JONNY BEIRNE

Gilgel Gibe III: Dam-Induced Displacement in Ethiopia and Kenya

Hydropower developments have come to assume an important role within the Ethiopian government's overall development strategy for the country during the last ten years. The Gilgel Gibe III on the Omo river, due to become operational in September 2014, represents the most ambitious, and controversial, of these projects to date. Further aspects of the government's national development strategy include leasing vast areas of designated 'unused' land for large-scale commercial agricultural projects and 'voluntarily' villagizing[1] scattered, semi-nomadic agro-pastoralist groups to centralized settlements so as to use land and water more efficiently and to better provide essential social services such as education and healthcare. The Lower Omo valley, along the Omo River, is one of the sites of this villagization programme as well as of these large-scale commercial agricultural projects which are made possible owing to the regulation of the river's flow by Gibe III. Though the Ethiopian government cite many positive aspects of these agricultural and hydropower developments there are still expected to be serious regional and transnational effects, including on migration flows, in an area already characterized by increasing climatic vulnerability with attendant population movements and conflicts over scarce resources.

The following paper is an attempt to track actual and anticipated migration flows resulting from the construction of Gibe III in the immediate vicinity of the dam, downstream in the Lower Omo Valley and across the border in Kenya around Lake Turkana. In the case of those displaced in the Lower Omo Valley, this will be considered in view of the distinction between voluntary villagization and forced resettlement. The research presented is not primary-source material. Instead, it is drawn from the reports and assessments of the Ethiopian government, rights-based groups, and academic researchers as well as media articles. It is hoped that this will serve to draw greater attention to the issue and encourage further methodological research on the dynamics of dam constructions (and associated large-scale irrigation schemes) on migration flows and on the ultimate experience of displacement and resettlement for environmental migrants in the region.

1 This is known as the Promoting Basic Services (PBS) scheme (previously called the Pastoralist Community Development Project) which is in its third five-year phase having been launched in 2001. The main donors for the program are the World Bank, the United Kingdom, the European Union, the Netherlands and Germany.

2. THE ENVIRONMENTAL THREAT: LARGE-SCALE DEVELOPMENTS ON THE OMO RIVER BASIN

2.1. The Omo River Basin and Lake Turkana

The Lower Omo valley is a semi-arid region of the South Omo Zone with extraordinary biodiversity and a large number of distinct, indigenous agro-pastoral and fishing communities living within it (Avery, 2013). Running through the woredas[2] of the Lower Omo valley is the Omo River which originates in the Shewan highlands of Ethiopia at an elevation of around 2400 metres.

Figure 1. **Map of the Lower Omo valley, Ethiopia**

Source: Antiquity Journal (2010)

The key hydrological feature of the Omo River to note is its annual flood cycle, which occurs during the wet season between May and September. As stated in the Environmental and Social Impact Assessment Executive Summary commissioned by the Ethiopian Electrical Power Corporation (EEPCO), the government entity charged with the overall management of the project[3], this process submerges the banks along the Omo river. This enables recessional cultivation and livestock grazing during the dry season, as well as replenishing lakes and swamps on the floodplain and allowing fish to breed (EEPCO, 2009a).

Not only does this process naturally irrigate the banks of the Omo in the semi-arid climate of the Lower Omo valley but it also replenishes the water and nutrient levels of Lake Turkana, a closed basin prone to accumulating minerals which makes its waters semi-saline (Avery, 2013). This process occurs when flood waters retreat from

2 Administrative sub-divisions within zones. Zones themselves are sub-divisions of regions.

3 In January 2014, EEPCO was renamed and split into two separate entities; Ethiopian Electric Power Office (EEPO) and Ethiopian Electric Services Office(EESO). EEPO are charged with overseeing the country's power projects including hydroelectric dams and transmission lines whilst EESO is responsible for the operations, distribution and sale of electrical power. For the purposes of this paper, I will continue to refer to the entity in charge of Gibe III as EEPCO.

the river banks, taking organic materials that ultimately end up in Lake Turkana. This nutrient inflow allows the growth of plankton, thought to be vital to regulating the salinity concentration of the lake. The soil fertility and biodiversity, therefore, that is found along the banks of the Omo and within Lake Turkana is a direct result of this cycle. Owing to this flood-cycle and the vast flows of water and nutrients the river provides to Lake Turkana, the Omo has become an indispensable natural resource for, at a conservative estimate, 170,000 agro-pastoralists and fishermen in the Lower Omo and Turkana basins who have adapted their livelihood practices according to this cycle and the river's unregulated flow (Avery, 2012). However, the total population expected to be indirectly affected by any changes is much larger with several estimates in the literature putting the Figure at 500,000 (International Rivers, 2011; Johnson, 2010; Turton, 2010).

2.2. Ethiopia's Hydropower Boom

Though Ethiopia has seen tremendous GDP growth over approximately the last ten years (Smith 2013) and encouraging signs of poverty reduction across the same period (UNDP, 2013), the country still faces huge challenges with regards to improving the standard of living for the majority of its population, particularly in the southern regions.[4] As part of a response to these twin demands of sustaining impressive economic growth and reducing the high levels of poverty, the government has sought to harness Ethiopia's topography through a series of hydropower developments aimed at meeting national demands but also with a substantial excess that can be exported to neighbouring countries. As stated by Miheret Debebe, the Energy Advisor to Prime Minister Desalegn, Ethiopia's ambition is to be the "renewable energy hub of the region" (Manson, 2014). Hydropower projects now occupy an important role within the 2011-2015 Growth and Transformation Plan (GTP, 2010) whose objective, broadly speaking, is to bring about social and economic changes that will put Ethiopia on its way to becoming a middle-income country by 2025. As part of the GTP, the Ministry of Energy and Water is charged with the responsibility of increasing Ethiopia's hydropower output from 2,000 MW to 10,000 MW by the end of 2015.

The Gilgel Gibe III dam situated along the middle basin of the Omo river in the South Omo zone of the Southern Nations and Nationalities People's Region (SNNPR) is the third in a planned series of five hydropower projects along the river. So far, two of these hydropower projects, Gibe I, a 40m high dam, and Gibe II, a hydropower station further downstream, have been completed. Of the two fully completed projects along the Omo river, Gibe I and its resulting 63 km^2 reservoir required by far the greatest number to be displaced with around 2,000 households, or 10,000 people, ultimately resettled (CEE Bankwatch, 2008). Resettlement took place between 1999 and 2001 with Africa Region Findings, reporting on behalf of the World Bank, declaring in its assessment that good practice had been followed by EEPCO who themselves stated that the resettlement guidelines and policies would act as a model for future resettlement programs (Africa Region Findings, 1999). However, in its 2005 resettlement evaluation report, the World Bank noted that since resettlement the average crop yield of the resettled communities had declined by 54% and livestock numbers by 72% when compared to pre-resettlement levels and that health centres, schools and water pumps were in poor condition. At least eight families had reportedly abandoned the resettlement site after appealing to local authorities over the problems they were facing and receiving no effective response. Nonetheless, the

4 As a tentative indication of this, Ethiopia's 2013 Human Development Index value of 0.396 places it at 173 out of 187 countries, below the average for sub-Saharan Africa countries.

Resettlement Action Plan (RAP) was considered 'complete' by the World Bank (CEE Bankwatch, 2008).

The Gibe III represents a much larger undertaking for the Ethiopian government. At a cost of $1.7 billion, it was Ethiopia's most expensive infrastructure development until plans were made for the Grand Renaissance Dam along the Blue Nile River in the north. It is also Africa's tallest dam at 243 m and it will create a reservoir with a surface area of 211 km^2 and a storage capacity of 11,750 million m^3 over a projected period of 3 years once it began filling from April 2014 (Fong, 2014). The dam is expected to have an installed capacity of 1870 MW with an annual energy production of 6,500 GWh.[5] It will thus, according to an EEPCO brief, increase the installed capacity of the country by 243% and annual energy production by 57% from 2008/2009 levels (EEPCO, 2010b). Given these power-generating capacities, much of the GTP's success, therefore, rest on the implementation of Gibe III.

2.3. Large-Scale Agriculture and Irrigation Developments

However, it is not just energy concerns that are driving hydropower developments such as Gibe III. As part of a national strategy to develop what is categorised by the government as 'under-utilised land', at least 1,000,000 hectares (ha), mainly in the developing lowland regions, have been leased to both private and state-owned commercial agricultural interests since January 2005. Other estimates which include land deals below 1000 ha put this Figure at closer to 3,000,000 ha (Keeley et al. 2014). Much of this land has been developed through irrigation schemes. The GTP states that only 853,000 ha of land were irrigated by modern methods as of 2009 and it aims to increase this by 1,000,000 ha by the end of 2015 (GTP, 2010). The government's stated aim of these land deals and irrigation schemes is to promote food security, create jobs and transfer technology to under-developed regions (IRIN, 2011).

In the South Omo Zone, at least 305,511 ha of land have been identified for different investment activities according to a government report outlining the opportunities available to investors (Federal Ministry of Agriculture and Rural Development, 2011). However, according to an Oakland Institute report (2011) the actual total may be as much as 445, 501 ha. What is certain is that more than 175,000 ha have been leased to the Ethiopian Sugar Corporation, a state-owned enterprise, for the Omo-Kuraz Sugar Project along the Omo River, which has been in development since May 2011 (Oakland Institute, 2011). Additionally, 70,000 ha have been set aside for future expansion and there are indications of 15 further land concessions totaling 111,000 ha to the private sector, mainly for cotton production. The Omo-Kuraz Sugar Project comprises of six sugar processing factories, the sugar plantations, housing units, 750 km of internal roads and a bridge as well as more than 200 km of irrigation canals. This ambitious project plays a major part in a further aim of the GTP; to increase annual sugar production from 314,000 tonnes to 2.25 million tonnes by the end of 2015 (GTP, 2010). The project has been made possible due to the regulation of the flow of the Omo river provided by the Gibe III dam.

2.4. The Environmental Threat

It is widely acknowledged that major dam constructions have both upstream and downstream effects on a river's flow and thus on agricultural, pastoral and fishing practices which are reliant on these flows (Mann and Plummer, 2000; McCully, 1996; Petts, 1980; McCartney et al, 2000). Upstream impacts result from the

5 GWh stands for gigawatt hours understood as a unit of energy equivalent to one gigawatt (1 GW) of power expended over one hour of time. This is commonly used to express the energy outputs of large power plants over long periods of time.

flooding of the river basin by the reservoir whilst downstream there are changes to the hydro-morphological regime of the river, namely the transport of nutrients and sediments as well as the overall flow of water. Upstream impacts have direct consequences on migration patterns in the region owing to the creation of the reservoir as this entails the displacement of the surrounding population as well as the in-migration of workers required to work on the dam. The construction of Gibe III has also, however, had direct downstream consequences for migration patterns insofar as it has enabled the development of the Omo-Kuraz Sugar Project whose construction has been subject to credible reports of widespread displacement (Human Rights Watch, 2012; Oakland Institute, 2013).

More typical downstream impacts, meanwhile, can be thought of as having indirect consequences for migration patterns as the hydrological effects that impact river-based livelihood practices occur cumulatively over a longer period of time. As such, it is difficult to predict precisely what will happen when and the possible impacts that this will have on migration patterns for the affected population. In the case of Gibe III, however, these indirect impacts are thought to be exacerbated by the sheer scale of the Gibe III project and also by the diversion of vast amounts of water to the sugar plantations of Omo-Kuraz (Avery, 2012). An estimated 60-70% of the Omo River's inflow will be captured by Gibe III in its first year of operation through the filling of the reservoir whilst the general regulation of water flow will end the river's annual flood cycle in the Lower Omo valley (Avery, 2013). Additionally, Avery finds that the Omo-Kuraz sugar plantations will require over 30% of the Omo River flow at a minimum. This could potentially rise to more than 50% depending on irrigation efficiency and the use of remaining land that has been set aside for possible future developments. As a result, a drop of 13 to 22 meters in the level of Lake Turkana is projected whilst an additional two meter drop is anticipated from the 3 year filling period of the Gibe III reservoir. For Lake Turkana, this would be devastating as its average depth is only around 30 meters.

The EEPCO-commissioned Additional Study on Downstream Impacts (ASDI) presents a different, positive picture of Gibe III's downstream impacts. However, this has been contested by several sources including the ARWG who claim the document "rests on a series of faulty premises that it is further compromised by pervasive omissions, distortions and obfuscation" with the predetermined intention of validating the completion of Gibe III (ARWG, 2009: 4)

3. KEY DAM-INDUCED MIGRATION FLOWS

3.1. Direct Consequences of Gibe III on Migration Flows: Resettlement Patterns in the Omo Basin

Generally speaking, direct dam-induced displacement is divided into out-migration of those forcibly resettled as a result of the reservoir and in-migration of those working on the dam. Assuming though that out-migration flows are typically more disruptive in character, the focus in the following sections will primarily be on displacement and resettlement. As highlighted, the case of Gibe III calls in to question our understanding of what constitutes 'direct' dam-displacement owing to the parallel development of the Omo-Kuraz Sugar Project and reports of forcible displacement throughout the area. Though the Ethiopian government claims that no forcible displacement relating to Omo-Kuraz has taken place in the Lower Omo valley, the villagization program has been ongoing in the region. This paper attempts to track these out-migration flows from the little information that has been made publicly available in the hope of better understanding the dynamics between 'voluntary' and 'forced' migration flows in this context.

Resettlement in the Vicinity of Gibe III

The initial Environmental and Social Impact Assessment (ESIA) for Gibe III was prepared by the Italian firm Centre Electrotecnico Sperimental Italiano (CESI) for EEPCO and Salini Construttori S.P.A in 2007, roughly one year after construction on the dam had begun. A Resettlement Action Plan (RAP) for the dam and reservoir area and a further ESIA for the Chida-Soda road realignment, both conducted by MDI Consulting Engineers, were released in January 2009 (MDI Consulting Engineers, 2009b). No follow up reports detailing the outcomes of the RAP have been released either through EEPCO or an independent body. The RAP found that 355 households totaling 2,627 persons would be displaced by the dam's construction and the creation of the reservoir. As can be seen from the table, the majority of those displaced were a result of the construction of the Chida-Soda road realignment built to replace that which was to be submerged by the reservoir with the construction workers' camps having less of an impact.

Table 1. Number of Affected Households by Project Component and Woreda.

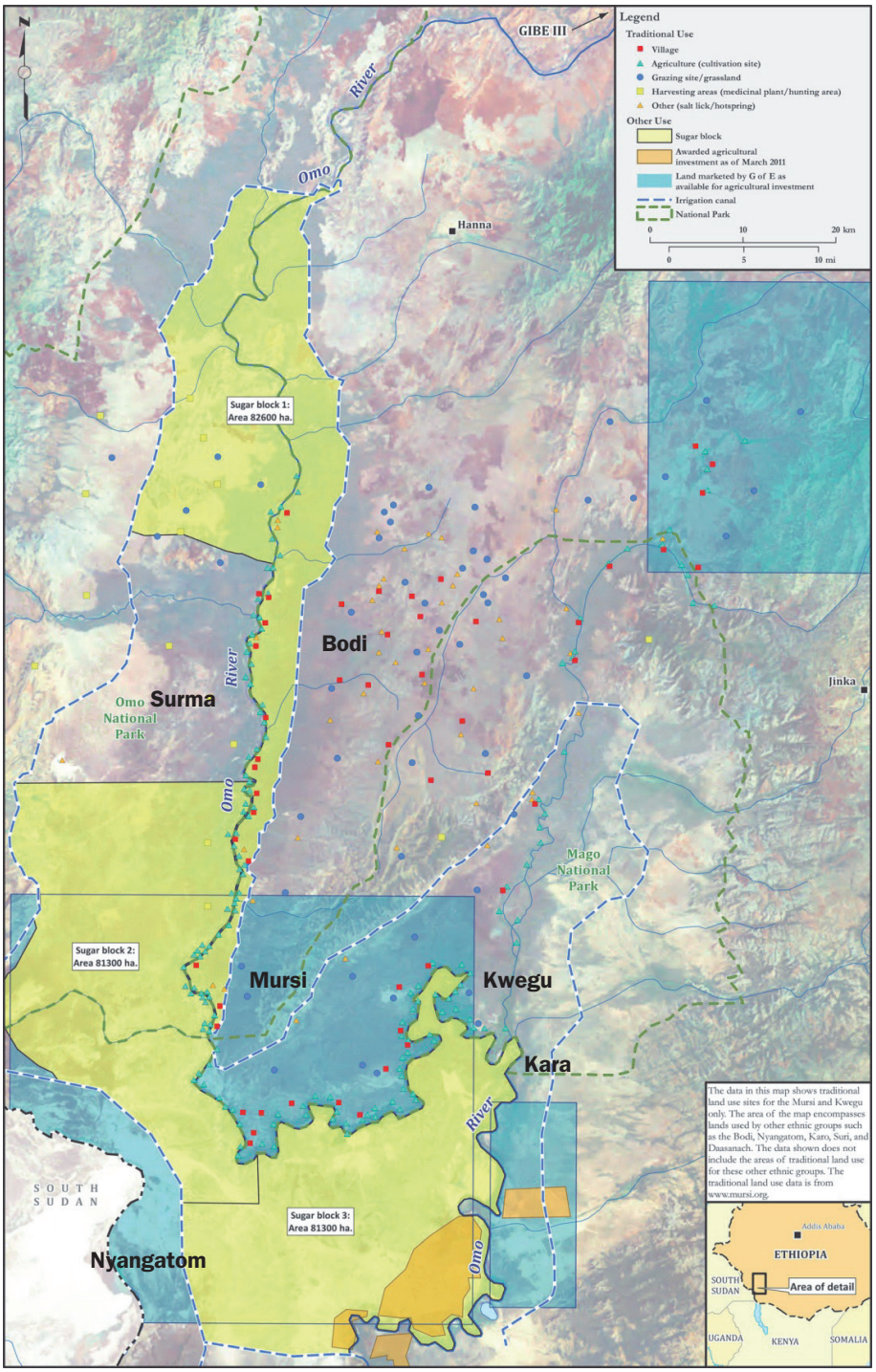
Woreda	Project Component			Total Households	Percent
	Main Road	Reservoir	EEPCO Camp		
Kindo Didaye	67	51	47	165	46.5
Kindo Koysha	69	-	-	69	19.4
Loma	114	7	-	121	34.1
All Woredas	250	58	47	355	100.0
Percent	70.42	16.34	13.24	100.00	

Source: MDI Consulting Engineers (2009a)

Given the scale of the project, the total number to be resettled beginning from the first quarter of 2009 was relatively small. Nonetheless, the submersion of 211 km² of landscape has other noted indirect impacts on surrounding communities such as increasing the threat of attacks from wild animals, limiting access to natural forest resources such as firewood and reducing mobility across the river to conduct commerce with other communities and to graze livestock (Hailemariam, 2011: 85-86). With regards to resettlement, the RAP raises certain concerns, particularly in light of the less than favourable outcomes of the Gibe I resettlement process (CEE Bankwatch, 2008). First, it is worth noting the vulnerable economic position of the affected households. Unsurprisingly, 96% practice farming, usually a combination of growing crops and rearing livestock, as a livelihood strategy. Only 14%, however, have a secondary source of income in addition to this. Assuring, therefore, that households can continue their agro-pastoral practices from the same or an improved standing is therefore crucial to the long-term success of the resettlement process.

Worryingly though, the RAP, whilst outlining various income and livelihood restoration strategies, does not outline where the actual relocation sites are and how they compare to the areas left behind in terms of soil suitability for crops and grazing for livestock. The impact of incoming settlers on the receiving communities and whether competition for resources may arise from this is also not addressed by the RAP. Furthermore, there is no discussion of the project-affected persons (PAPs) capacities to access or cross the river and reservoir for their livestock and other commercial purposes. Indeed, the ESIA estimated that the grazing lands of a further 275 households (around 1,400 people) would be affected by the reservoir but they were not compensated or involved in any public consultations (CEE Bankwatch, 2008). The RAP states that 24 public consultations involving 455 participants

Figure 2. Omo-Kuraz plantations overlap with local settlements and restrict access rights to the Omo river and other grazing areas. The map also indicates land that has been set aside for future developments.



Source: Human Rights Watch 2012

regarding the resettlement process were carried out in total. However, the AWRG claim, based upon their own visits to five villages across woredas included in the RAP's public consultations list, that residents had no knowledge of such consultations or even of the Gibe III dam project itself. They further claim that there have been instances where local government officials have been instructed to fill the consultation forms out themselves without public participation (AWRG, 2009: 27). Regarding compensation for the PAPs, this took the form of cash payments for loss of farmland, perennial crops and trees and for houses and other structures. This amounted to a total of around $2,300 on average per household (CEE Bankwatch, 2008). Given that the average payout per household for Gibe I was $4,300 and that the majority of these PAPs have been further impoverished by their resettlement, it appears valid to question the sufficiency of this amount.

Displacement at Omo-Kuraz Sugar Project

The allegations of widespread displacement at the site of the Omo-Kuraz Sugar Project, backed up by satellite imagery from Human Rights Watch (HRW, 2014a), represent the most contentious and controversial aspect of resettlement regarding Gibe III thus far. As indicated by Figure 2, nearly all of the land of Nyangatom, as well as large parts of the Bodi, Kwegu, Mursi, Karo and Surma have become plantations on what is land deemed under-utilised by the Ethiopian government.

The total population living within the 'command area' of the project contained primarily within the woredas of Salamago and Nyangatom is estimated at 53,596, based upon a survey conducted by the Ethiopian Sugar Corporation (Demeke, 2014). However, understanding how this project has impacted on the migration patterns of people in the region is a difficult task. This is due not only to a level of uncertainty regarding these population Figure ures but also because of the Ethiopian government restricting access to the area for international organisations whilst civil society activity in general remains extremely limited in Ethiopia (HRW, 2014b).

According to a recent Human Rights Watch report though, as of January 2013, around 6,500 ha of land traditionally used by the Bodi had been cleared for cultivation. Furthermore, in May 2012 an earthen diversion dam that had been constructed just upstream from Omo-Kuraz to divert waters to the irrigation canals had caused the flooding of around 500 ha of land and resulted in the displacement of around 220 Bodi households (HRW, 2014a). It is unclear where those affected by the clearances and floodings were relocated to or what compensation and support, if any, they received as a result. There are indications though that evicted villagers, both Bodi and Mursi, have been forced back into the ecologically degraded upland plains, without sufficient livestock, or have been pushed further south into the Omo Delta region of the Dassenach which already suffers from issues of over-crowding (Carr, 2012).

Nonetheless, Sugar Corp spokesperson Yilma Tibebu said on June 15th 2012 that "There is no one to be relocated at all, let alone forced relocation, due to the sugar development project". This statement, however, is followed up by the acknowledgement that "Around 2,250 resettled households will be given 1,700 ha of irrigable land, public services and a grain mill" (Davison, 2012). This is so that "the people can benefit from a settled way of life alongside the sugar farms"(Davison, 2012). This statement alludes to the government's villagization program in the area, which is deemed 'voluntary' and entirely distinct from the Omo-Kuraz Sugar Project. Public information as to the villagization scheme in the area and its relation to the Omo-Kuraz Sugar Project is limited. However, a leaked report from 2011/2012 of the South Omo Zone Pastoralist Areas Agriculture Bureau (2011) gives some indication of the numbers involved in addition to the Figure ures quoted by Yilma Tibebu. The report outlines plans to undertake over the course of 2011 to 2012 the voluntary villagization of at least 8,877 households totaling 44,385 people across the woredas of Salamago,

Dassenach, Nyangatom, Hamer and Bennatsemay. The breakdown of how these numbers are dispersed across the woredas is presented in Table 2.

As can be seen, many of the households resettled by voluntary villagization were from Salamago and Nyangatom; the two main woredas that Omo-Kuraz's sugar plantations stretch across. According to the Head of the SNNPR Regional Bureau of Agriculture, quoted in a report by the Ethiopian Human Rights Commission (EHRC) on the status of human rights in the villagization programs, the ultimate target for planned resettlement is 100,000 households in the South Omo Zone by 2015 (Berile et al. 2013). This number could potentially account for the remaining population living within the 'command area' of Omo-Kuraz though no further details on these plans are provided.

Table 2. Breakdown by woreda of villagization in South Omo Zone.

Woreda	Number of Households
Salamago	2,517
Hamer	1,000
Nyangatom	2,176
Dassenach	2,728
Bennatsemay	456

Source: South Omo Zone Pastoralist Areas Agriculture Bureau (2011)

The EHRC report provides further insights into the blurred lines between those with the status of forcibly resettled and those voluntarily villagized. In reference to the large-scale agricultural developments underway in South Omo, it is reported by the authors that 'a situation of displacing residents from the areas and gathering them in the centres [central villages] might [have] happened' (Berile et al. 2013: 79). After raising the question of compensation for residents evicted from their land as a result of Omo-Kuraz and highlighting the woredas of Nyangatom and Salamago, as well as Meneshash, as sites for such displacements, the authors indicate that affected villages receive "special support". Precise details of this are not elaborated upon with the EHRC stating that "it was not possible to find sufficient information regarding the then existing situation and the process of payment of compensation when the people were displaced" (Berile et al. 2013: 79).

General implementation issues raised by the EHRC regarding the resettlement process include the absence of rules of procedure or adjudication of complaints related to villagization outside the regular courts of justice, thus marginalizing any likely grievances or issues faced by the affected communities. This is especially concerning given that the report also acknowledges the refusal of citizens in some woredas to move to the new villages (Berile et al. 2013: 84). Other issues regard the fact that in many of the assessed villages in the South Omo Zone, social services, amenities and infrastructure had either not been completed or initiated prior to the arrival of those resettled and that several villages reported shortages of available farming and grazing land. These findings contrast with public statements from the Ethiopian Sugar Corporation which highlight the full support of the program and the benefits conferred upon affected communities such as greater access to water and social services and improved food security (Ethiopian Sugar Corporation, 2013).

3.2. Indirect Consequences of Gibe III on Migration Flows: Ecological Modifications of the Omo River and Lake Turkana

As defined by the UNEP (2002), vulnerability can be understood as a combination of exposure to hazards and coping capacities. The African Development Bank Group's Socio-Economic Analysis and Public Consultations of Lake Turkana Communities clearly states that communities around much of Lake Turkana are vulnerable to ecosystem modifications given their low coping capacities: *"Most of these communities live utterly below the poverty line... Fishing has become the only source of income during drought and seems to be the only sustainable income generating activity in the area... Thus, any activity that shall in any way undermine this only promising source of sustainable income shall make these communities struggle to get out of poverty, sink deeper into poverty and become dependent on aid and relief"* (Kaijage and Nyagahand, 2009: 162-163).

Similarly, the ASDI (2009: 84) characterizes the majority of the Lower Omo valley woredas as food insecure with the agricultural economy based "almost entirely at subsistence level". Numerous studies have explored the relationship between water access, food security and migration patterns and find that migration plays an important role in people's responses to water scarcity and food and livelihood insecurity (Tucker and Yirgu, 2011; Afifi et al. 2012). The aim of the following sections is to chart potential future flows of migration due to the anticipated modifications to the ecosystems of the Omo River and Lake Turkana basins. To help illustrate these projections, a review of previous studies on the region regarding resource conflicts and migration flows related to periods of drought and the fluctuating water levels of Lake Turkana will be consulted.

The key push factors in this context concern changes to agricultural, pastoral and other water-related livelihood activities such as fishing. The main pull factor applies to the Omo-Kuraz Sugar Project where it is anticipated that nearly 118,000 jobs will be created once the factories and plantations are fully operational (Davison, 2012). For the purposes of this paper though, the rest of this section focuses on out-migration patterns around the Lower Omo valley and Lake Turkana on the assumption that the associated push factors are of a greater magnitude in terms of threats to livelihoods than the pull factors related to in-migration in these areas. This assumption is considered especially pertinent in this case due to an established history of migratory movements by various groups in the region in response to increasingly scarce water and grazing sources which have frequently resulted in inter-tribal and cross-border conflicts (Carr, 2012). This suggests, at the outset, that migration is likely to occur in response to increasingly scarce resources brought about by ecosystem modifications to the Omo River and Lake Turkana.

Climatic Variability, Contested Borders and Conflict

Tracking future migration flows around the Omo and Turkana basins as a result of Gibe III and the irrigation schemes of Omo-Kuraz is a challenging task due to a lack of publicly available information, the semi-nomadic nature of many of the groups living in the region and the porous borders between countries where many groups straddle different countries.[6] This is perhaps best illustrated with regards to the contested region of the Ilemi Triangle, a 10-14,000 km^2 area where Kenya, Ethiopia, South Sudan and Uganda meet which has been a site of conflict and remains absent of meaningful government administration (International Rivers, 2013).

Today the region is most forcefully claimed by Kenya, allegedly motivated by oil prospects in the region, though South Sudan has reportedly written to the UN

6 Amutabi (2010) notes that for the most part, national borders and the concept of nationality itself are either unimportant or meaningless to the relations and movements of different groups in the region.

Figure 3. **Tribes of the Lower Omo Valley and Lake Turkana.**

Source: Carr 2012.

and the African Union to express its dissatisfaction with this border delimitation (International Rivers, 2013). Overlapping claims for seasonal grazing lands between the Toposa[7] of South Sudan, the Nyangatom and Dassenach[8] of Ethiopia and the Turkana of Kenya have characterized a majority of the conflicts between different groups in the region but such conflicts have not been confined to the Ilemi Triangle as resources have become increasingly scarce in recent years. Several studies of the region have considered the issue of increasing climatic vulnerability, food and water insecurity and dwindling grazing lands. [9] These could provide some indication of likely responses, including migration, of affected peoples in the event of the heightened environmental stresses that Gibe III and Omo-Kuraz are expected to cause.

Identification of Longer-Term Migration Patterns

Though it is difficult to be precise with regards to numbers and ultimate destinations for agro-pastoralist groups, it is arguable that the combination of a collapse in livelihood strategies, increased conflict and tensions over scarce resources as well as greater interaction with outside groups and actors is likely to lead to substantial distress migration (Carr, 2012). In view of this backdrop of contested and porous borders, increasing climatic variability and inter-group conflicts over scarce resources, a paper from International Rivers[10] (2013) considers some possible migratory dynamics as a result of further environmental stresses arising from Gibe III and Omo-Kuraz, based on Avery's (2012) projections. One of the most severe ecosystem modifications will take place at the shallow, northern end of Lake Turkana, which is predominantly populated by the Turkana to the west and the Dassenach to the north and east. The northern shore is expected to shift southwards over time by around 40 km creating a land bridge entirely within Kenya to the south of Dassenach territory, bisected by the much-reduced Omo river (International Rivers, 2013). This will likely force many Dassenach to follow the lake southwards into Kenya. At the same time, the densely-populated western delta has seen a reduction in water flow which has impacted farming for the Turkana and forced many groups to migrate into the central and eastern portions of the delta where annual floods are more likely to occur. This could spark conflict between the Dassenach and Turkana and potentially force many Turkana people west across the Ugandan border towards Karamajong and Jie[11] territory or further eastward into the lands of the Gabra peoples[12] of whom the Turkana have a history of raiding their livestock. According to International Rivers, the geographical barrier of Lake Turkana has helped to inhibit outbreaks of conflict between the two in the past (International Rivers, 2013). The potential influx of Turkana and Dassenach into Gabra territory on the eastern shore may reduce grazing access for the Gabra and, alongside the lowering water levels, this may force them to move north and east towards the land of the Borana peoples to the north and east and potentially over the Ethiopian border towards the territory of the Moyale or

7. The Toposa are closely linked to Nyanagatom, referred to by Amutabi (2010) as 'cousins'.

8. Within Kenya, the Dassenach are better known as Merille.

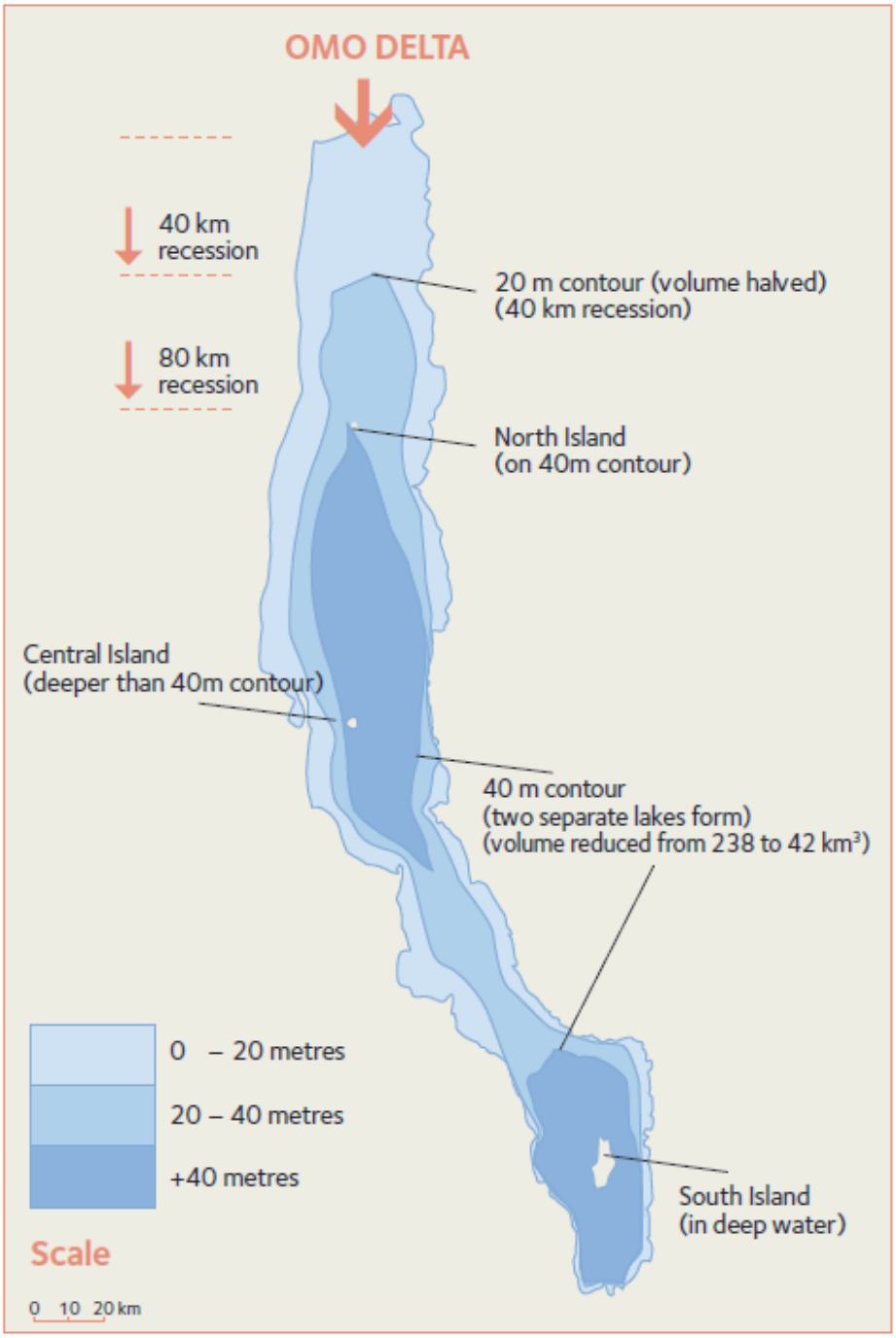
9. For example, Ynitso (2012) looks at the case of the Dassenach who have seen an increase in the number of conflicts they have been engaged in with the four main surrounding groups (namely the Turkana and Gabbra in Kenya and the Nyangatom and Hamar in Ethiopia) which is explained largely in terms of pasture and water scarcity. This situation has led to extreme food insecurity and seen large-scale migration of Dassenach further south to the delta of Omo-Turkana and across the border into Kenya.

10. The author of the report, a natural scientist with many years of field experience in the region, requested anonymity. Sixteen prominent academics and experts have, however, endorsed the report's findings.

11. The Karamajong are an ethnic group in north-east Uganda who have historic ties to the Turkana. The Jie are another group in the north-east who are considered part of the Karamajong cluster.

12. The Gabra are a nomadic group of camel-herders predominantly situated in the Chalbi desert of northern Kenya, east of Lake Turkana, and the Highlands of southern Ethiopia.

Figure 4. Changes to lake volume and surface area at a range of projected water loss levels.



Source: Avery, 2012)

Somali peoples. These likely migrations are expected to result in increased outbreaks of violence and inter-group tensions (International Rivers, 2013).

A further drastic consequence for Lake Turkana is the possibility of the lake splitting into two parts along the shallow midpoint as illustrated in Figure 4 (Avery, 2012). This split would impact the southern portion severely as it would no longer receive flows from the Omo River and as such it would become even more saline.[13] The north, on the other hand, would become comparatively fresher and be able to support greater biodiversity as a result of retaining more of the nutrient inflows from the Omo River. This dual outcome, alongside declining grazing pastures for livestock, is expected to push those living near the southern portion of the lake to migrate northwards in order to take up fishing there (Carr, 2012).

As characterized by Snyder (Avery, 2010: 15), food aid throughout much of Lake Turkana is more or less an "institutionalised drought-coping mechanism", whilst in the Lower Omo valley it has typically only been the Nyangatom who have received food aid regularly (Hathaway, 2009). Given the prospect of restricted access to the Omo River and the end of the annual flood cycle, this may push tribes of the Lower Omo towards semi-urban settlements or internally displaced persons camps around Lake Turkana such as at Lodwar and Kakauma as well as South Sudan where food aid relief programs are in place (International Rivers, 2013: 12; Carr, 2012: 90). Additionally, depending on the success of the villagization programs, the displacement of groups such as the Mursi and Bodi around Omo-Kuraz may cause them to migrate southwards as well thus placing extra stress on this region, or potentially towards the Ilemi Triangle and the Sibiloi/Koobi Fora National Park in Kenya (International Rivers, 2013). A summary of these and other potential population movements and the likely conflicts that may arise from them are summarized in Figure 5.

The scale of these and other potential migration flows depends largely on the extent and intensity of the changes to the ecosystems of the Omo River and Lake Turkana borne by Gibe III and Omo-Kuraz. Nonetheless, as outlined by International Rivers (2013: 9): "The cumulative impact of these developments on the ecosystems and societies of the Lower Omo and Lake Turkana will be severe in the short and medium terms, and potentially catastrophic in the longer term."

4.MAIN GAPS IN POLICY AND LEGISLATIVE FRAMEWORK AT THE NATIONAL AND INTERNATIONAL LEVEL

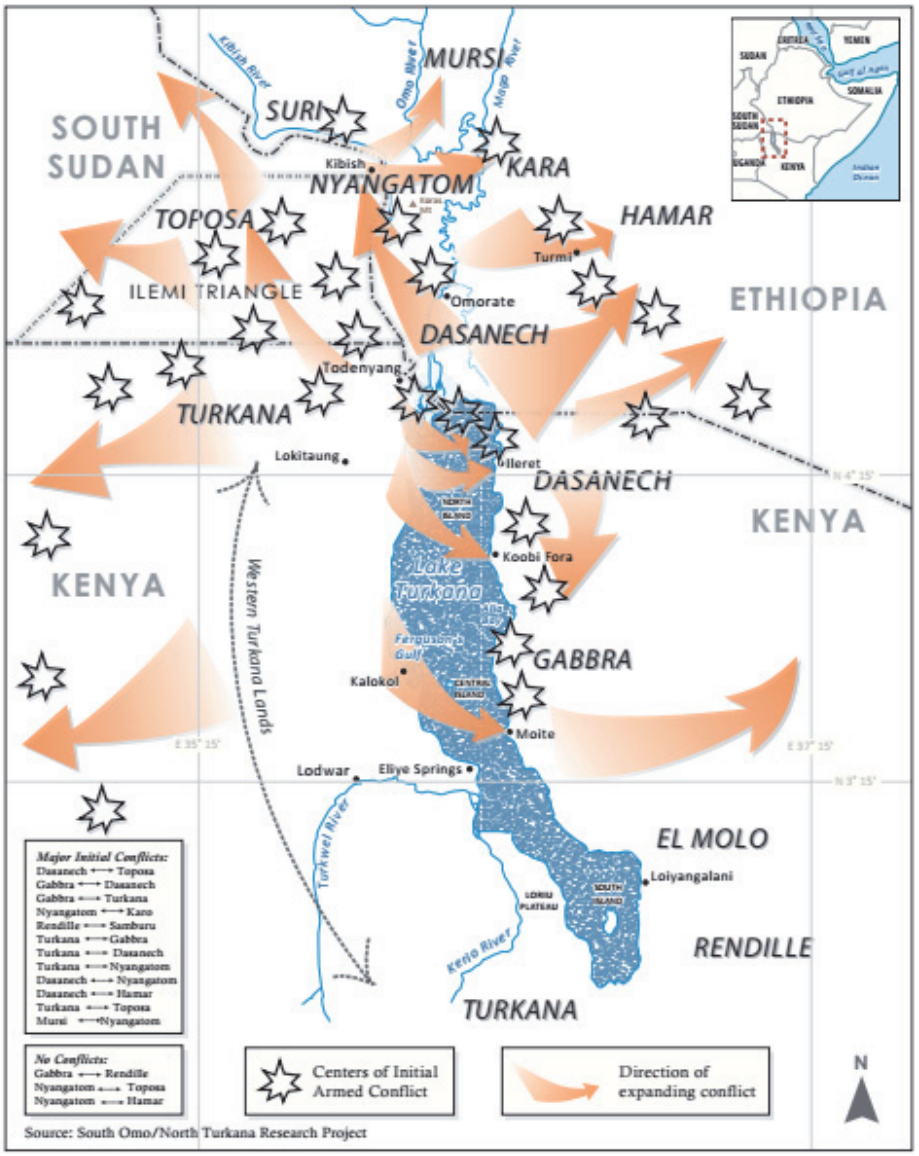
4.1. Lack of Protection of Displaced and Resettled People

Assessment of the policy framework concerning large-scale development and commercial projects and the resettlement process

Ethiopia's drive for socio-economic development promises various favourable prospects for the country with regards to large-scale projects such as Gibe III and Omo-Kuraz. However, numerous gaps remain in policy, institutional capacity, legislation and procedure which have serious implications for the displacement and resettlement of populations affected by their implementation. The recommendations of the 2000 report from the World Commission on Dams (WCD) regarding dam developments, which includes dam-related infrastructure such as irrigation canals, will provide some reference points for the issues raised (American University International Law Review, 2001). The main issues identified by this article include:

13 However, if a river between the northern and southern portions were to be formed this would slow the process down.

Figure 5. **Direction and magnitude of projected conflict points arising from Gibe III.**



Source: Carr, 2012

Belated and inadequate Environmental and Social Impact Assessments.
The original ESIA for Gibe III was approved by the Environmental Protection Agency (EPA) nearly two years after construction on the dam had begun. This is in violation of international standards as outlined in the WCD report (2001) which recommends a balanced and comprehensive assessment of environmental and social impacts and the consideration of possible alternatives to large dam construction prior to any decision-making. At the national level, Ethiopia's own Environmental Impact Assessment Proclamation (2002; Part 2: 3.1) stipulates that "Without authorization from the [Environmental Protection] Authority or from the relevant regional environmental agency, no person shall commence implementation of any project that requires environmental impact assessment." Additionally, the ESIAs

have been widely discredited as unscientific and impartial owing to the pressure for a positive assessment given the project was two years into its construction phase when conducted (ARWG, 2009: Hathaway, 2009). There was no ESIA made for the Omo-Kuraz Sugar Project though its irrigation schemes required a dam construction and in the long-term involves the diversion of greater volumes of water than Gibe III. The WCD also recommends that dam-related infrastructure such as irrigation canals are included in ESIA. Finally, the belated release of an ESIA concerning downstream impacts on Lake Turkana did not take into account the impact of the Omo-Kuraz development in its projections.

Belated and limited public participation and consultation.
The majority of public consultations for Gibe III in the immediate project area and in the Lower Omo valley were conducted 10 to 17 months after construction on the dam had begun and have been criticised as "limited" in scope, "selective" in terms of the stakeholders involved and for taking place "without any intention of influencing the dam-planning process"(Hathaway, 2009: 7-8). Public consultations at Lake Turkana were conducted by the African Development Bank Group (Kaijage and Nyagahand, 2009) and were more extensive but preceded the development of Omo-Kuraz, thus these projected impacts are not accounted for in the authors' findings.

Lack of clarity over the status of those displaced at Omo-Kuraz.
The distinction drawn between being voluntarily and involuntarily resettled has implications for the treatment of the individuals undergoing resettlement in terms of their right to compensation as well as government liability as to the resettlement process itself. Whilst questions persist as to the voluntary nature of the villagization scheme as a whole, those at Omo-Kuraz who have been forcibly displaced have not been adequately compensated in the manner required in the government's own Resettlement Policy Framework as set out in the RAP and instead have been subsumed into the wider voluntary villagization scheme. This ambiguity has served to make the status and rights of those resettled at Omo-Kuraz unclear.

Inadequacy of the compensation packages for displaced persons and limited budgetary and institutional capacities of the Villagization Program.
The WCD report recommends that those affected by dam construction receive entitlements that improve their livelihoods and that they receive a priority share in the project's benefits. The amount received by those displaced by the construction of Gibe III is less than what was paid out to those affected by Gibe I, which in itself has been deemed insufficient (CEE Bankwatch, 2008). However, cash represents only one aspect of a compensatory package and whilst the RAP outlines certain income restoration and social development plans as well as monitoring mechanisms to assess their implementation, no updates as to the progress of these plans are publicly available. This is concerning given the resettlement experiences of Gibe I, the lack of promised social services for villagized settlers at Omo-Kuraz and other historic examples of insufficient compensatory packages for resettled peoples in Ethiopia (Alemu, 2013). Regarding the villagization scheme at Omo-Kuraz, though there are some positive indications that delivery of services such as schools and health clinics have been implemented successfully (Godanna, 2013: 39-40) this has not been the case for all of the resettlement sites in the region. A lack of budgetary and institutional capacities to comprehensively implement such an ambitious, large-scale program has been cited as primary reasons why there has been such a significant lack of service provision (Tadesse, 2009).

Assessment of the legislative and institutional framework concerning hydropower development, land-use and displacement.

In recent decades, a significant legal framework on environmental, land and water management has been developed in Ethiopia as well as provisions concerning the resettlement of those displaced for public purposes. Furthermore, the World Bank and the African Development Bank have worked with the Ethiopian government and provided guidance on social and environmental laws and policies relating to hydropower developments and subsequent displacement of populations. Nonetheless, the findings of this paper suggest that a considerable gap remains between such provisions, the reality experienced by those undergoing resettlement and the ultimate detrimental impact on the environment. Table 3 provides an outline of the legislative framework guiding certain sectors relevant to hydropower developments in Ethiopia in order to help explain this gap. The remaining section considers further legislative and institutional gaps that have negative implications for those facing displacement and resettlement in Ethiopia and Kenya.

Table 3. Summary of legislative framework for certain sectors relevant to the resettlement process in Ethiopia.

Sector	Main legal texts	Main gaps preventing appropriate resettlement practices
Resettlement and villagization legal and policy framework	Expropriation of Landholdings for Public Purposes and Payments of Compensation Proclamation (No 455/2005); Rural Land Administration and Land Use Proclamation (No 135/2007); National Rural Development Policy and Strategy (1996)	Installing EEPCO as the main implementer of the RAP created a conflict of interests. The fact that no mechanisms for monitoring EEPCO are detailed makes this especially problematic. Regarding displacement at Omo-Kuraz, there are no regional legal agreements in place dealing directly with villagization and those affected are excluded from compensatory provisions owing to the voluntary status of the scheme.
Energy legal and policy framework	Electricity Proclamation (No 86/1997) Growth and Transformation Plan (2010)	To ensure that the GTP's objective were not compromised is a likely reason as to why environmental and social concerns became sidelined and EEPCO were afforded all of the responsibility for the resettlement process.
Environment legal and policy framework	Environmental Impact Assessment Proclamation (No 299/2002) Environmental Protection Organs Establishment Proclamation (295/2002)	Though certain legal safeguards concerning the environment are in place at the national level, the hierarchy of governance means that the established Environmental Protection Authority is less powerful and influential than other offices such as EEPCO and so any objections or concerns are often subsumed.
Water management legal and policy framework	Water Resources Management Proclamation (No 197/2000) River Basins Council and Authorities Proclamation (No 534/2007)	The WRMP (2000) lacked an integrated approach to water resources management with few provisions given with regards to inter-sectoral and regional coordination and linkages (Tamrat, 2008). The River Basins Council proclamation aimed to overcome the deficiencies of this centralized system but has been hampered by a lack of finances and as such is primarily dependent on the federal government for its budget.

Source: Author

i).Few safeguards concerning land rights of pastoralists.

Though the Ethiopian Constitution declares that land in Ethiopia is the property of the state, Article 40:5 also specifies that "Ethiopian pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands." However, neither federal nor regional laws have thus far been developed to enforce this principle effectively (Hagmann and Mulugeta, 2008). As such, the legal title of pastoralist's land-holdings remain unclear and their communal and nomadic land-use practices leave them vulnerable to encroachment and mismanagement. This pressure on pastoralist landholdings has been intensified by proclamations detailing favourable tax exemptions and export facilitations for land investors and developers (Land Investment Proclamations and Regulations 2002,2003 & 2005).

ii).Absence of a bilateral agreement on the joint management of the Omo River basin.

The lack of any formal agreement or legislative framework concerning the joint management of the Omo basin between Kenya and Ethiopia has precluded appropriate consultation between the governments as to the impacts of Gibe III and Omo-Kuraz on Lake Turkana. This has meant that the Ethiopian government has been free to pursue its development plans on the Omo river without limits or safeguards on its activities.

iii).Highly centralized and sectoral planning and decision-making processes for dam construction.

The Ethiopian model for the planning and decision-making for Gibe III, as for Omo-Kuraz, is an example of a top-down approach which marginalizes the concerns and input of relevant stakeholders. As a result, the needs, constraints and livelihood realities of affected communities are not adequately taken into account (Tefera and Stroosnijder, 2007).

4.2Lack of Political Will to Confront Long-Term Indirect Migratory Impacts at the International Level

There is no framework currently in place to address long-term, indirect migration flows resulting from the cumulative impacts of Gibe III and Omo-Kuraz, either at the national level in Ethiopia and Kenya or between the two countries concerning likely trans-boundary flows. For the Ethiopian government this can be attributed quite clearly to their unwillingness to acknowledge the detrimental impacts of the developments in the South Omo zone given the large sums of money they have invested in the projects and their reliance on their successful implementation in order to achieve their GTP targets. The Kenyan government is also heavily invested in the Gibe III project having signed a power exchange and connection agreement with Ethiopia in 2006. This may help to explain the Kenyan government's initial reluctance to confront the Ethiopian government over its developments.[14] Nonetheless, in response to the concerns of a number of civil society organisations[15] in Kenya, the government has started initiatives to combat the threat facing Lake Turkana.

So far though no agreement with the Ethiopian government has been reached and the focus has not extended to consideration of how to manage the likely impacts on the populations, including of migration flows. To what extent and in what form these migration flows will occur remains unclear. As such, this paper hopes to spur further methodological research into this unfolding issue. ♦

14 As part of this agreement, the World Bank funded Ethiopia-Kenya Power System Transmission Line from Gibe III is currently under construction and will have the capacity to deliver 1,000MW of electricity (Tropics Consulting Engineers Plc & Gamma Systems Ltd, 2012).

15 These include the Friends of Lake Turkana, the South Omo and North Turkana Project, the Turkana Development Organizational Forum and the Turkana Pastoral Development Organization.

BIBLIOGRAPHY

Books

- McCully, P, 1996 *Silenced Rivers: The Ecology and Politics of Large Dams*. Zed Books.

Articles and reports

- Afifi, T. et al., 2012 Where The Rain Falls: Climate Change, Food and Livelihood Security and Migration. *Global Policy Report of the Where the Rain Falls Project.* Bonn: CARE France and UNU-EHS.
- Alemu, B. Y., 2013 Expropriation, Valuation and Compensation Practice in Ethiopia: The Case of Bahir Dar City and Surrounding. *Property Management*, *31*(2), 132-158.
- American University International Law Review.
- 2001The Report of the World Commission on Dams-Executive Summary. *American University International Law Review 16*, no. 6 : 1435-1452.
- Amutabi, M. N., 2010 Land and Conflict in the Ilemi Triangle of East Africa. *Kenya: Kenya Studies Review*, *1.*
- African Resources Working Group., 2009 A Commentary on the Environmental, Socioeconomic and Human Rights Impacts of the Proposed Gibe III Dam in the Lower Omo River Basin of Ethiopia.
- Avery, S., 2010 Hydrological Impacts Of Ethiopia's Omo Basin On Kenya's Lake Turkana Water Levels & Fisheries. *The Africa Development Ban,*. Tunis, Nairobi.
- Avery, S., 2012 Lake Turkana and the Lower Omo: Hydrological Impacts of Major Dam and Irrigation Developments. *African Studies Centre,* the University of Oxford.
- Avery, S., 2013 What Future for Lake Turkana? *African Studies Centre,* the University of Oxford.
- Berile, E. et al., 2013 The Status of Human Rights in Ethiopian Villagization Programs. *Ethiopian Human Rights Commission,* Addis Ababa.
- Brittain, M. & Clack, T., 2010The 'Ella' Stone Platforms in Mursiland, Lower Omo Valley, South-western Ethiopia. *Antiquity*, Vol. 84: 323
- Carr, C. J., 2012 Humanitarian Catastrophe and Regional Armed Conflict Brewing in the Transborder Region of Ethiopia, Kenya and South Soudan: The Proposed Gibe III Dam in Ethiopia. *African Resources Working Group.*
- CEE Bankwatch Network & Campagna per la Riforma della Banca Mondiale., 2008 The Gilgel Gibe Affair: An Analysis of the Gilgel Gibe Hydroelectric Projects in Ethiopia.
- Damtie, M., & Bayou, M., 2008 Overview of Environmental Impact Assessment in Ethiopia*:* Gaps and Challenges. *MELCA Mahiber,* Addis Ababa, Ethiopia.
- Fong, C., 2014 A Cascade of Development on the Omo River: Downstream Effects of the Gibe III Filling and Associated Commercial Irrigation Projects . *International Rivers*
- Gebre, Y., 2012b Environmental Change, Food Crises and Violence in Dassanech, Southern Ethiopia. *Research Report Peace and Conflict Studies No. 1.* Freie Universität, Berlin, September 2012
- Godanna, N., 2013 Implications of Government-Led Large-Scale Land and Water Acquisitions on Local Communities Livelihoods in Ethiopia: Case of Omo-Kuraz Sugarcane Development. *International Institute of Social Studies*. 1 (1)
- Hagmann, T., & Mulugeta, A., 2008 Pastoral conflicts and state-building in the Ethiopian Lowlands. *Africa Spectrum*, 19-37.
- Hailemariam, W. F., 2011The Challenges of Renewable Energy Resource Development: The Case of Gilgel Gibe III Hydropower Project in Ethiopia. *Centre for Development and the Environment,* University of Oslo, p85-86.
- Hathaway, T., 2009 *Facing Gibe 3 Dam: Indigenous Communities of Ethiopia's Lower Omo Valley.* International Rivers.
- Human Rights Watch., 2012 *"What Will Happen if Hunger Comes?" Abuses Against the Indigenous Peoples of Ethiopia's Lower Omo Valley.*
- Human Rights Watch., 2014a *Ethiopia: Land, Water Grabs Devastate Communities.*
- Human Rights Watch., 2014b *World Report 2014: Ethiopia.*
- International Rivers., 2011 *Ethiopia's Gibe III Dam: Sowing Hunger and Conflict.*
- International Rivers., 2013 *The Downstream Impacts of Ethiopia's Gibe III Dam: East Africa's "Aral Sea" in the Making?.*
- Kaijage, S. & N. Nyagahand., 2009 Socio–Economic Analysis and Public Consultation of Lake Turkana Communities in Northern Kenya. *African Development Bank Group.*
- Keeley, J. et al., 2014 Large-Scale Land Deals in Ethiopia: Scale, Trends, Features and Outcomes to Date *International Institute for Environment and Development.*
- McCartney, M. et al., 2000 Ecosystem Impacts of Large Dams. *Thematic Review II, 1.* IUCN, UNEP, WCD.
- Mann, C. C., & Plummer, M. L., 2000 Can Science Rescue Salmon?. *Science, 289* (5480), 716-719.
- Oakland Institute., 2011 *Understanding Land Investment Deals In Africa: Half A Million Lives Threatened By Land Development For Sugar Plantations In Ethiopia's Lower Omo Valley.*
- Oakland Institute., 2013 *Understanding Land Investment Deals in Africa, Ignoring Abuse in Ethiopia: DFID and USAID in the Lower Omo Valley.*
- Petts, G. E., 1980 Long-term Consequences of Upstream Impoundment. *Environmental Conservation*, *7*(04), 325-332.
- Tadesse, A., 2009 The Dynamics of Resettlement with Reference to the Ethiopian Experience. *Kimmage Development Studies Centre.*
- Tamrat, I., 2008 *Policy and Legal Framework for Water Resources Management in Ethiopia.*
- Tefera, B., & Stroosnijder, L., 2007 Integrated Watershed Management: A Planning Methodology for Construction of New Dams in Ethiopia. *Lakes & Reservoirs: Research & Management*, *12*(4), 247-259.

- Tucker, J., & Yirgu. L., 2011 Water in Food Security Assessment and Drought Early Warning: Experience from Sub-Saharan Africa with a Special Focus on Ethiopia. *RiPPLE.*
- Turton, D., 2010 The Downstream Impact. *Text of talk given at the School of Oriental and African Studies, London, 11.*
- UNDP., 2013 *Assessing Progress in Africa Towards the Millennium Development Goals.*
- UNEP. 2002 *Assessing Human Vulnerability to Environmental Change: Concepts, Issues, Methodsand Case Studies.*
- World Bank., 1999 World Bank: Ethiopia - The Gilgel Gibe Resettlement Project. *Africa Region Findings*; no. 141. Washington, DC.

Government Documentation and Legal Texts

- Agriconsulting S.P.A and MDI Consulting Engineers. 2009 *Environmental And Social Impact Assessment: Additional Study on Downstream Impact.*
- Constitution of the Federal Democratic Republic of Ethiopia, 21 August 1995.
- Ethiopian Electrical Power Corporation. 2009a *Environmental And Social Impact Assessment Executive Summary.*
- Ethiopian Electrical Power Corporation. 2010b *Brief About EEPCO.*
- Ethiopian Electrical Power Corporation. 2010c *Environmental and Social Issues Related to the Gibe III Hydroelectric Project.*
- Federal Ministry of Agriculture and Rural Development. 2011 *The Best Investment Opportunity in SNNP South Omo.*
- MDI Consulting Engineers. 2009a *Resettlement Action Plan: Dam and Reservoir Area.*
- MDI Consulting Engineers. 2009b *Environmental and Social Impact Assessment: Chida- Sodo Road Realignment.*
- Ministry of Finance and Economic Development. 2010 *Growth and Transformation 2010/11- 2014/15.*
- South Omo Zone Pastoralist Areas Agriculture Bureau. 2011 *Villagization Plan.*
- Tropics Consulting Engineers Plc & Gamma Systems Ltd. 2012 *Ethiopia-Kenya Power Systems Interconnection Project: Revision of Environmental and Social Impact Assessment and Resettlement Action Plan Studies.*

Websites

- Arnold, D. 2013 Kenya, Ethiopia Mediating Omo River Water Controversy. *Voice of America News*. October 16.
- Biron, C. L. 2012 World Bank Approves Contentious Ethiopia-Kenya Electric Line. *Inter Press Service News Agency*. July 2012.
- Davison, W. 2012 State Sugar Project Harming Ethiopian Tribes, Rights Group Says. *Bloomberg News*. 18 June.
- Demeke, A. 201 The Omo-Kuraz Sugar Development Project. *Aiga Forum*. 13 July
- Ethiopian Sugar Corporation. 2013 Residents Around Omo Kuraz Happy With Sugar Development Project and Villagization Program. *Ethiopian Herald Press*. 9 August.
- IRIN News. 2011 Ethiopia: The Great Land-Grab Debate. *IRIN News*. 11 March.
- Johnson, L. 2010 *Kenya Assessment –Ethiopia's Gibe III Hydropower Project Trip Report.* Mursi Online
- Manson, K. 2014 Ethiopia Uses Electricity Exports to Drive Ambition as an African Power Hub. *Financial Times*. 16 February.
- Smith, D. 2013 Ethiopia Hailed as 'African Lion' with Fastest Creation of Millionaires. *The Guardian*. 4 December.

Interviews

- Correspondence by email with Professor David Turton, Senior Research Fellow of the African Studies Centre at the University of Oxford on 31st March 2014.