

# The Role of Ethiopia's Hydro Dam Constructions in Boosting The Horn of Africa Regional Relations

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Endalcatchew Bayeh

Lecturer and Researcher Department of Civics and Ethical Studies, College of Social Sciences and Humanities, Ambo University, Ambo, Ethiopia.

Email: [endbayeh@gmail.com](mailto:endbayeh@gmail.com)

## Abstract

*The Horn of Africa region is one of the most volatile regions of Africa. The fragility nature of the region has been associated with different factors. Lack of economic cooperation is one significant factor, among others. This study argues that the regional relations and cooperations can be hastened by Ethiopia's hydro dam constructions and the subsequent electricity export. The study, analyses the role of those hydro dam constructions in promoting regional relations through the lenses of the two grand theories of international relations. Accordingly, the findings of the study show a new progress on regional countries' economic cooperation on the basis of mutual benefit. And, thus, the study calls for neighboring countries' cooperation for better economic as well as social and political cooperations.*

## Key words:

Dams; Economic integration; Horn of Africa; Hydro power; Regional cooperation

## INTRODUCTION

The Horn of Africa is one of the most politically unstable and volatile

regions in the world (Medhane, 2004: 1; Leenco, 2004:101; Kidist, 2009: 7; Healy, 201:1). This fragility of Horn of African countries is attributable to different factors. For instance, the failure of states to pursue rational policies that bring social solidarity and the prevalence of poverty, porous borders as well as lack of resources (Medhane, 2004: 4 & Wasara 2002:39). Another hindrance for further regional cooperation is the small and fragmented nature of the region's economy (Janneh, 2012:65). There is low level of trade in the region as well as Africa at large (ibid: 73). Thus, a lot effort needs to be exerted to improve interstate trade and infrastructures thereby to promote regional relations. In this regard, Ethiopian current attempt to export power is a good sign post for fostering regional states economic integration. Though Ethiopia is the water tower of East Africa with huge hydropower potential, it has not fully utilized its potential (Tsegay, 2000:13 & Gilgel Gibe Affair, 2008:4). Nonetheless, in 2005, the Government of Ethiopia made an aggressive 25 year national energy master plan and is now undertaking large and small hydropower projects (UNIDO, 2009:4).

The very objective of this study is, therefore, to analyze how Ethiopian hydro dam constructions and subsequent

production of electric energy can boost regional relations. The study starts with discussing theoretical perspectives and proceeds to the potential capacity of Ethiopian hydro dams and the role of hydro dams in accelerating regional countries' relations with typical examples of Ethio-Djibouti, Ethio-Sudan and Ethio-Kenya relations respectively.

## **THEORETICAL PERSPECTIVES**

In this study the two grand theories of International Relations namely Realism and Liberalism are selected to explain the role of Ethiopian hydro dam constructions in promoting regional relations. Hence it is better first to see their respective assumptions. As classical realists argue, since the need to have more power is inherent in human nature, states are constantly involved in a struggle to amplify their capacities (Griffiths, 2007: 12). Realists and neo realists also believe that the ultimate goal of states is to survive; and the sole means to realize this goal is to increase their power (Weber, 2005: 16). More importantly, neo realists are pessimistic about the possibility of interdependence and cooperation, thus, argues that each state must rely on its own resource to survive and flourish (Rourke, 2007: 25). In short, it is might that makes right (ibid: 26). In line with this assumption one may argue that Ethiopian programme for utilization of its water potential through projected dam constructions as a precondition for strengthening its power economically and militarily to ensure its hegemonic power in the hostile region of Horn of Africa and get an upper hand on the neighboring countries (Opriş, 2012:64&69 & Verhoeven, 2011:13-17)

Liberalism, on the other hand, has an optimistic view towards possibility of creating harmonious relations among the states and argues that states must cooperate more fully to prevent various dangers and evils (Rourke, 2007: 26). From the liberal's perspective cooperation and interdependence among the states can result in better advantage and reduces interstate competition unlike the realists' assumption (Burchill et al, 2005: 63-64). In addition, liberals believe that since states aspire for absolute gain, they are competent to cooperate in trade and other activities (Griffiths et al 1999:109 & Burchill et al, 2005: 65). Hence, they do have positive believe on states' interest to make a good relations and cooperation. This cordial relation of states can be hastened by trade exchanges (Burchill et al, 2005:63). As liberals argue, cooperation will increase mutual benefit and peaceful interaction of the states, and states are ready to do that (Griffiths et al, 1999:109). Thus, unlike the realists here creation of good relations and cooperation among states is possible through trade import export or a give and take kind of relations. Based on this theory one may assert that Ethiopia's hydro dam constructions and the subsequent planned export of electricity have paramount importance to boost regional relations and friendship based on mutual benefits. The subsequent analysis of the issue under discussion clearly reveals which theory best explains the impact of Ethiopia's hydro dam projects on the Horn of Africa regional relations.

## **ETHIOPIA'S HYDRO DAM CONSTRUCTIONS AND THEIR POTENTIAL CAPACITY**

Ethiopia is endowed with an aggregate capacity of 60,000 MW of which 45,000 MW from hydro, 10,000 MW from wind and 5,000 MW from geothermal (EEPCo, 2011:1). Nonetheless, the country generates only a very limited amount out of 45,000MW from hydropower (Healy, 2011: 35; EEPCo, 2011:1; UNESCO, 2004: 44). It is now believed that increasing access to modern energy services is vital for poverty mitigation in Ethiopia as well as for demands of neighbour countries (Gilgel Gibe Affair, 2008:5). Hence, the Ethiopian government is now providing utmost significance for harnessing the water resources properly to meet the ever increasing needs of the people (Healy, 2011: 35 & UNESCO, 2004: 44). In this regard the government has been undertaking different hydro dam constructions at different times aiming at addressing domestic interest and exporting electricity to neighboring countries, notably Sudan, Kenya and Djibouti (Gilgel Gibe Affair, 2008:5; EEPCo, 2011:1; Healy, 2011: 35; UNESCO, 2004:44; Medhane, 2004: 124). Besides, Ethiopia is undertaking, in addition to different small dams, Grand Renaissance Dam on Africa's second largest hydropower potential river, Nile, (IRENA, 2012:24).

Several dams with different potential capacity have been constructed and now providing service to electric power generation. According to EEPCo (2012) the following are interconnected systems of dams with their respective installed capacity by MW. Koka-43.20, Awash II-32.00, Awash III-32.00, Finchaa-134.00, Meleka Wakena-150.00, Tis Abay I-11.40, Tis Abay II-73.00, Gilgel Gibe I-184.00, Tekeze-300.00, Gilgel Gibe II-

420.00, Beles-460, Amerti Neshe-97.00. These amounts a total of 1,939.60 MW installed capacity. Additionally, there are three, Self-Contained System, small hydro dams, namely Yadot, Sor, and Dembi, having capacity by MW of 0.35, 5.00, and 0.80 respectively - in combination amounts 6.15MW (ibid). Thus, currently, Ethiopia has a total of 1945.75 MW of hydropower potential for energy production.

Moreover, there are also dams under construction. These are Gilgel Gibe III with 1870MW, Genale Dawa II with 254 MW and the Grand Renaissance Dam with potential capacity of 6000 MW. Gibe III is an ongoing project which is considered as the tallest dam in Africa planned to be completed in 2013 though not still finished (Ministry of Water Resources, 2007:53 & Healy, 2011: 36). The most magnificent interest on the use of water is manifested in the Renaissance dam. This is the largest of all hydro dams combined. Thus, the following section deals with the role of such hydro dam constructions in promoting regional relations.

### **THE ROLE OF ETHIOPIA'S HYDRO DAM CONSTRUCTIONS IN BOOSTING REGIONAL RELATIONS**

The construction of several hydro dams in Ethiopia can promote relations and cooperation among countries of the region. Ethiopia attempts for the integration of regional states economically and latter politically. Accordingly, the hydro dam projects of the country are not aimed at only satisfying the domestic interest of the state, rather it farther aimed at strengthening neighboring countries'

economic integration (EEPCo, 2011:3). Ethiopia is a land locked country which is highly in need for access to sea via her neighbors (Healy, 2011: 4). This fact makes Ethiopia to use its hydro power production as means of cooperation with its neighboring countries. Therefore, the hydro dam constructions can play a pivotal role in making harmonious relations and cooperation with neighbors.

As EEPCo's External Communication Officer (2013) stated the hydro dam constructions and production of electricity are not targeted solely to satisfy domestic demands rather they are also planned to make good relations with all the neighboring countries. This shows that the planning and undertaking of hydro dam projects is by taking in to consideration the interests of other neighboring countries and the economic cooperation and integration of the region. To this end, it has been projected to export electric power generated from hydro dams to the neighbor countries (Gilgel Gibe Affair, 2008:7; Healy, 2011: 35; Minister of Water Resources, 1996:76; EEPCo, 2011:1). The following sub topics reveal the positive influence of Ethiopia's hydro dam projects on Ethiopia's relations with the neighboring countries, notably with Djibouti, Sudan and Kenya.

### **Ethio-Djibouti Relations**

Ethiopia and Djibouti have good potential to cooperate economically as Ethiopia is endowed with abundant water resources and Djibouti retains long coastline. Producing electricity in Djibouti through oil-fired generators has been expensive and electricity costs have been a major obstacle to growth (African Economic

Outlook, 2011). As a result, to meet the overriding energy demand, Djibouti has been developing its plan to promote its economic integration with regional states. Accordingly, the Ethiopia-Djibouti Power Interconnection Project was the first interconnection system in the region and is pivotal to both Ethiopia and Djibouti (African Development Bank Group, 2013). After its connection to Ethiopia's electricity grid in 2011, Djibouti is getting cheap power supply and witnessed domestic improvements specially in reducing inflation and the cost of imported oil (Development Bank Group, 2013; AECOM, 2012; and African Economic Outlook, 2012). Djibouti is now receiving 35 MW electricity from Ethiopia (Tesfa-Alem, 2014). After the realization of all dams, Ethiopia can export substantial amount of power to Djibouti in return it will receive a million of dollars and get a better chance to use the port of Djibouti, which is the major international transport hub. It is evident that both countries are being mutually benefited from their economic cooperation (Sisay Asefa, 2006: 16). The economic integration of the two countries would further leads to the infrastructural development between two countries to accelerate the flow of goods, services and people to each other. Hence, Ethiopia's hydropower plays a great role in facilitating economic, social, security and political relations of the two countries as well as the region at large.

### **Ethio-Sudan Relations**

The two countries' relations which was known to be hostile is now changed and good relations have been established (Verhoeven, 2011:3; Healy, 2011: 35; Yacob, 2007:193-197; Medhane, 2004:

121). These two countries are now becoming very interdependent economically. Ethiopia is exporting electricity to Sudan since 2010 and Sudan is also supplying petroleum product to Ethiopia and providing port service to export Ethiopia's agricultural product (Healy, 2011: 4 &35). Ethiopia is currently exporting 100 MW hydro power to Sudan (Tesfa-Alem, 2014). It has also imported significant amount of oil in the recent years from Sudan, around 85% (Verhoeven, 2011:3). Several roads have also been constructed that connects Ethiopia with Sudan. This infrastructural development will contribute for the advancement of the two countries' economic as well as social and political relations.

Thus, it is safe to argue that Ethiopia's production of electric power will be mutually important for both countries. Putting it differently, the production and export of electric power in exchange for Sudan's oil will further promote both countries' mutual interest and friendship. Most interestingly, the two countries are now reached on the agreement to establish a joint military force so as to "ensure border security, boosting economic cooperation and allowing the two countries to carry out joint development activities" (Tesfa-Alem, 2014). From this one can deduce that the two countries economic relations become a source of cooperation on the area of peace and security as well as other spheres of activities

### **Ethio-Kenya Relations**

Ethiopia and Kenya had cordial historical relations. Currently, too, one notable smooth relations and cooperation

Ethiopian has with the regional countries is with Kenya. Economically, the two countries are now on the process of being interdependent. Ethiopia has planned to export electricity to Kenya up to 500 MW (Gilgel Gibe Affair, 2008:7). According to EEPCo's External Communication Officer (2013) Kenya is also requesting 400-500 MW hydro electric power from Ethiopia though it is waiting for the completion of Gilgel Gibe III. Ethiopia has already connected its power grid to Kenya and currently exporting 60 MW (Tesfa-Alem, 2014). From this one can construe that both countries are in need of the generation of electricity from Ethiopia's hydro dams so that the realization of such dams as well as production and export of electricity to Kenya will hasten the two countries' relations.

As the above explanations on typical examples clearly show, it is the liberalist approach which soundly explains the influence of Ethiopia's hydro dams on regional relations. Liberalists argue that the mutual benefits of trade promote better cooperation between states and reduce the tendency to resort to war (Griffiths et al 1999:144 & Burchill et al, 2005: 62). This is apparent on Ethiopia's relations with the aforesaid neighboring countries. Their relations go to the extent of cooperating on several other areas of activities, namely on peace and security. As Medhane (2004: 106) noted states with common economic interest are less likely to create conflict. This is true in the current Ethiopia's relations with its neighbors.

Classical liberalists also insist that "national economies should specialize in their areas of comparative advantage, the fruits of which can then be traded for foreign goods that are not produced

domestically. In this way, through free trade and specialization, all countries gain optimally” (Hobson, 2000: 70). Likewise, Ethiopia is using its fortune of huge hydro power potential to produce electricity and began exporting to those who are in short of producing it while it is importing oil and petroleum that it cannot easily produce (Healy, 2011: 35). From this trade exchange all are mutually being benefited and securing most favorable advantage. According to the classical liberals economics does not only bring economic benefits, it brings political benefits as well, and they further believe that economic processes should drive political processes (Weber, 2005: 105). Similarly, the economic significance of the hydro dam constructions and production of electric energy will also produce political advantage. In other words, the economic cooperation and integration of states can, in the long run, result in political integration of East and Horn of Africa countries as the current new progress tends to show.

Generally, the realization of hydropower potential of Ethiopia through its underway projects is significant for both Ethiopia and neighboring East and Horn African countries. It has good promise to promote economic integration, electricity integration, infrastructural expansion, people to people integration, and latter political cooperation in the entire region. The hydro power projects have good implication for regional economic integration as well as political cooperation beyond the aforementioned typical states. This is due to the fact that the project is not limited to make economic relations with those above mentioned states; rather the plan also extends to other countries of the region as

well as outside the region. Thus, being Ethiopia at the heart of the region accelerates good regional relations and cooperation.

### **What happens for Egypt?**

The relatively contentious project with the downstream countries, especially, Egypt is Great Renaissance Dam. This is due to the fact that Egypt for whatever purpose (drinking, washing, agriculture, transportation and energy) relied on Nile and it is unthinkable without Nile (Yohannes, 2008:33; Kendie, 1999: 141; Yacob, 2007:198). When we see this fact vis-à-vis Ethiopian Grand project, it seems something of difficult and incompatible things. Nevertheless, according to EEPCo (2012) the project will provide Sudan and Egypt with an opportunity to directly benefit from highly regulated outflows. Besides the function of reducing the over flooding, the dam also helps to trap sediment. EEPCo’s External Communication Officer (2013) also best stated that the reservoir will not be filled at once, rather it takes time not to deny water supply to downstream countries, and the water will be reserved in the summer season when the water outflows. In addition to this, Yacob (2012:3-4) stated that the dam has no significant adverse effect on downstream countries since the project is not for irrigation purpose. The International Panel of Experts also came up with no significant impact of the dam on downstream countries.

Therefore, from these justifications one can infer that there is no as such significant change in the amount of water flow to downstream countries even it provides additional and regular water during the winter season. Furthermore,

Ethiopia intends to export power to Egypt, which would integrate both countries economically. These combined reasons show the great possibility of creating cooperation and strong relations with Egypt. Thus, the Great Renaissance Dam makes not only Ethiopia but also Egypt and Sudan beneficiaries. This is best articulated by EEPCo's External Communication Officer (2013) that "if it was based on the benefit that would be gained, the dam has to be constructed by all the three countries jointly". Meaning that, they all are beneficiaries.

Generally, standing from the above discussion it is possible to boldly say that the full realization of all the dam projects will have significant role for domestic interests of the country as well as the demands of neighboring countries thereby promoting economic cooperation and friendship. In the long run, it has the prospect to further strengthen social and political relations of regional countries.

## CONCLUSION

The Horn of Africa is characterized by hostile relations. These hostilities can be changed into a peaceful one. In this regard, the Ethiopia's hydro dam constructions can play a pivotal role in promoting peaceful and cooperative regional relations through accelerating economic integration and expanding infrastructural facilities. It has the potential to benefit neighboring countries from electricity supply and, in turn, Ethiopia will earn foreign currency and get better access to ports of Sudan, Kenya, and Djibouti. As the prevailing reality shows, economic interdependence of regional states is facilitating their cooperation. In the long run, economic exchanges will further lead to good

diplomatic relations and political cooperation. Putting it differently, as hydro power projects are beneficial to all, they are one vital instrument for cordial regional relations. Therefore, it is strongly recommended for countries of the region to cooperate each other to achieve mutual development and better stability in the region.

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### Interview

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