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The Ethiopian Dam Case study

di Beatrice Russo

Key Words: Grand Renaissance Dam, Ethiopia, Egypt, Principles Accords, Regional Agreements, Hydropower (Green energy),Water conflicts, Nile Basin.
Research Question: What are the reasons why the construction of the Ethiopian Dam has generated conflicts. What can be done to overcome these conflicts?
Research Hypothesis: In this analysis I will argue that conflicts over water between the bordering countries (Egypt and Ethiopia in particular) are generated nowadays not only because water is the essential source of living but also because increasingly it has been used as the source of green energy.
Thesis Statement: The lack of cooperation between Nile riparian Countries is one of the main causes of conflicts over water; I will argue that it could be overcome with adequate international policy solutions: in particular through regional agreements, such as the Principles of the Grand Ethiopian Renaissance Dam.

Abstract

The Ethiopian Grand Renaissance Dam (GRED) is a gravity dam on the Blue Nile River in Ethiopia currently under construction. The case of the Ethiopian Dam is an example of the recent evolution of conflicts and tensions over water. It shows how water is an essential and exploitable resource, not only as a natural source of living, but also as a green energy source. In this analysis I will examine the historical, economic and political reasons connected to the construction of the Ethiopian Dam that generated the Nile Basin water conflict, underlining that the main cause of conflict it is the lack of cooperation among Nile riparian States (Liberalism Theory). Therefore I will analyze the positions of Ethiopia and Egypt in particular. Moreover I will argue that to overcome the actual tensions -due to the construction of the GRED- trough a sustainable and equitable solution, it is necessary the implementation of adequate international policy solutions, such as General Principles Accords and Regional Agreements established by the international community. In addition it is required the intervention of regional organizations, as watchdogs and mediators, because of their closer link to the territory of the Nile Basin that puts them in the best position to negotiate a balanced solution among the conflicting interests.

Sommario

1. Introduction and methodology; 2. The case; 3. Literature Review; 4. Conclusions.

1. Introduction and methodology

The former UN Secretary General Boutros Boutros-Ghali famously said: "*The next war in the Middle East will be fought over water, not politics*" (1985) and "*Water will be more important than oil this century*" (2003)[1]. In today world where the interest in renewable energies is increasing, water is becoming more appealing for all its intended uses (source of life,

[1] Talking Point: Ask Boutros Boutros-Ghali. Available at: http://news.bbc.co.uk/2/hi/talking_point/2951028.stm

transportation, source of energy... etc.). Therefore as a source of energy water has become an element economically relevant and exploitable. This is the reason why it is possible to see tensions over water resource- called, indeed, *water conflicts*-. The Ethiopian Dam is an example of water conflicts in the Nile Basin. *"The Ethiopian Dam Case study"* aims to answer the question: which are the reasons why the construction of the Ethiopian Dam has generated conflicts and tensions among the Nile Basin riparian countries and what can be done to overcome these conflicts and tensions. The research hypothesis is based on the assumption that conflicts over water between the Nile bordering countries (Egypt and Ethiopia in particular) are generated because water is not only fundamental source of life, but also a green energy. Through the analysis of the literature review and the empirical analysis of the consequences of the starting of the construction of the Ethiopian Dam, I will argue that the lack of cooperation and the lack of principles and rules regarding policy decision issues that have a trans-bordering effects between the bordering countries are the main causes of conflicts. The dependent variable are the conflicts and tensions over water, while the independent variables are: water as a resource for life and water as a green energy source, water scarcity, economic exploitation of the Nile River, lack of efficient regional and international agreements on trans-boundary waters, power relation among States. The analysis of *The Ethiopian Dam Case study* is mainly based mainly on secondary data: quantitative data and -especially- qualitative data that are collected from literature review of the main Scholars interested in the subject of conflicts over water. I also used primary data: Personal Interview to the Deputy Head of Mission of the Embassy of the Arab Republic of Egypt in Italy Ayman Tharwat Amin April 2015 and the Speech of the President of the Arab Republic of Egypt in Addis Ababa March 2015. The results of the data analysis (analysis on secondary data) show that conflicts among riparian states and in particular among Nile riparian States (Egypt, Ethiopia and Sudan) are increased since water is not anymore "just" an essential element of life, but an exploitable natural resource.

2. The case

The Ethiopian Dam, also known, as Grand Ethiopian Renaissance Dam (GERD), Millennium Dam or Hidase Dame, is a gravity dam situated on the Blue Nile River and currently under construction[2]; it will become Africa's largest dam, producing an estimated 6,000MW of electricity. It is an example of how renewable energy (hydropower in this case in particular) can be the object of many tensions at the international level[3]. This is so because this dam will be constructed on the source of the Nile and has been claimed that the dam will modify the Nile flow, provoking many damages especially for the downstream countries such as Egypt, while increasing Ethiopia hydropower supplies[4]. The Nile river basin comprises of ten countries, which are: Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda[5]. However I will analyze

[2] "Salini will build the biggest dam in Africa." Salini Costruttori. 31 March 2011. Retrieved 17 April 2011.

[3] GEORGE, W. L. (2013). "*Ethiopia's Plan to Dam the Nile Has Egypt Fuming*". Retrieved March 10, 2014, from http://world.time.com/2013/06/28/ethiopias-plan-to-dam-the-nile-has-egypt-fuming/

[4] GEORGE, W. L. (2013). "*Ethiopia's Plan to Dam the Nile Has Egypt Fuming*". Retrieved March 10, 2014, from http://world.time.com/2013/06/28/ethiopias-plan-to-dam-the-nile-has-egypt-fuming

[5] WONDDWOSSEN TESHOME B. (2008). "*Transboundary Water cooperation in Africa: The case of the Nile Basin Initiative*". Turkish Journal of International Relations winter.

the positions' of two Countries in particular: Egypt and Ethiopia, which are the two countries most involved in conflicts over water in the Nile Basin.

Ethiopia

The dam is under construction in Ethiopia, which is Africa's second most populous Nation, which is living constant power shortages and it is also highly vulnerable to climate change, particularly erratic rainfall[6]. However Ethiopia is becoming one of the world's fastest-growing economies[7], involved with megaprojects - especially in recent years- including dams, factories, roads and railways across the country.[8] Its biggest project is the Renaissance Dam, thanks to which the hydropower plant is expected to bring the country's electricity generation to more than triple its current capacity[9]. So far Ethiopia considers itself as the powerhouse of Africa[10]. The reasons that brought Ethiopia to develop, always more efficiently hydropower solutions, should be found in the exigency of providing energy to the whole country. This is so because in 2009 less than 10% of Ethiopians had access to electricity and there were continuing malfunctioning. Therefore, in order to overcome this situation, the government has started an ambitious project of dam building: The Ethiopian Dam, with Chinese financial and technical support, ignoring the opposition from Egypt.[11] Accordingly to Ethiopian Government reports, has been argued[12] that while hydropower does not consume water, it is not possible to reduce water flow[13]. In addition, evaporation from the reservoir surfaces constitutes a permanent loss of water from the river[14]. Ethiopia has also received support from other riparian countries like South Sudan and Uganda: they argued that Egypt should not undermine Ethiopia's right to the Nile [15]. Sudan hopes that the dam will help to prevent seasonal flood, regulate the river flows and extend the life span of Sudanese dams by preventing silts in the upstream. Ethiopia has also promised to sell the hydropower to Sudan and Egypt at a much cheaper price. For what concerns the environmental impact of the Ethiopian dam, it has been argued by many NGO and in particular by Nile Basin Initiative (NBI)[16] that the Ethiopian dam will cause

[6] HUIYI CHEN ASHOK SWAIN, *Energy Development Frontier The Grand Ethiopian Renaissance Dam: Evaluating Its Sustainability Standard and Geopolitical Significance*, 2014

[7] FORTIN, JACEY. "*Dam Rising in Ethiopia Stirs Hope and Tension*". The New York Times, 11 Oct. 2014. Web. 29 Apr. 2015.

[8] FORTIN, JACEY. "*Dam Rising in Ethiopia Stirs Hope and Tension*". The New York Times, 11 Oct. 2014. Web. 29 Apr. 2015.

[9] "International Experts Analyze Impacts of Ethiopian Dam." MIT News. N.p

[10] FORTIN, JACEY. "*Dam Rising in Ethiopia Stirs Hope and Tension.*". The New York Times, 11 Oct. 2014. Web. 29 Apr. 2015.

[11] "International Experts Analyze Impacts of Ethiopian Dam." MIT News. N.pdispute.
The United States Bureau of Reclamation identified the site for the Grand Ethiopian Renaissance Dam during a Blue Nile survey conducted between 1956 and 1964. The Ethiopian Government surveyed the site in October 2009 and August 2010. In November 2010, a design for the dam was submitted. On 31 March 2011, the project was made public, a US$4.8 billion contract was awarded without competitive bidding to *Salini Costruttori* and the dam's foundation stone was laid on 2 April 2011 by then Prime Minister Meles Zenawi.

[12] GEORGE, W. L. (2013). "*Ethiopia's Plan to Dam the Nile Has Egypt Fuming*". Retrieved March 10, 2014, from http://world.time.com/2013/06/28/ethiopias-plan-to-dam-the-nile-has-egypt-fuming/

[13] "On the River Nile, a Move to Avert a Conflict Over Water." By Fred Pearce: Yale Environment 360.

[14] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[15] GEORGE, W. L. (2013). "*Ethiopia's Plan to Dam the Nile Has Egypt Fuming*". Retrieved March 10, 2014, from http://world.time.com/2013/06/28/ethiopias-plan-to-dam-the-nile-has-egypt-fuming/

negative impacts on the agriculture. This is so mainly because the dam will cause a lack of the water flow that will make more complicated the exploitation of the fields close to the river. It is possible to argue that the dam has negative effects because it does not fulfill the criteria established by The World Commission on Dams (WCD) made the World Bank and the World Conservation Union in 1998, which are the universally agreed five values (equity, sustainability, efficiency, participatory decision making and accountability). In other words, the main problem is building large dams in a suitable and sustainable way to minimize different types of environmental and social costs and maximize the benefits. The planning of the dam seems to have ignored the participation of affected people. The management and implementation of the large dam project has been a top-down approach rather than the one involving the decision making process, because it has not involved the participation of the local people[17]. Moreover a number of displaced people, belonging to indigenous "*Gumuz*" and "*Berta*" community, which have the lowest standard of living even in Ethiopia, are more vulnerable to the resettlement[18]. The risks are loss of livelihoods, unemployment and impoverishment[19]. The local community is greatly dependent on the fisheries and forest resources for their livelihoods (fishing, hunting, gathering fruits, honey, firewood, etc.)[20]. On the other hand, the former director-general of Ethiopian Environmental Protection Authority (EPA) argues that displacement is not an issue considering the fact that they have been given land and money to resettle and that the dam will create employment opportunities for local people[21]. However, the indigenous people have strong connection with the land and water resources, and under the involuntary resettlement situation, it is harder for them to change to non-agriculture activities for livelihoods and compete in the job market due to their limited education[22].

Egypt

For what concerns the Egypt position the first thing to underline is the fact that Egypt is the main recipient of the Nile water (it is the lowest riparian State in the basin and therefore it is affected by any actions taken by the upstream States) and it is been dependent from the Nile River water since ancient times.[23] Indeed, the *ancient philosopher Herodotus, describing the Egyptian civilization, said: "Egypt is the Nile and the Nile is Egypt* [and Egypt is] *the gift of the Nile*".[24] Other upstream riparian states now are more interested in the usage of Nile water compared to the past, because they are living an increase of their population[25]. This would limit Egypt water supply[26], Egypt economy,

[17] International Rivers. (2012). Field Visit Report-GERD Project. Ethiopia: International Rivers

[18] International Rivers. (2012). Field Visit Report-GERD Project. Ethiopia: International Rivers

[19] HUIYI CHEN ASHOK SWAIN, *Energy Development Frontier The Grand Ethiopian Renaissance Dam: Evaluating Its Sustainability Standard and Geopolitical Significance*, 2014

[20] HUIYI CHEN ASHOK SWAIN, *Energy Development Frontier The Grand Ethiopian Renaissance Dam: Evaluating Its Sustainability Standard and Geopolitical Significance*, 2014

[21] WORLDEGEBRIEL, E. (2013). "*Ethiopian dams won't cause harm- ex-head of Ethiopian Environemntal Protection Authority*". Retrieved Dec 4, 2013, from http://www.trust.org/item/20130812133857-74iy1

[22] HUIYI CHEN ASHOK SWAIN, "*Energy Development Frontier The Grand Ethiopian Renaissance Dam: Evaluating Its Sustainability Standard and Geopolitical Significance*", 2014

[23] Climate Change. London: HMSO, 1994. Web

[24] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[25] Eurasia-rivista.org." Eurasiarivistaorg RSS 2014

[26] Personal Interview to the Deputy Head of Mission of the Embassy of the Arab Republic of Egypt in Italy Ayman Tharwat Amin April 2015

life, mobile communication and international relations[27] [28]. The primary goal for Egyptian Government about water policy has always been to ensure a free flow of sufficient water to assure its internal usages and for export purposes. Egypt asserts, so, historical rights over Nile water; those rights found their juridical source in Helsinki Accords and in the Berlin Rules. Furthermore, what entrenched Egypt's power over other riparian countries in the Nile river basin is the water treaty agreement signed between Egypt and Britain in 1929[29]. At that time, Great Britain was in charge of many riparian Countries as its colonies, therefore Britain negotiated with Egypt on behalf of its colonies. The result was an agreement over Nile water usage unbalanced in favor of Egypt necessities[30]. However, with the attainment of independence by these Countries and high population growth, global warming, global economic crisis natural disasters, political development, pollution and resource depletion, industrialization as well as urbanization, the above mentioned riparian Countries decided to fight Egypt's control over Nile water resources.[31] They wanted to re-negotiate earlier water treaties in order to change the hegemonic position of Egypt towards water.[32] After the speech of the President of the Arab Republic of Egypt Abd al-Fattah al-Sisi in Addis Ababa the 25th of March 2015, the position of Egypt is clear: collaboration with Ethiopia will be enforced in order to an equitable sharing of the Nile water[33]. The most important part of the speech is the following: "*Non of the Countries* [African Countries and Nile riparian Countries] *should build its welfare at the expense of his brother for as your brotherly Country has the right to development and to utilize its resources to improve the standard living of its people; your Egyptian brothers also have the right, not only to the development, but also the right to life itself and to live in a safe haven on the banks of the Nile River, the river upon which they created an incessant civilization for thousands of years*[...] *Egypt came with an open heart, an open mind* [and] *a recognition of the responsibility with sincere intent* [towards] *cooperation and partnership"*.[34]

3. Literature Review

I am going to analyze the Ethiopian Dam case study using three approaches: Realism, Marxism and Liberalism in order to explain why the construction of the dam has generated conflicts among Nile riparian Countries.

3.1 Realism

[27] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[28] Personal Interview to the Deputy Head of Mission of the Embassy of the Arab Republic of Egypt in Italy Ayman Tharwat Amin April 2015

[29] PIERRE CRABITÈS (1929). "*The Nile Water agreements*". Available at: http://www.foreignaffairs.com/articles/69025/pierre-crabites/the-nile-waters-agreement.

[30] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[31] A. WOLF, (1999). "*Criteria for equitable allocations: The heart of international water conflict*". Natural Resources Forum. 23 (1), pp.3-30

[32] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[33] "*It is the river whose water flows as blood in the vains of the Egyptians and of the Ethiopian who shall always remian brothers and would not allow any dispute to creep on them or to impair the strength of the ties that bring them together* " the President of the Arab Republic of Egypt Abd al-Fattah al-Sisi in Addis Ababa the 25th of March 2015

[34] Speech of The President of the Arab Republic of Egypt Abd al-Fattah al-Sisi in Addis Ababa the 25th of March 2015.

Realism is based on the binomial assumption: anarchy will always lead international relations and the most relevant (*rectius* the only relevant) actors involved in those relations are States, which are absolute sovereigns over the affairs and no other State or power can interfere. This theory perfectly describes the current relations that lead Nile Basin States struggling over water conflicts. First of all because all Nile riparian States, in particular Ethiopia, Egypt and Sudan have developed unilateral projects on the international water source within each individual nation[35]. Secondly because there is not an international authority appointed to solve conflicts over water, nor effective international agreements and multilateral agreements, which regulate the subject[36]. Thirdly because Nile Riparian States are ready to fight (where they are not fighting yet) in order to exploit Nile[37]. Realist Scholars refer, in this case, to *Inter state hydropolitics*[38]. Hydropolitics is a phrase that has been coined in the literature on international water conflicts, notably those in the Middle East (cf. Waterbury, 1979; Ohlsson, 1995). It refers primarily to conflicts and negotiation processes between sovereign states on water allocation and distribution, particularly in relation to transboundary rivers or aquifers. Turton and Henwood (2002) propose to broaden the term to encompass all water politics, but it is preferable to use it in its original meaning, including inter-state water conflicts in federal political setups. Hydropolitics is the part of water politics that has been well researched and documented, perhaps because it is a very public phenomenon, with sometimes high stakes and geopolitical relevance, and because it is an interesting case for international relations studies (Zeitoun and Warner, 2006). Exploitation of the Nile, as the argument of this thesis points out, not just in the traditional way, that is the essential source of living, but also because increasingly it has been used as the source of green energy[39]. Indeed one of the reasons of tensions is the emerging of new players -such as Ethiopia- in the horn of Africa as major hydro-political powers that can engage Egypt's hydro-hegemonic status[40]. The construction of the Ethiopian Dam, as an unilateral decision taken by the Ethiopian Government, shows exactly the picture portrayed by realist scholars. It describes an emerging green-energy-powerful State, which in order to fulfill its own interests (economic, political, transport facilities, life facilities) decide to built a dam that accordingly to riparian States -Egypt in particular-[41] will diminish the quantity of water (scarcer source of life and hydropower) for the exploitation of other Countries, not taking in account how those decisions will affect other States interests. Moreover there is not a legal international authority designate to solve conflicts and

[35] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[36] As we mentioned before just WTO can incidentally be called in order to settle a dispute over water conflicts, because it has the power to arbitrate water disputes presented by its member states when the disputes are commercial in nature

[37] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[38] MOLLINGA, P. P. (2008). "*Water, politics and development: Framing a political sociology of water resources management*". Water Alternatives 1(1): 7?23

[39] Browne, Anthony (2003-08-19). "Water wars, water wars, everywhere...". London: The Times. Retrieved 2009-02-12

[40] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[41] CHARLES W KAGLEY, JR (2006). "*World Politics: Trend and Transformation (Unitated States Cengage Learning)*

controversies over water. This is why has been argued that, especially in Africa where water is the essential resource, conflicts in the 21st century will be fought over water[42].

3.2 Marxism

Marxism theory is useful when we want to analyze conflicts that involve an exploitable resource, because the object of the tensions can be measured and categorized accordingly to economic values and parameters[43]. The central assumption of Marxism is the fact that the world economic relations are based on capitalism and capitalism is based upon the exploitation of resources and workers[44]. Moreover exploitation as the base of capitalism is the key in order to enforce free economy. Free economy is the best option for the Market in order to regulate itself.[45] Marxism theory- especially the stream started by Stiglitz- argues that the consequence of this system is the distortion of the economic relations worldwide, that advantages rich States and exploiting Countries while this system disadvantages poor Countries[46]. If we want to apply this concept to the case of water conflicts, and than of the Ethiopian dam in particular, we can argue that the main resource -which can create a gap among rich countries and poor countries- is water (*rectius* how and how much water can be exploited)[47]. So it is clear that the State able to exploit better and more water is the one that will be able to impose itself over other countries[48]. Imposition and power, not only considered from an economic point of view, but also from a political perspective[49]. In other words, and this is where Realism and Marxism collude, the State who can exploit water resource is the hegemon State in Africa[50]. This situation lead to various forms of competition to control water as resources or the allocation of water, which will naturally generate two outcomes: tensions and potential conflicts rather than cooperation (this last outcome is the one preferred by liberalism theory)[51]. In Africa, Egypt has always played the role of hegemon over the exploitation of the Nile water during history and then Egypt's sole access to the Nile for centuries guaranteed its hegemonic position over the years [52]. The Ethiopian Dam and the consequent exploitation of the Nile water by Ethiopia is, clearly, a turmoil in the balance of

[42] "Many of the wars of the 20th century were about oil, but the wars of the 21st century will be over water" ISMAIL SERGELDIN DANIEL CONNELL. "*Water wars, maybe, but who is the enemy?*" [ONLINE] Available at http://www.globalwaterforum.org/2013/04/10/water-wars-maybe-but-who-is-the-enemy

[43] DUNNE, KURKI, SMITH (2013) *International Relations Theories*. Oxford University Press.

[44] DUNNE, KURKI, SMITH (2013) *International Relations Theories*. Oxford University Press.

[45] DUNNE, KURKI, SMITH (2013) *International Relations Theories*. Oxford University Press.

[46] STIGLITZ (2013). "*Inequality is a choice*". [ONLINE] Available at: http://opinionator.blogs.nytimes.com/2013/10/13/inequality-is-a-choice/?_r=0.

[47] STIGLITZ (2013). "*Inequality is a choice*". [ONLINE] Available at: http://opinionator.blogs.nytimes.com/2013/10/13/inequality-is-a-choice/?_r=0.

[48] Homer-Dixon, T. (1999). Environment, Scarcity and Violence. Princeton University Press, Princeton, NJ, USA.

[49] Strange, S. (1994). Who governs? Networks of power in world society. In Authority and Markets – Susan Strange's Writings on International Political Economy, Tooze, R. and May, C. (eds), Palgrave Macmillan, Hampshire, UK.

[50] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[51] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[52] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

powers in East Africa[53]. This process already started when Ethiopia has vowed to engage Egypt over the control of water resources in the Nile valley basin trough the proposal of water agreements, with the other riparian countries, in order to abrogate all previous agreements hitherto entered by Egypt (agreements that protected and provided the economic central power of Egypt and its dominance over water)[54]. There are other applications and interpretations of the Marxist theory, in order to analyze conflicts over water[55]. For instance, we can mention the perspective proposed by Collier-Hoeffer [56]. Its analysis on conflict - basically- argues that internal conflicts over water are driven by differentiates variables such as tribes, identities, economics, religion and social status in Africa[57]. Indeed analyzing data about conflicts in Africa, accordingly to a regression process, it is possible to conclude that economic factor rather than ethnic, or religious, identities are causes of conflicts in Africa[58]. Marx underlined the fact that social and human interactions are important factors in the analysis of a dominant nation that seeks to control dependent nations or peripheral countries[59]. The consequence of this power-relation is the tension between rebels against the oppressor. In other words, dependent States, in order to agitate for equitable and fair share of resources, promote conflicts against the State, the one that exploit the resource they need. This point leads to the concept that economic factors are significant predictor of conflict in many parts of the African continent[60]. Therefore, according to this evolution of Marxist theory, economic reasons contribute to a large extent to the greater portion of conflicts in Africa. In other words the Ethiopian dam proves the fact that riparian Countries are challenging the *status quo*, rebelling to the economic-model that was imposed to them[61].

3.3 Liberalism and Principles for settling conflicts

Liberalism states that the world equilibrium is based on anarchy -but contrary to Realism- it sustains that the balance is based on the cooperation (and not power) of States that aim peace[62]. Cooperation, that is possible thanks to international agreements, multilateral collaboration and the institution of international organizations, which are in a position of superiority compared to States. Moreover, Liberalism theory tries to prevent conflicts trough the unity of human kind and acting towards the absolute good instead of the lesser evil and by applying ethical principal and

[53] ADAM, B. (2004). *The Hydropolitics of the Blue Nile Water Resources: A Case Study of the Impact of the Gezira Agricultural Scheme*. Presentation made for King's College London Postgraduate Research Day, London.

[54] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[55] KEOHANE, R. O. (1980). *The Theory of Hegemonic Stability and Changes in International Economic Regimes, 1967–1977*. In *Change in the International System*, HOLSTI, O.R., SIVERSON, R.M. AND GEORGE, A.L. (eds), Westview Press, Boulder, CO, USA, pp. 131–161.

[56] COLLIER AND HOEFLER, *Greed and Grievance in Civil war*- Oxford Economic paper 2003

[57] COLLIER AND HOEFLER, *Greed and Grievance in Civil war*- Oxford Economic paper 2003

[58] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[59] COLLIER AND HOEFLER, *Greed and Grievance in Civil war*- Oxford Economic paper 2003

[60] MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[61] CASCAO, A. (2005). *Hydro Hegemony in the Nile River Basin*, Presentation given at First Workshop on Hydro-Hegemony, 21/22 May 2005, King's College London, London, UK.

[62] DUNNE, KURKI, SMITH (2013) *International Relations Theories*. Oxford University Press.

transnational institutions over the pursuit of power[63]. In the Ethiopian Dam case we can see a partial failure of the cooperative-driven approach typical of the Liberalism. First of all because it is clear the lack of an effective regulation able to frame and regulate relationship over trans boundary waters; secondly countries with severe water scarcity have difficulty continuing to work cooperatively after the water resources have been fully allocated and there is still an increasing demand but no longer a supply to be divided[64]. In other words the perspective of cooperation is something that should be applied (*rectius* reinforced), rather than something that is already functioning[65]. This is so because even if on the 23rd of March 2015 Egypt, Ethiopia and Sudan they signed the Principles of the Grand Ethiopian Renaissance Dam, there is still work in order to put in action (implement) those principles. Indeed, many riparian Countries comes from different political and socio-cultural backgrounds and therefore they are prone to series of political and civil upheavals that will endanger any attempt by riparian countries to cooperate for mutual benefit sharing. But why it should be considered good cooperate and share water. Because accordingly to many scholars "Water sharing" is a synonymous of "benefit sharing".[66] Indeed according to Teshome, benefit sharing is "the distribution of benefits through cooperation" and he argues - furthermore- that "benefit sharing gives riparian states the chance to share the benefits derived from the use of water rather than the physical distribution of water itself"[67]. In the light of what has been said, it appears desirable the solution of those conflicts trough cooperation. Collaboration accordingly to the International Principles and with the instrument of Regional Agreements/ Regional Organizations, which are the most effective tool to solve problems with a strong territorial dimension. In other words with adequate international policy made by international community establishing general principles and trough regional agreements between the countries involved. In other words the combination of the intervention of International Organizations for the creation of a more effective legal framework on trans-boundary water and the Accords/Criteria established by the involved Regions is the best instrument to prevent or at least settle dispute. We can give a short overview of the general regulative framework that can discipline the settlement of disputes over water [68]. There are four general principles that are used in the settlement over water disputes. The first principle is the Harmon principle, which dictates that each state has a complete sovereignty over the drainage basin located within its territory and clearly upstream states generally insist on this principle[69]. The second principle states that

[63]DUNNE, KURKI, SMITH (2013) *International Relations Theories*. Oxford University Press.

[64]MAJEED A. RAHMAN (07.24.2011). "*The Geopolitics of Water in the Nile River Basin*". [ONLINE] Available at: http://www.globalresearch.ca/the-geopolitics-of-water-in-the-nile-river-basin/25746

[65] MARK ZEITOUN Æ NAHO MIRUMACHI, 2008, *Transboundary water interaction I: reconsidering conflict and cooperation* - Springer Science - Business Media B.V.

[66]WONDDWOSSEN TESHOME B. (2008) "*Transboundary Water cooperation in Africa: The case of the Nile Basin Initiative.*" Turkish Journal of International Relations winter Vol. 7.4 pp34-43

[67]WONDDWOSSEN TESHOME B. (2008) "*Transboundary Water cooperation in Africa: The case of the Nile Basin Initiative.*" Turkish Journal of International Relations winter Vol. 7.4 pp34-43

[68]ARNON SOFFER (1999), *Rivers of Fire: The conflict over water in the Middle East* (Lanham: Lowman& Littlefield Publishers

[69]ARNON SOFFER (1999), *Rivers of Fire: The conflict over water in the Middle East* (Lanham: Lowman& Littlefield Publishers

there is absolute territorial integration among the basin states[70]. This principle is applied in the situation in which downstream states have historical rights to the usage of the water, while the upstream which contribute all of the water but have never historically used the water lack certain rights to it[71]. The third principle states that all of the basin states are allowed to share in exploiting the basin water, which emphasizes the mutual rights for all the riparian's to benefit from agreeable development[72]. The fourth principle is termed "equitable" utilization, which emphasizes that no state may cause harm or injury by means of water to other riparian, all states have the right to develop- as long as it causes no harm, as well as all states must mutually consent on the equitable and just distribution.[73]. Three other principles that have previously been applied in order to settle dispute are: the Linkage principle which requires benefits for agreements to share international river water such us preferable trade relation; the Mutual Use Principle, which allows for a state to ask compensation in order to change its previous conduct and usage of the river, and the Image principle, which notions that a state seeking to portray its neighborliness may cooperate in order to create for itself a positive image.[74] We can argue that even if large steps has been taken in the field of international law in order to organize solutions to the international competition over international rivers and fresh water resources, however there is no an actual regulation, but something close to guidelines[75]. Indeed According to Cano (1989, 168)[76], international water law did not substantially begin to be formulated until after World War I[77]. Since that time, organs of international law have tried to provide a framework for increasingly intensive water use, focusing on general guidelines, which could be applied to the world's watersheds[78]. These general principles of customary law, codified and progressively developed by advisory bodies and private organizations, are defined as "soft law," and they are not intended to be legally binding, but can provide evidence of customary law and may be the base of the future regulation of the subject [79]. So if we are waiting for those principles to be encompassed in clear and binding rules, it is more accurate to think in terms of guidelines for the process of conflict resolution[80]. However we had example of codified regulations, such as the Helsinki Accords (1966) and the Berlin water Rules (2004). Helsinki Accords are an international guideline regulating how rivers and their

[70] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[71] ARNON SOFFER (1999), *Rivers of Fire: The conflict over water in the Middle East* (Lanham: Lowman& Littlefield Publishers

[72] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[73] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[74] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[75] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[76] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[77] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[78] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[79] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

[80] A. WOLF, (1999). *Criteria for equitable allocations: The heart of international water conflict*. Natural Resources Forum. 23 (1), pp.3-30

connected ground-waters that cross national boundaries may be used. The International Law Association (ILA) in Helsinki adopted them in 1966[81]. The problem is that even if the ILA adopted them, there is no mechanism in place that enforces the rules. Moreover the guidelines lack of formal status, however the positive aspect is that they led to the creation of the United Nations' Convention on the Law of Non-Navigational Uses of International Watercourses[82]. The most relevant part about the settlement of the disputes (water conflicts resolution) of the Helsinki Accords is disciplined in the second section, which regulates in general conflict resolution in international river basins. The leading principle that travers the whole Accords, but that is peculiarly relevant while discussing solutions regarding water conflicts is using an equitable way of distributing basin water among the riparian states. In 2004, the Berlin Rules on Water Resources superseded the Helsinki Accords. Accordingly to this document, nations must take appropriate steps to sustain and manage water resources, in cooperation with other resources, and minimize environmental harm.[83] Nations are not permitted to take action that may result in a shortage of life-sustaining water, or that may cause any sort of ecological damage. There is also a regulation of the water resources when they are internationally shared. It regulates equitable use of those resources taking in account factors such as past customary usages of the resource and balancing variant needs and demands of all bordering nations[84]. The most important thing to have in consideration in weighing needs is satisfying the requirements of human beings for water to sustain life[85]. It requires that nations sharing water make reasonable efforts not to cause harm to one another by the ways in which the water is used. The document requires a reasonable openness to the international community of information related to water resources and their usage, particularly in those cases where nations sharing a water resource may be impacted[86]. Except in cases of emergency, usage that may significantly impact others should be discussed in advance with all interested nations, with disagreements resolved by appeal as necessary to international governing committees[87]. In other words, Nations are expected to work together as needed to sustain shared water resources. Moreover the Berlin Rules on Water Resources provides that nations must enforce its provisions through local legislation and also submit to international review as necessary to ensure that they are compliant[88]. To summarize we could argue that the transversal principle that must be used in order to distribute, share, use water as resource and moreover to prevent or settle disputes, conflicts and tensions is the so called Rule of Reason. Accordingly to this

[81] "The Helsinki Rules on the Uses of the Waters of International Rivers". UNESCO. Retrieved 2009-02-12

[82]The Helsinki Rules on the Uses of the Waters of International Rivers". UNESCO. Retrieved 2009-02-12

[83] In addition to setting out various regulations for nations to follow with respect to water within their boundaries and water they may share, it regulates behavior in wartime, including damage to water installations such as dams and dikes

[84] Browne, Anthony (2003-08-19). "Water wars, water wars, everywhere...". London: The Times. Retrieved 2009-02-12.

[85]The Helsinki Rules on the Uses of the Waters of International Rivers". UNESCO. Retrieved 2009-02-12

[86]The Helsinki Rules on the Uses of the Waters of International Rivers".UNESCO. Retrieved 2009-02-12

[87] MCCAFFREY, STEPHEN M. (1999). "*International Groundwater Law: Evolution and Context*". In *Salman, Salman M. A. Groundwater: Legal and Policy Perspectives*: Proceedings of a World Bank Seminar. World Bank Publications

[88] MCCAFFREY, STEPHEN M. (1999). "*International Groundwater Law: Evolution and Context*". In *Salman, Salman M. A. Groundwater: Legal and Policy Perspectives*: Proceedings of a World Bank Seminar. World Bank Publications

principle in order to share water as a resource it is necessary to do a balance of interests, which in other words means take in account all exigencies (economic, historical, about navigation, connected to health and well-living) of the various actors involved in the contrast.

4. Conclusions

Throughout this project I analyzed the international turmoil created by the construction of the Renaissance Dam in Ethiopia under the perspective of water that is the source of life, but also a green energy resource. I underlined the fact that water conflicts, over oil conflicts, it is becoming a main concern for the international community, as pointed out by Boutros Boutros-Ghali already in 1985. This is so because water scarcity, growing of population and misuse of water, will make this resource very precious, even more valuable compared to how much oil was in the past and it is now[89]. This is so because water is the essential source of living and it is irreplaceable, while oil has its possible substitutes. I focused my attention analyzing two States' positions towards the dam. In particular, I focused on Ethiopia, which is the upstream country that is building the dam and that will receive major benefits from it and on Egypt -the downstream Country- that will be mostly negatively affected by the dam[90]. While Ethiopia -thanks to the dam hydropower- will live an increase of its economic position, Egypt -the historically hegemon Country in the Nile Basin- that gained its position thanks to the exploitation of the Nile water, will suffer shortage of the resource. The solution to overcome this problem -accordingly to the liberalist stream Scholars- is the international cooperation: firstly through the watchdog and mediator role played by the international organizations; secondly by the enforcement of International Laws and Accords regarding trans boundary resources and thirdly with the creation of Regional Agreements more apt to deal with specific issues. As the President of Egypt pointed out in the speech of the 25th of March 2015 in Addis Ababa "*There is no alternative before Egypt and Ethiopia as two poles in the continent, but to work at bilateral level and with their brothers in Africa to overcome these challenges that are threatening our people, and in fact target our entity and very existence*". Water conflicts in history are not just related to renewable energies (as the Ethiopian Dam Case), but to navigation, religion, terrorism, privatization of the resource, development dispute, and military strategies reasons. To conclude we can say that the use of any kind of finite resources requires, for its solution, always a cooperative approach. Cooperative approach, because it should be taken in account that the individual efforts of the States are not always sufficient to overcome conflicts. Therefore it is needful the intervention of the international community and its organizations to get a sustainable and equitable solution.

[89] We could argue that "*Green is the new Black*", meaning that water -as a green energy- is replacing oil as source of conflicts, especially in Region afflicted by water scarcity.

[90] It should be mentioned that Ethiopian Government sustains- trough unreleased researches- that the dam won't affect the Nile flow negatively for Egypt. On the River Nile, a Move to Avert a Conflict Over Water." By Fred Pearce: Yale Environment 360. Web.