

Ethiopia – Gibe III Hydropower Project

Trip Report - January 12 – 30, 2009

Prepared by Leslie Johnston

USAID/Washington, EGAT/ESP



USAID/Washington traveled to Ethiopia to meet with stakeholders about the Gibe III hydropower project as part of USAID’s due diligence efforts under the International Financial Institutions Act, Title XIII, Section 1303(a)(3), to review multilateral development bank (MDB) projects with potential adverse environmental and social impacts.

This report summarizes information obtained from meetings with stakeholders in Addis Ababa, including the Ethiopian Electric Power Corporation (EEPCo), the Ethiopian Environmental Protection Authority (EPA), and the African Development Bank (AfDB); a visit to the project site and downstream areas; and meetings with three indigenous ethnic group communities – the Mursi, Kara and Daasanach. The meetings focused primarily on the environmental and social aspects of the project, with particular attention paid to the relationship of the livelihoods of the indigenous ethnic groups to the Omo River and their understanding and participation in meetings concerning the project.

Comments included herein are based on meetings with stakeholders or documents in the public domain and do not reflect the views of USAID or the USG; not all comments have been substantiated by USAID.

General Background Information: Ethiopia is facing a number of serious development challenges, including increasing population growth, energy shortages and massive deforestation exacerbating soil erosion. One stakeholder noted that the Government of Ethiopia (GoE) is underestimating its population growth and therefore underestimating its energy requirements and other needs. Food security could become an issue due to the high rates of fragmentation of farmland and increasing population growth in the highlands.

Ethiopia’s path toward development is constrained by its limited range of natural resources. The country’s only economically exploitable resource is hydropower, which offers the potential for generation of more than 30,000 MW. Ethiopia has Africa’s greatest hydropower potential, second only to Democratic Republic of the Congo.

Facing the challenges of regional energy shortages, in 2005 the countries of East Africa established the Eastern Africa Power Pool (EAPP). EEPCo is a founding member of EAPP.

Under the EAPP framework, Ethiopia will play a significant role, given its abundant hydropower resources. Ethiopia's planned hydropower projects through 2015 will deliver an additional capacity of 3,600 MW, a substantial increase compared to its current installed capacity of 810 MW. The export of hydropower to other countries will enable Ethiopia to earn foreign exchange, improving the economic basis of the country. It has been deemed more politically, socially and economically feasible to develop hydropower projects in basins other than the Nile River Basin. The Gibe III hydropower project, located on the Omo River, is part of this plan.

The current political landscape for civil society/NGOs remains difficult in the aftermath of the May 2005 parliamentary elections. This political environment discourages public discourse on development issues, including both energy policy and projects to implement the policy. An NGO law passed in early January 2009 is the most recent attempt to weaken civil society's voice and disengage civil society from the policy-making process. The new law heavily restricts the thematic areas where civil society organizations can operate and places funding restrictions on local NGOs by international NGOs. The areas that are compromised include governance, civil society, and human rights issues. Some stakeholders see the new law as an additional element of political control and targeted towards a small number of NGOs (about 100) that were politically active during the earlier elections, with the GoE trying to head off any disagreements.

The absence of a free debate in the media also compounds concerns associated with the lack of public discourse. There appears to be tight government control of the media with no questions openly asked concerning national development issues and policies. This further restricts the limited amount of political space civil society has to engage in with the government.

A number of stakeholders questioned whether the rights of the downstream indigenous ethnic groups were appropriately protected when decisions were being made about the Gibe III project. This concern has been raised because the affected groups are not legally recognized as indigenous peoples, which would have afforded them certain rights and protection by the GoE. These indigenous ethnic groups have been neglected by the GoE and discriminated against by the highlanders; others think they are "backwards" because of the way they live and dress. Even regional administrative knowledge of these ethnic groups is very low. Furthermore, the perceived lack of culturally appropriate project consultations contradicts Ethiopia's constitution, which provides for people to have the right to full consultation and expression of their views in the planning and implementation of environmental policies and projects that affect them directly.

Gibe III Project

The Gibe III hydroelectric power project is located within the Gibe-Omo River Basin, in the middle reach of the Omo River approximately 450 km south of Addis Ababa. Gibe III is the third development in a cascade of hydropower development schemes in the basin. The two previous projects are Gilgel Gibe/Gibe I, in operation, and Gibe II, under construction. Another hydropower project, Gibe IV, is expected downstream of Gibe III on the Omo River, adjacent to the country's largest national park, Omo National Park. Project documentation shows a fifth hydropower project (Gibe V) below Gibe IV, but the status of this project is unclear.



Gibe III is a 1,870 MW facility comprising a 240 m dam creating a reservoir with a surface area of at least 200 km², live storage of 11,750 million m³, underground and inclined penstocks, and a surface powerhouse equipped with 10 power generating units and switchyards. Electrical power generated by Gibe III will be available to cover both peak and off-peak demand in the Ethiopian interconnected power systems and also exports to Kenya's market. Power produced will be evacuated through a four double circuit 400 kV, 65 km, overhead transmission line. The commissioning of Gibe III is scheduled for 2012.

Project construction started in 2006. The day prior to USAID's visit, the Omo River was diverted through one of the three parallel diversion tunnels to below the downstream cofferdam. Work was underway on a number of project activities – completion of the remaining diversion tunnels, both upstream and downstream cofferdams, power intake tunnels, alluvium quarrying from the left bank of the Omo River, and preparing the foundation side walls for the dam.



Environmental Management

Activities. The mission statement of the project developer, EEPCo, reflects the need for its management practices to be responsive to the socio-economic development and environmental protection of the public. Therefore, it has the responsibility to be involved with the construction supervision team to ensure the implementation of this Environmental

Management Plan (EMP). EEPCo is in the process of establishing an Environmental Management Unit (EMU) to fulfill this function in coordination with the Ethiopian EPA and the Regional Environmental Protection Offices. The environmental performance of the project will be monitored on a regular basis through EEPCo's EMU and through external/third party audits.

Environmental monitoring of the project will be conducted at four levels:

1. EPC contractor, Salini, has developed a set of environmental monitoring procedures and is responsible for ensuring best practices at the construction site.
2. The Environmental Inspector, a project consultant, is responsible for reviewing the environmental aspects of work plans, developing site environmental management procedures, and providing monthly reports.
3. EEPCo's EMU has overall responsibility for ensuring implementation of the EMP.
4. Ethiopian EPA has oversight function and can undertake a surprise inspection or audit.

The project contractor has implemented an environmental monitoring program which encompasses cleaning petroleum/chemical spillages, containment of material with cement away from the river, segregation of wastes and composting organic waste. There is an active recycling program for scrap metal, batteries, plastics and contaminated material—materials are separated and stored for pick up by various vendors for final disposition. The project undertakes a facility check at the final deposition sites to ensure that the materials are being handled in an environmentally responsible manner.

A public relations officer from the area has been hired. The project contractor and the EMU will monitor the area for illegal settlers. The onsite EMU is currently recruiting staff, including a sociologist. Health activities are being supported through three first aid clinics staffed with doctors. It is estimated that at least 10% of the visits are from the local communities. Permanent facilities such as a school and clinics will be provided by EEPCo.

Cumulative impacts assessment: The cumulative impact assessment of the dams in the Omo watershed needs to be provided to the public. Reportedly, the basic conclusion of the analysis is that the proximity of the dams to one another (Gibe III is 250 km from Gilgel/Gibe I) will prevent cumulative impacts. Gibe IV and Gibe V were not designed as two separate projects but as alternatives for one project; the decision was made to go forward with Gibe IV. This information is to be presented in the revised downstream ESIA.

Associated facilities: The ESIA for the transmission line to export power to Kenya is being carried out by EEPCo. It is not finalized and currently it is not in the public domain. At this point the transmission line is not being considered for financing by either AfDB or WB, although there is some discussion.

Environmental flow/controlled flood: Ethiopia does not have a regulation defining the required minimum environmental flow in rivers to meet the riverine ecological requirements downstream of a dam site. Project staff and the consultant discussed

whether the tremendous fluctuations shown the ESIA will actually occur. Project staff felt that fluctuations would be minimized compared to what is presented in the ESIA because power, even at a reduced level, will always be generated.

The project is committed to a controlled flood release, circumstances permitting. The project invested additional funds to install middle outlets in the lateral blocks of the dam body for the flood release. Based on the project's ESIA, the controlled flood is designed to stay on the land for 10 days to allow for enough moisture to soak into depth and to kill weeds prior to planting. Since the natural flood fails one year in every three to four years, the reliability of the controlled flood is seen as a benefit of the project. The project addressed stakeholders' concerns regarding flood sediment loads by ensuring that the sediment in the lake will not have settled into the reservoir and therefore will be present in the controlled flood waters.

Project staff are comfortable with the amount of water that is expected to be released during the controlled flood, basing their opinion on a heavy rain event in August 2008. The flood level during this event was 1,500 m³/sec, controlled flood will be 1,100 m³/sec. The project took advantage of this event and conducted a helicopter survey as the water moved down the Omo to Lake Turkana to evaluate how much of the riverbank was being inundated. Their analysis indicates that there will be ample water release from the controlled flood. This information is to be provided in the revised downstream ESIA.

EPA's role: The EPA approved the Gibe III project ESIA on 23 July 2008. While acknowledging that the ESIA should have been approved before project construction started, the EPA plans to use it as a management tool during project construction. The EPA considers itself the highest level of environmental oversight for the project; the Regional Environmental Protection Offices bear primary responsibility for ensuring implementation of the environmental management plan, not the federal authority. However, there are technical and resource capacity constraints in coordinating monitoring activities at the local level. The EPA is responsible for monitoring and crosschecking all agency/ministry EMUs, including the EMU established by the Ministry of Mines and Energy to backstop EEPCo's EMU. If any problems cannot be solved at the ministry/agency level, the EPA will work with the Environment Council, of which the Prime Minister is the chair, to achieve resolution.

Project audits are the EPA's responsibility, but they are rarely carried out because of limited human and financial resources. Therefore, the EPA needs to be selective and focus its attention on projects about to be operationalized, which is when audits are mandatory. Audits can be based on information from stakeholders. Stakeholders have the right to inform the EPA of issues or concerns relating to the project, and if the EPA takes no action within 30 days then the stakeholders can institute a court case.

The EPA attaches great importance to the Gibe III project for its capacity to enhance the livelihoods of Ethiopians. EPA-cited benefits of the project include the transformation of the Omo River into physical capital by making it more predictable and the contribution to a healthier environment made by hydropower, a cleaner energy source. The EPA, with regional authorities, will develop ecosystem-based enterprises for the reservoir area above and beyond what EEPCo has planned. Activities will include training people to fish

and market their catch; with money earned in this way, beneficiaries will be able to send children to school. Additionally, the EPA can help communities negotiate with EEPCo to protect the watershed through reforestation efforts and obtain carbon credits.

EPA is a relatively newly functioning entity as it was only re-established in 2002. Consequently, a number of stakeholders perceive EPA as a weak agency. It does not have political power and its resources (human and financial) are limited.

Multilateral Financing Options. The project is being proposed for African Development Bank (AfDB) financing. Although the World Bank was approached for financing, they turned down the request because the procurement of the prime contractor, Salini, was sole-source, which violated the Bank's procurement policy.

The AfDB agrees that the ESIA should have been approved before construction started, as failing to do so is a clear contravention of GoE laws. The AfDB did not conduct its own project appraisal until the EPA gave the project's ESIA official approval in 2008, which the AfDB took as the green light to move forward. AfDB has conducted three-to-four high level missions with the GoE about this project. AfDB continues to have concerns about the project: the weaknesses they perceive include the baseline data and the environmental monitoring by EEPCo's EMU.

Lower Omo Valley. Downstream of the project is the Lower Omo Valley. This is one of the most biologically and culturally diverse regions in East Africa. An estimated 500,000 people comprising indigenous ethnic groups live in the Lower Omo Valley. At least eight groups—Bodi, Mursi, Kwegu, Kara, Hamar, Bashada, Nyangatom and Daasanach—depend on the Omo River as an integral component of their livelihoods and could potentially be impacted by the Gibe III hydropower project. The Omo River and its riverine forest provide for a wide variety of subsistence activities ranging from recession agriculture, fishing, pasture for seasonal livestock grazing, habitat for beekeeping, to wildlife for hunting. Reliance on these activities supported by the Omo River and riverine forest varies from group to group depending on their livelihood strategy. Three of the groups are profiled at the end of this report.



Flood recession cultivation: The Omo River's flood cycle is critical for recession agriculture. The Omo River starts rising in June, with flooding in August/September. The extent of the area for recession cultivation increases as the Omo River moves south, due to the increasing meander of the river. In the north, where the Mursi and Bodi live, narrow strips of land are cultivated because reliability of production is crucial to their livelihood and can mean the difference between food security or insecurity. At least 21,000

households are engaged in recession agriculture on nearly 12,000 hectares along the Omo River. Each group relies on its own understanding of the floods to time planting, although most groups plant in mid-September.

The proposed controlled flood initially appears beneficial, because it would provide certainty about when to plant without fear of a larger subsequent flood wiping out newly planted crops. In the past, indigenous groups have guarded against crop loss by always holding back some seed and grain reserves. There is concern, however, that even though the flood would be guaranteed, it would be substantially different from natural flooding with respect to sediment load/deposition and length of time the water is on the land before it recedes. Consequently, the land might not be as productive as it now is and would need additional inputs, such as fertilizer.

Oxbow lakes: Oxbow lakes are a unique ecosystem, and provide important contributions for certain groups' food security, as a resource for both fisheries and recession agriculture. These lakes are scattered along the lower portion of the Omo River. They are important sources for fisheries when they are renewed and contain adequate levels of water. However, as they dry out they become good sites for recession agriculture and dry season grazing. These lakes are only renewed during periods of heavy flooding, which means they can go for several years without seeing an influx of new water and with it fish. It is highly questionable whether these lakes will be recharged based on the controlled flood release.

Fisheries: The Gibe-Omo River Basin is known to contain a high diversity of fish species: more than 70 species have been identified. The migration and reproduction of many of these species is triggered by the flood cycle. A number of species, including commercially valuable ones, undertake extensive migrations from Lake Turkana upstream into the Omo River and its tributaries. Additionally, many of the riverine fish species are potamodromous species that perform local migration along the river course. Many of the species migrate upstream during the flood season for spawning and then migrate downstream during the dry season. The large variety of species found in the river system is distributed throughout its habitat: the deep open river channel, deep pools, the floodplains, and rocky habitats. Their feeding habits vary enormously among the species covering all available niches. It is expected that these habitats will change due to the reduced flow, the fluctuation in flow resulting from dam operating procedures up to the point where effects dampen out (approximately 400 km downstream of the dam) and changes in the natural flood cycle.

Discussions with the project fisheries expert concluded with the conjecture that the duration of the controlled flood will not impact the cues for fish to initiate their reproductive process and subsequent migration. This conclusion is based on the assumption that the smaller rivers that enter the Omo River will provide adequate increases of fresh water flows into Lake Turkana when the rains start, thus starting the changes in the chemical composition of the water to initiate the process for reproduction and migration.

Fisheries are an important food security component for a number of indigenous groups, although the extent to which each group depends on fisheries for protein varies. For

example, the Kwegu have no livestock aside from some goats, so they rely heavily on fishing, along with flood recession agriculture. Other groups such as the Mursi practice subsistence fishing and eat fish daily during the period when their cattle cannot be close to the river. The project ESIA states that as a result it is likely that the feeding and spawning grounds will be reduced, and there would therefore be a possible reduction in fish number. This would signal a high potential of impacting groups which rely on fisheries as part of their food security strategy.

Riverine forest: The Omo's riverine forest provides important resources for the ethnic groups; it is also a key element in the integrity of the Omo National Park. The forest provides habitat for wildlife, including bees for honey production, housing material, and medicinal plants. Areas subject to floods will support the growth of large trees, which are valuable as important habitat for bees. Honey production is an important activity, with trees being owned by individuals. Most indigenous groups use honey predominantly in their own food supply and rarely trade it.

Project Impacts on Indigenous Groups. Various stakeholders raised concerns over a number of potential social changes due to the project, including the following:

- The project will transform these groups' subsistence lifestyle into the more formal market-based economy, which will require them to change their livelihood strategies and cultures at an accelerated pace. Currently, these groups do not have the capacity to move effectively into the mainstream of society without extensive support. They are ill-equipped to compete in the labor market due to their lack of formal education and inability to speak the national language.
- The project will enable the GoE to have more control over these groups by distributing or not distributing food aid, providing or not providing agricultural inputs, and requiring payment of taxes.
- The project has the potential to exacerbate existing pressures on groups by increasing competition over decreasing resources. For example, although rainfall is variable and unpredictable, pastoralists depend upon it for agriculture or pasture. If the rains fail, the groups can lose large areas of land rapidly. With population growth reducing the amount of available highland land, agricultural activity is expanding into pastoralists' land, which also has the potential for igniting conflict.

Benefits of Gibe III include, in addition to power generation, foreign exchange earnings for the country, the cessation of large catastrophic floods (which are particularly a problem for Daasanach), and the regularity of controlled floods establishing a more predictable schedule for planting recession agriculture crops. A small percentage of money derived from the benefits of Gibe III will be invested downstream for watershed protection and socio-development over the life of the project.

The project downstream ESIA provides for general mitigation measures for the ethnic groups that will be affected by Gibe III. These measures include support for fisheries, rainfed and irrigated agriculture, and livestock. Given the wide variation in each groups' livelihood patterns, mitigation measures need to be defined specifically for the ethnic groups and constraints of their geographical location. These activities are to be

implemented by EEP Co and local authorities and possibly financed through the federal budget and electricity-originating revenues. Compensation was not discussed in the project ESIA for the lower Omo Valley since the dam is not expected to impact recession agriculture because sufficient release of flood water will prevent any livelihood losses. In fact, the project will develop roads that will support recession agriculture by providing access to areas not currently used because they cannot be reached.

Below are detailed descriptions of the three indigenous groups to be affected by the project whose representatives met with USAID.

Mursi. The Mursi, whose population numbers less than 10,000, live in the upland plains of the lower Omo Valley. Their territory encompasses the area between the Omo and Mago rivers and as far north as the Mara River. Mursi livelihoods depend on three critical elements: recession agriculture, rainfed agriculture, and cattle herding. Their survival relies on integrating these three elements together, resulting in a complex cycle of seasonal movements according to the Omo River flood cycle.

Agriculture (both recession and rainfed) accounts for approximately 75 percent of their diet, with recession agriculture comprising the substantially larger share. Their main crop is sorghum, but they also grow maize and beans. Mursi have access to a limited area for recession agriculture, so they cultivate along both banks of the Omo River. Riverbank land is more highly valued than other areas, as its fertility is annually renewed by the sediment carried in the river's flood waters.

The Mursi live at the Omo River approximately five months out of the year; during these months they engage in recession agriculture. Although all sizes of land are used for cultivation, the extent of the floods determines the amount of land cultivated each year. If the area cultivated



is narrow, the harvest is approximately 10 sacks/season; if the area is larger, the harvest yield will be >10 sacks. Mursi described two naturally occurring floods that precede their cultivation of the land.

Rainfed crops are tremendously unpredictable. As one Mursi observed, “Mursi living in the area many years, working hard to clear bush to ready the land for rain crops. After rain, crops will dry out, problem is the rain – don’t have much rain.”

The duration, distribution, and onset of the rains vary from year to year. Moreover, research has shown that rainfall is decreasing in the Omo rainshed. Rainfed crops are also susceptible to pests, such as birds. Rainfed crops frequently fail, and in such years the Mursi survive by exchanging small livestock for grain. However, if rainfed crops fail three years in a row, the population becomes food insecure and food supplements are required.

The Mursi depend on daily consumption of fish for protein when living alongside the Omo River. The fish they consume can be divided into two categories – low water and flooding fish. Fish are caught more easily with the available equipment they have when the river level is low. The main fish they catch during this period are: aihei, kangachoi, and rigr(n)ig. During the flood season, they see more fish moving upstream but catch less. It is more difficult to catch fish during the flood season, but they catch the following with a spear and long rope: diri, kuchalai, ngachumuno, dongilai, dolcoli, chogei, bineri, guru and shangai. They do not dry fish for consumption during the part of the year when they are not living on the Omo.

In addition to growing crops along the banks of the Omo River and rainfed crops, they also cultivate along the banks of the Elma and Margo rivers.

Omo National Park and Wildlife Reserve overlaps Mursi territory and effectively decreases its size. The Mursi are trying to adapt to these limitations on their ability to move throughout their territory. They reportedly have been told by the GoE that they are not to graze their cattle on National Park or Wildlife Reserve territory or cultivate along a portion of the Mago river. This effectively reduces their subsistence base by at least 50 percent, which could make them permanently dependent on food aid. Currently, they are rarely dependent on food aid from the government. If this directive is enforced then boreholes would have to be drilled for their cattle which would quickly result in overgrazing and environmental degradation.

The project consultant confirmed that Mursi activities are to be moved from the core area, but understood this requirement less as pressure on the land (decreasing area) and more as pressure on the resources. Any support the project provides in forage development and range management will be beneficial to the Mursi.

Knowledge of the project: The group of Mursi elders/men meeting with USAID (15+) had heard of plans to do something on the Omo in the far north about two years ago. They could not remember any consultations on the project in recent years from either the government or contractor so they do not have any details on the project.

As recently as three days prior to USAID's visit, someone from the GoE in Addis came to their territory to map the trees in the bush belt area. Since the visitors did not explain clearly why they were there, the Mursi refused to allow them to conduct the mapping.

Kara. The Kara live further south of the Mursi with their northern border along the southern part of Mursi territory. The Kara people are entirely dependent on the Omo River for their livelihood. The elders/men described the flood events occurring in three phases. The length and type of flood vary according to the rainy season. The first flood comes and goes down rather quickly. The second flood stays for two months; when the water recedes from this flood, they plant. The third flood always comes and depending on

its intensity may destroy the crops. Discussions with the Kara indicate that the amount of flooding occurring each year has been decreasing. Last year the flood only stayed for one month, which they felt was not long enough for sufficient crop yield. The elders/men observed that in previous years the flood was adequate to generate sufficient crops; they never used to have to ask the GoE for help, but now they can't get enough food due to the lack of flooding. When asked whether they thought that a controlled flood of 10 days is long enough to grow crops, they thought the plan needed to be reshaped.



The Kara practice flood recession agriculture on both sides of the river, growing sorghum, maize, cereals, beans, peas. They rarely practice rainfed agriculture, except under exceptional circumstances. They depend on pasture from the flooded areas for dry season grazing. The riverine forest provides trees for honey production and wildlife for hunting. Their culture depends on the Omo as there is no other river resource within their territory. If the floods are low, they cannot obtain enough food; under such circumstances, they will need to depend on outside sources.

The Kara depend on fish as a protein source. They discussed the many types of fish in the Omo, but said there are too many to count or name. The local names of some of the fish caught are: ruda, guru, shaka, chawada, benaru, rumbuya, pored, ronda, karda, korangash, and duwada. They primarily use hooks and nets to catch fish, which means their catch is only plentiful when the water is low. When the river floods, they cannot catch enough.

Kara utilize oxbow lakes for fishing and cultivation. The Dypa Hyak, located close to Kara Korocho, is an important seasonal water body for some Kara groups. The downstream ESIA records that the Dypa Hyak contains fish diversity similar to the Omo River, although its population of Nile perch is more abundant. The Dypa Hyak is used both for fishing and for recession



agriculture. During years of high flood events, water, along with new fish, will flow into the Dypa, but these floods do not occur every year. During the last two years, the floods have not been high enough for water to recharge the Dypa Hyak. When the floods are not high enough, the water will recede. It takes three to four years for the water to recede fully. As the water level drops, fisheries production will reduce and the Kara will begin recession agriculture.

Knowledge of project: The group of Kara elders/men (25+) meeting with USAID had heard about Gibe III. They understood the project as providing electricity for the cities and outside of Ethiopia. To their knowledge no one from the project had come to discuss the project with them or provide an explanation. They are not sure whether the GoE plans to move them from the area, but they need to be able to grow food wherever they are.

For the Kara, it is unclear how they will benefit from the project. They need education, training and capacity building. Their options appear to be very limited because of their exclusive dependence on the Omo River. From their perspective, pastoralists and farmers are not the same as they have different mental awareness. They are ill-suited to become farmers if they are displaced; although experienced in recession agriculture, they have no experience or knowledge of irrigation.

The Kara feel as if they are the forgotten people and that the GoE does not have enough money to support all of the tribes in Ethiopia. They fear being killed by two things: drought and human disease.

Daasanach. The Daasanach are primarily flood plain farmers. They depend on the Omo River for fishing, farming and as their only drinking water source. The Daasanach are dependent on flooded flats which they use for both agriculture and grazing livestock in the dry season. Like the Kara, they do not depend on rainfed agriculture.

They described the flooding of the Omo as a four-month process. The first three months consist typically of a shallow flood, and during the fourth month the waters rise.

After the last phase of the flood, they start farming. A second growing period may follow the first harvest. However, the second harvest depends on the rains. Last year, for example, there were no floods, and as a result, they did not plant. They do undertake irrigation farming, although they produce much more grain using recession agriculture. The GoE built an irrigation channel with a pump approximately 10 years ago, with each family receiving a small plot of land. The sole pump



for the entire system, maintained by the government agriculture office, is reported to work only sporadically. There are periods when it is out of commission for eight to 10 days, which leads to crops dying, since they regularly need water.

The Daasanach catch most of their fish during the three months of shallow flooding when the river is low. Their fishing equipment is very limited: they have a small number of nets, and their canoes are too small to catch large fish and too poorly constructed to last more than six months. When the Omo decreases and the water becomes clear (the stage it is in now), they catch Nile perch and catfish. When the Omo turns brown/red, the Daasanach catch slim, small fish as they move from Lake Turkana upstream. During the high flood, they catch a smaller number of fish using hooks and harpoons. During the high flood, they do not need irrigation because they use the river bank for cultivation. Most of their protein comes from cow milk and goat/sheep meat.

Knowledge of project: The group of Daasanach elders/men (15+) had not heard of Gibe III. One man said he had heard through the media of a project to stop the flooding about a year ago (after the 2006 flood). All eventually remembered hearing something but had forgotten about it, doubting that it would go forward because the GoE never came to talk to them about the project. They would like to know more about the project from either GoE or NGO sources. Their only water source is the Omo, so they are concerned that any diversion of the river will translate to insufficient water for them.

Two fishermen from a different village were interviewed in Omorate. They had heard about the dam from the GoE. They understood that it would be used for power and that a small amount of water will flow and be used for farming. They think fishing will be adequate with the dam because dams will be good for fishing.

Transboundary Issue. Transboundary impacts are an important consideration for the project, because the Omo River provides Lake Turkana with 80 percent of its water. Estimates of the level of Lake Turkana dropped dramatically between the 1890s and 1970s due to reduced rainfall over the Omo highland catchment area. Satellite imagery shows that the Omo delta expanded by 500 sq. km during the 1980s and 1990s, which implies that the lake level and river flows were decreasing at least up to that point. Water elevation has dropped 25 meters from 1890 to 1960s. Although the project downstream ESIA states that the project will benefit Lake Turkana, this conclusion is questioned by stakeholders in both Kenya and Ethiopia.

The southern part of the Omo River and Delta lies within the Ilemi Triangle, where a long standing border dispute continues unresolved among Sudan, Kenya, and Ethiopia. Furthermore, oil and mineral exploration are increasing in the area. If the resources provided by the Omo River, such as grazing land, are degraded, conflicts may arise.

No formal agreement about the project exists between Ethiopia and Kenya, although high-level discussions have reportedly taken place between the two governments. No Power Purchase Agreement has been established yet, but several stakeholders thought there would be no issues.

USAID has not engaged in consultations in Kenya concerning this project. At the time of the USAID site visit, AfDB staff were unsure of the status and were requesting information from the GoE.

Recommendations

- There needs to be additional baseline data collected and analyzed to support the conclusions reached in the ESIA concerning impacts on fisheries, ob-bow lakes, Lake Turkana, and recession agriculture.
- Based on discussions with elders in the three communities visited, additional consultations are needed; ideally, consultations should be systematic and continuous. Consultant stated that consultations were tied to market days and the last one in Mursi was December 2007.
- Livelihood mitigation plans need to be specific for each site and ethnic group, rather than the generic plans outlined in the documents. The Project Implementation Unit (PIU) is responsible for the specifics of the plans. The PIU will be established at the site level. The PIU should include ethnic representation, nominated and chosen transparently, who can give voice to the local communities.
- An independent grievance mechanism should be established for the lower Omo Valley. Established NGO representation for conflict management in the area could be engaged.
- The Independent Panel outlined in the ESIA needs to be truly independent and include representatives of diverse ethnic groups—selected in a transparent manner—as well as NGOs and scientific experts.
- There needs to be baseline data collected and consultations held with communities in Kenya around Lake Turkana.
- A conflict vulnerability assessment is needed for: 1) the indigenous ethnic groups that depend on the Omo and have already a history of conflict and 2) the Ilemi Triangle region entities that are dependent on the traditional resources of the Omo River and Lake Turkana.