicate the very conditions of the lake in specified pools.” The consultants have forgotten that an entire lake’s ecology cannot be locked down in a pool or a room, it is a much more complex system. The loss of one species can mean the loss of many more things. Plus their visit to Sibloi should have taught them how neglected the park is that such a suggestion is very naïve.

- “Loss of culture and traditional norms and values”. The report failed to provide any copying mechanisms, resources required, sources of support, or indicators for this issue.
Annex 11

FoLT
Summary and Critique of AfDB’s Gibe 3 Consultation Report
July 6, 2010

Introduction

The report was commissioned by AfDB and prepared by two consultants. The consultants met with hundreds of people affected by the Gibe 3 Project around Lake Turkana (mainly in focus groups and workshops), government officials and NGO representatives. It appears that the consultants only speak English and Kiswahili, which few affected people speak, and not the local languages.

The first objective of the exercise was “to ensure that [the affected people] have been fully informed about Gibe III project”; only the third objective was to actually “collect stakeholders’ views, concerns on the Gibe III project” (pp. 9f). The plan for an “on going process of public consultation” is to establish a website and radio station to inform about Gibe 3, and to inform the communities through brochures, leaflets, songs etc. This plan makes clear that the consultation is a top-down propaganda exercise rather than a real, bottom-up consultation process.

Looking at the report and reading critical sections more thoroughly. The following summary and critique is mainly based on the report’s 34 pp. executive summary and the conclusion and recommendations.

Opposition by the affected people

The report leaves no question about the strong opposition to the Gibe 3 Project by the affected people around Lake Turkana. It says that “hostility to the project made it very difficult to discuss any ideas on mitigation” (p. 26), elaborates the fears of affected people in quite some detail, and mentions that “some of the communities suggested that Kenya should fight with Ethiopia” over Gibe 3 (p. 34).

Here is a telling quote from the report on gender related fears (p. 31): “Thus as result of interference on Omo River the already overburdened women, will be stretched to unimaginable limits that no doted evenly spread mitigation measures can salvage them from this (sic) foreseen in-human circumstances.”

According to the report, the fears of the affected communities include the following:

- Drought and loss of Lake Turkana as the only safety net (p. 30: “Any imagination of losing the lake causes much anger, concern and desperation.”);
- Poverty related fears, given that fishing has become the only source of income during droughts;
- Gender related fears (see above);
- Fear that irrigation in the Omo Valley will reduce and pollute the river’s water;
- Late consultation may be nothing but a “mockery exercise” (p. 32);
- Lack of a transboundary water agreement between Kenya and Ethiopia, lack of support from the Kenyan government;
- Similar projects (Turkwel Dam) have turned into white elephants, affected communities will thus not benefit from Gibe 3;
• Loss of resources will lead to conflicts between fisherfolk and livestock keepers, and between humans and wildlife.

Fears justified?

At several instances, the consultants claim that the affected communities have been “misinformed” about the Gibe 3 Dam by opponents (pp. 10, 33, 167f, 187). For example the following statement (p. 187): “The communities along Lake Turkana have negative attitude towards Gibe III dam project. This is due to inadequate factual information, misinformation and misconception about the project. The misinformation and misconception about Gibe III project has brought much uncertainty and fear among communities.”

This assertion by the consultants is paradoxical for two reasons. First, the consultants explicitly acknowledge that the basic fears regarding a loss of water are validated. For example the following statement (p. 187): “The validity of the above fears are strongly hinged upon uncertainty and speculated reduction of water of Lake Turkana as a result of the construction, subsequent filling, management and operational regime of Gibe III dam and the Omo River, most of these fears stay validated as long as there is no detailed analysis and studies to prove otherwise.”

The consultants also state the following (p. 32): “(Irrigation) will definitely lead to decrease of River waters. At the same time, no one knows exactly what percentage of the water shall end up in irrigation and whether this irrigation shall be seasonal or throughout the year.”

The Draft Hydrological Impacts Assessment, which has meanwhile been prepared, warns that the filling of the Gibe 3 reservoir will likely dry up Ferguson’s Gulf, the lake’s most productive fishing area. It also warns that the planned water abstraction in the Omo Valley, not least in the context of the new reservoirs for Gibe 3-5, could lead to a drop in the lake level of 40 meters and turn Lake Turkana into “two small puddles, one of which will dry up”.

Even though the consultants acknowledge that the basic fears of the affected people are justified, they respond to them by straightforward misinformation. See the following statements (p. 33, see also pp. 168f): “The consultants went on to explain that the water shall continue to flow downstream after the electricity in produced, and the levels of water at the river shall be regulated to ensure there is enough water. (…) The consultants explained that the river shall not be blocked completely and it will continue to flow even in its normal way once the dam filled.”

Gaining public acceptance?

The consultants state at several instances that the project will need the consent of the affected communities in order to go forward. At the same time, they implicitly and explicitly make clear that the AfDB should ignore the lack of any such consent.

The consultants list the requirements and regulations which the project will need to fulfill (pp. 23ff). They refer to the ICOLD policy that “all projects have to be planned, implemented, and operated with the clear consent of the public concerned”, and the International Energy Agency’s Hydropower Agreement, which stipulates that “local communities be willing partners in the development of a hydropower project” (Hydropower Agreement, p.103).

In their conclusion, the consultants stress the need for Gaining Public Acceptance, and acknowledge the right of the indigenous peoples living around Lake Turkana to free, prior informed consent. Yet in the
very same paragraph, they recommend that the AfDB completely ignore this right (pp. 188f, emphasis added):

“Gaining Public Acceptance, The principle that dams and other water and energy infrastructure development should enjoy public acceptance is increasingly widely accepted, both on practical grounds (...) and as a central concomitant of a rights based approach to development. (...) For indigenous peoples living around Lake Turkana, free, prior, informed consent to developments that affect their lands is now firmly entrenched in international law and recognised as such by the UN. (...) Therefore consultation and information process should be emphasized to ensure that the local communities of Lake Turkana fully understand the Gibe III project, its benefits and role in economic development for the entire region, and to embrace the possible mitigation measures to ensure both their developmental needs are taken care of and the success of the project.”

This paragraph succinctly sums up the farcical nature of the AfDB’s consultation exercise. A meaningful consultation process would require that the findings have an impact on the outcome of the decision whether or not a funder should finance a project. Yet the consultants make it abundantly clear that they consider the funding of the Gibe 3 Project by the AfDB to be a foregone conclusion, and that the consultation is indeed, as the affected people feared, a “mockery exercise”.

Mitigation measures and recommendations

The report identifies project risks, identifies mitigation measures (pp. 35ff, 168ff) and makes recommendations (188ff). In spite of its critical importance, the risk of a receding lake level is not considered. The measures and recommendations appear at times useful, heavy-handed, and ridiculous. The proposed mitigation measures include the following:

- “training on entrepreneurship skills for alternative income generating activities”;
- “increase the presence of security apparatus, and jail and rehabilitate the criminals to be productive members of the society”;
- “reduce the livestock raid related activities Operation to collect all illegal arms from the communities, and arrest, charge and imprison the raiders in correctional facilities”;
- “create cultural museum and cultural tourism programs to ensure culture is maintained with economic productivity”;
- “well developed facilities that can replicate the very conditions of the lake in specified pools of water or similar environments thus safe guarding the endangered species”;
- “construction of the state of the art schools in the middle of these desert lands”.

The consultants recommend that these mitigation measures be funded or supported by government agencies, the military apparatus, international organizations, other donors, and NGOs, including Friends of Lake Turkana. They do not propose that their costs be part of the Gibe 3 project budget.

The consultants’ recommendations include the following:

- “In case the dam is used for other uses, other than generation of hydro- electric power, such as irrigation, then a full ESIA must be carried out on the entire catchment of Lake Turkana including Lake Turkana communities on the Kenyan side.”
- “Hydrological report should be a predetermining factor to the authenticity of the fears of the community, since water is the main factor and issue behind this public consultation and socio-economic study.”
• “There should be a law and agreement drafted between Kenya and Ethiopia, with International enforcement on the management of shared water bodies. (…)Water must be used for electricity only and should not be interfered with for other purpose such as irrigation.”
• “During the filling up of the dam the water must be left wholly for hydropower and a constant flow to Lake Turkana must be ensured to flow southward into lake Turkana while great care to ensure that between the dam and the lake, the population does not divert the water for other uses rather than maintaining adequate inflow into Lake Turkana.”
• “Kenya and Ethiopia should not just enter into a framework of cooperation but abide to an internationally brokered treaty between Kenya and Ethiopia under the auspicious of the UN and IUCN.”
• “Involvement in environmental management authorities such as NEMA, and their counterpart in Ethiopia and other stakeholders in all the decisions affecting Lake Turkana and its environs.”
• “Formation of trans-boundary waters treaty between Kenya and Ethiopia, and subsequent adherence of the internationally laid down diplomatic channels for consultations on projects whose effects and impacts transcend national boundaries.”
• “More peace initiatives in the region to enable economic activities around and about Lake Turkana.”
• “There must also be deliberate efforts to disarm the indigenous people and further curb the proliferation of illegal arms in the area.”
• “If presence of Gibe III does not leave both Kenyan and Ethiopian communities worse off, then the two governments must ensure that the communities around Lake Turkana benefit from the electricity.”
• “Monitoring and study of Lake Turkana hydrology since there is no study that has been done to particularly determine the reasons why the lake is shrinking, so most of the information from advocacy groups is based on assumptions that the main reason is reduced waters in River Omo.”