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## A Glance at the Developmental Opportunities of Gibe III Hydro Electric Power Project of Ethiopia at National Level Vis-À-Vis Local Communities

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**Abstract-** With a great deal of enthusiasm to make a way out of extreme poverty, the government of Ethiopia is claiming the fact that it was embarked on a track of developmental ventures that would bring economic transformation for the nation. To this end priorities were given to the power sector which is believed to be serving as foundation for the upcoming shift from agrarian economy to the manufacturing industry in short period of time as was envisaged by the Growth and Transformation Plan of the incumbent gov't. Accordingly massive investments are on the stake in power generation projects, particularly in the hydroelectric sector. One of such endeavours is the Gibe III hydroelectric power project which is launched in 2006. The purpose of this short article is to observe the balance of national development initiative with the concern of local communities adjacent to the project centre. Accordingly the government is keen explaining the projects role in boosting the nation's energy supply in the field of electric city and above all it opens the way for earning foreign currency since part of the energy produced is going to be Exported to the neighbouring states including Kenya.

**Keywords:** *development, local communities.*

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AGLANCEATTHEDEVELOPMENTALOPPORTUNITIESOFGIBEIIIHYDROELECTRICPOWERPROJECTOFETHIOPIAATNATIONALLEVELVISVISLOCALCOMMUNITIES

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# A Glance at the Developmental Opportunities of Gibe III Hydro Electric Power Project of Ethiopia at National Level Vis-À-Vis Local Communities

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**Abstract-** With a great deal of enthusiasm to make a way out of extreme poverty, the government of Ethiopia is claiming the fact that it was embarked on a track of developmental ventures that would bring economic transformation for the nation. To this end priorities were given to the power sector which is believed to be serving as foundation for the upcoming shift from agrarian economy to the manufacturing industry in short period of time as was envisaged by the Growth and Transformation Plan of the incumbent gov't. Accordingly massive investments are on the stake in power generation projects, particularly in the hydroelectric sector. One of such endeavours is the Gibe III hydroelectric power project which is launched in 2006. The purpose of this short article is to observe the balance of national development initiative with the concern of local communities adjacent to the project centre. Accordingly the government is keen explaining the projects role in boosting the nation's energy supply in the field of electric city and above all it opens the way for earning foreign currency since part of the energy produced is going to be exported to the neighbouring states including Kenya. With regard to localities of the project area based on the information directly obtained from informants representing the communities there are some developmental opportunities associated with the project which includes infrastructure, social services, alternatives labour intensive economic activities, support in some aspects of agricultural modernization( providing productive crops species). Etc.

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## I. INTRODUCTION

Ethiopia is a nation curved out of people with diverse cultural and ethno- linguistic background. Throughout history the people lived in the land in harmony and cooperation despite some challenges that had their roots in elite grid to exploit those differences for their own multifaceted Political as well as economic agenda. History tells a prestige about the nation, which is greatly manifested in its rhetoric of being centre for civilization and among the big economic and political powers of the day in the past.

However this record is not supported with historical continuity. With a tremendous set back, today Ethiopia is one of the polities at the bottom of the international economic power pyramid. This fact is again has many thing to do with the nation's multidimensional political and cultural history. Against this background

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efforts have been made by different regimes and systems that came to the political ascendancy to rule the nation at different times.

As an agent inheriting this hallmark of poverty, the current generation is making its part to change the course of history. This is manifested by the development endeavours embarked by the incumbent government that are specially targeted to laying foundations for the upcoming industrialization expected to be a vibrant sector in boosting the nation's economy. Particularly the power sector is the most important issue identified by the government as a point of departure for activities to be conducted and hence we witness an intensive movement associated with construction of power generating projects and among them the hydroelectric power sector is prioritized given the nation's huge potential and its value as environmentally friendly initiative which enable sustainable development possible.

Usually projects of hydroelectric power generations are identified with creating extra opportunities for supplementary economic engagements and harmonizing development endeavours that can boost economic development particularly in localities they are established. In this study effort is going to be made to identify opportunities and associated challenges of the Gibe III hydroelectric power project launched by the government along the Gibe- Omo river basin. Accordingly the study is composed of four parts in which the first part is dedicated to describe the overall dynamics of the gibe III hydroelectric Power project in light the statement of the problem for this study. The second part is all about literature review. In third part methodological issues are addressed and fourthly the concluding remarks were presented.

### a) *Overview of the Gibe III hydroelectric power project*

As part of a departure to exploit the estimated potential of 40,000MW hydroelectric power, the government of Ethiopia embarked on launching massive projects. Among them is the Gibe III Hydroelectric power project which laid it foundation along the Gibe- Omo river basin in 2006 (EPCO 2009).

With a construction Cost of \$1.8 billion Gibe III is a 1,870 MW facility comprising a 240 m dam creating

a reservoir with a surface area of at least 200 km<sup>2</sup>, live storage of 11,750 million m<sup>3</sup>, underground and inclined penstocks, and a surface powerhouse equipped with 10 power generating units and Switchyards (EPCO 2009).

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 project is schemed with installed capacity of 1,870MW and up on completion it is expected to raise the county's generation status significantly (International Rivers 2009).

The project is located in the territory of SNNPR about 450 Km south of Addis Ababa within the Omo Gibe River basin in the middle reach of the Omo River, around 450 km by road South of Addis Ababa. The scheme, from the root of its reservoir to its tailrace outfall, extends over a corridor some 155km long. Administratively, the reservoir stretches over five zones, eleven Weredas and 67 kebeles. However, all the works concerning the construction of the Gibe III scheme dam, tunnel, power house, switchyard, construction camps and access road are concentrated in area under the jurisdiction of the Loma Wereda of the Dawro Zone and Kindo Didaye and Kindo Koyshaweredas of Wolayta zone of the Southern Nations and Nationalities People Regional State (Aklilu and Sanjay 2013).

The upper stream areas of the project is represented by parts of wolayta, Dawwro, Hadiya and Kambata while the Downstream encompasses territories of the lower Omo river valley that includes localities occupied by the people of Bodi, Mursi, Kwegu, Kara, Hamar, Bashada, Nyangatom and Daasanach (Johnston, 2009).

Currently the status of the construction is already finalized and all issues as far power generation is concerned are getting operational. But with regard to concerns to the associated development and transformation of the socio economic status of the localities around the project is concerned things are yet fully addressed. Therefore this study tried to identify opportunities of integrated development and concerns of social justices pertinent to the communities adjacent to the project site of the region.

## II. DEVELOPMENTAL OPPORTUNITIES OF THE GIBE III PROJECT

Hydropower is central to Ethiopia's Growth and Transformation Plan (GTP), as claimed by the incumbent government of Ethiopia. This integrated, state-led development scheme envisions Ethiopia rising to a middle income country by 2025 (MFED, 2012). It includes hydropower as a critical driver of economic development and plans to boost the current production in a tremendous amount. To meet its increasing

demand, Ethiopia has embarked on an accelerated electrification program to increase the low rate of population access to electricity from current 25% to 50% by 2018. In addition, the Government of Ethiopia would like to monetize their vast hydropower resources by exporting the power to the sub region. Accordingly Ethiopian Electric Power Corporation EEPCo is preparing itself to export 50 MW to Djibouti, up to 200 MW to Sudan, and up to 1000 MW to Kenya in the medium term. Therefore the Project understudy supports these objectives of the government of Ethiopia by providing large amounts of primary and secondary energy to the grid to meet both the objectives - increasing power supply to the domestic grid for increasing access; and exporting excess electricity to the sub region to meet the demands for electricity in neighbouring countries in an environmentally and socially sustainable manner.

To this end the EEPCo has embarked in energy production through construction of huge hydropower plants. One of these plants is the Gibe III hydroelectric power plant with an installed capacity of 1870 MW and an annual energy production of 6,500 GWh. This additional energy ensures the satisfaction of the ever increasing domestic demand with reliable supply as well as supporting the country's Universal Electrification Access Program. By exporting power through regional interconnection system, the country will significantly benefit from foreign currency earning through sales of electricity to the neighbouring countries as well as contributing to the regional economic integration (EPCO 2010).

One of the informants from the Project site remarked that recently, there is a growing opportunity for limited regional economic integration in relation to the energy sector and there is also a growing political pressure for the establishment of a regional body to manage the shared use of water resources in the region. Such collaboration could help to improve the mutual trust and confidence of the states and motivate them to seek peaceful coexistence and develop a peaceful neighbourhood through an expansion of inter-dependence. Unlike other countries in the region, Ethiopia's main potential source of energy is hydro-electric power, which makes costs cheaper than elsewhere. Motivated by this potential, Ethiopia is seeking to develop a market for its energy exports and the neighbouring countries are, in turn, looking for cheaper energy sources. This convergence of interests as Mulugeta (2012) argues has led Djibouti, Kenya and Sudan to enter into power purchase agreements with Ethiopia. As part of these agreements, power-grid connectivity projects have been launched and the Ethiopian grid system is now connected with Djibouti Sudan, and Kenya (Mulugeta, 2012). This project is not only intended for the development of Ethiopia but is also a way of contributing to regional economic development

since it will bring electrical energy to neighboring countries besides Ethiopia. According to observers the power supplied by Ethiopia will also support other projects in the region – specifically the Lamu Port and Lamu-South-Sudan- Ethiopia Transport Corridor (LAPSSET), oil developments in the Turkana region, and pumping stations for any Kenyan oil pipeline. The power trade that is signed between the Kenya and Ethiopia serves as a cooperation tool for the two countries (Mahlet, 2016).

In fact economically, Ethiopia and Kenya are now on the process of being interdependent. Ethiopia has planned to export electricity to Kenya up to 500 MW (Gilgel Gibe Affair, 2008). According to EEPCo's External Communication Officer Report (2013) Kenya is also requesting 400-500 MW hydroelectric power from Ethiopia though it is waiting for the completion of Gilgel Gibe III. The latter has already connected its power grid to Kenya and currently exporting 60MW (Endalcachew, 2014). The bilateral nature of this type of cooperation will hopefully develop into some sort of supranational and regional mechanism, with the objective of regulating power generation and marketing in the region. Such a regime as Mahlet claims will not only provide reliable and cost effective energy, but will also promote peace by enhancing the interdependence of the states (Mahlet 2016).

With regard to development associated with local communities, (weredas of Loma, Kindokoysa and KindoDidaye of Dawro and Wolaita Zone respectively) which is the focal point of this study, narratives by different observers makes its beginning from the employment opportunities created as the result of the launching of the project. Hence according to Akililu and Sanjay (2013) and Sanjay Mishra, from the initial personnel requirement of 1200 at the beginning of the construction has risen to 5000 in its peak time with the majority engaged in unskilled and semi-skilled engagements (Akililu and Sanjay 2013). Hand in hand with this it is possible to observe proliferation of small scale service oriented business engagements with provisions to the migrant work force operating in the localities.

Particularly the Social Impact Assessment Team which is conducting empirical studies under the supervision of EEPCo along the project site further makes a reference to the emerging development of the fishing industry with the creation of a reservoir area for big artificial lake. The Environment and Social Management Plan mandated by the Ethiopian electric power project further points out that the project will create a reservoir of 20,000 ha in area and 230meter deep at the dam site. This is a large artificial lake that provides different environmental and ecological niches for diverse fish species. Accordingly a number of fish species in the lotic (riverine) habitat are expected to adapt to the new reservoir (lacustrine) habitats these

species also appear in other lakes in the Rift Valley – Abaya and Chamo. Hence the new reservoir would potentially provide opportunity for developing commercial fishery (EEPCO 2009).

According to local officials of the government in the project area in order to exploit the emerging potential in fishery particularly the Kindo Didaye and Kindokoysaweredas of the Wolaita zone there are seven cooperatives organized out of local unemployed work force. The officials further remarked that of these two werdas there had been advance preparation from the concerned stakeholders to facilitate conditions for the evolution of Eco tourism associated with emerging bio-diversity and land scape in line with the construction of the artificial lake.

In addition to that the above mentioned informants described that there are different road projects collectively extended to cover about 120 km area with an estimated cost of 1 billion 440 million birr. The roads are meant to serve people living in the Loma, Genabosa, Kindo Didaye, Kindo Koysaweredas of Dawro and Wolaita Administrative zones respectively. These road networks are opening the potential for inter-wereda and Kebele communications. A case in point is the road connecting the Kindo koysa and Kindo Didaye Weredas in Wolaita as well as Gora-Disa and Bosa –Angala networks of the Dawro zones .

Apart from this the Social Impact Management Team also informed that the Project is also opening an opportunity of water transportation along the Omo River that would enable easy communication of peoples across weredas and zones. This will be expected to boost local economic transaction between the neighbouring communities. To this effect the project identified 12 inland waterways along the river and provided 12 motor boats with each carrying capacity of 27-30 people at cost of 8 million 479 000 birr. It also rendered training services associated with operating the boats for local unemployed youths. In line with this according to information from the Kindokoysawereda there 10 cooperatives organized to engage in the business of inland water transportation.

Furthermore as one of the informants from the communities pointed out, the project also financed the construction of Secondary school with the estimated cost of 5 million birr for the people of Loma wereda in Dawro zone. Particularly in Loma Wereda of Dawro zone the informants confirmed the fact that using the financial aid from the project it was able to install a water pipe line at a cost of 200,000 birr to the health station serving the people of Addisu Bedre Kebelle. Accordingly until the end of the construction period of the project there has been free health service sponsored by the project office provided to the communities of Loma and Kindo Didaye Werdas.

The project's development ventures also extend to the construction of religious institution for the people



of diverse denominations including followers of Orthodox Tewahido, Catholics, and the Protestants. In the Kindo koysha and Kindo Didaye Weredas of wolaita Zone the project financed the construction of police stations in an attempt to support governmental initiative in crime mitigation. Particularly in kindo Didaye wereda officials confirmed the fact that the project contribution was with paramount importance in disaster support engagements especially in localities where there is vulnerability of land slide during the rainy seasons. Therefore according to the Social Impact Assessment Team the total cost of local development assistance provided to the communities along the project site is estimated to be 1,480,551,785.27 birr.

### III. CONCLUSION

Development at national and global context always is at the centre of intellectual debate with regard to normative issues are concerned. Accordingly any initiative pertinent to it is subject to different sorts of criticisms and value judgment. In the early days it was all about its dimensions that attracted a great deal of discussions and philosophical discourses. Hence it was not uncommon to witness arguments in reference to the different aspects of life that Development needs to take in to account. Particularly in the contemporary world the dynamics of the intellectual discourse began to shift from this content focused debate to the nature of development itself. Therefore people from different background began to talk about a new version of development taking the name "Sustainable Development". In this new conceptual discourse the focus of attention was turned in to propagating developmental ideas to represent environmental concerns. So, in line with this the United Nations and other similar supra national entities were active promoting as well as supporting ventures pertinent to the new agenda (Sustainable Development). It was also promoted to the extent of attaining a new terminology often called "Green Economy".

Despite several challenges nations of the world are turning their faces to policies of development that is in harmony with environmental concerns. Accordingly the most crucial of the entire developmental endeavour the energy sector is with paramount importance given the fact that it is the foundation for any sort of development ventures. Consequently there is huge sum of money began to be invested in this sector so as to galvanize implementation of the agenda of sustainable development. In this respect the hydro power alternative is one of the most widely harnessed potential of energy development in different parts of the world.

Therefore in line with this given the huge potential of the state's resource in the sector the government of Ethiopia is currently embarked on massive investment in the development of hydro-electric

power. Accordingly one of the major mega projects representing the effort of the government is the Gibe III Hydro-Electric Power Project. The government is keen explaining the project's role in boosting the nation's energy supply, opening a new avenue for generating foreign currency and henceforth strengthening inter-regional cooperation among neighbouring nations.

Accordingly with regard to the opportunities to local communities in the first place it is possible to look at the fact that there will be a huge potential for rural electrification and associated improvement of energy supply for the day to day activities of the people. As the government tries to demonstrate there are also efforts made to improve rural infrastructure that is very much stimulated by the advent of the project.

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