

**UNIVERSITY OF NAIROBI**  
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**RIVER NILE POLITICS: THE ROLE OF SOUTH SUDAN**

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**DECLARATION**

This research project is my original work and has not been submitted for another Degree in  
any other University

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This research project has been submitted for examination with my permission as the  
University supervisor

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## **ACKNOWLEDGEMENT**

First and foremost, all thanks to God Almighty for the strength and ability to pursue this degree. For without him, there would be no me. I wish to express my sincere thanks to Professor Maria Nzomo the research supervisor for her tireless effort and professional guidance in making this project a success. I also extend my deepest gratitude to entire university academic staff in particular those working in the Institute of Diplomacy and International Studies.

## **DEDICATION**

I dedicate this research project to my entire Matara's family for moral and financial support during the time of research

## **ABSTRACT**

This study focused on River Nile Politics, a study of the role of South Sudan. The study relates to the emergence of a new state amongst existing riparian states and how this may resonate with trans-boundary conflicts. The independence of South Sudan has been revealed in this study to have a mixture of unanswered questions. The study is grounded on Collier-Hoefffer theory analysed the trans-boundary conflict based on the framework of many variable including: identities, economics, religion and social status in the Nile basin. It points out that Egypt's economic status may have contributed to her hegemonic status and thereby greatly influencing the unending water conflict in the Nile basin. The methodology employed in this study mainly relied on secondary method of data collection. It is concluded that the emergence of a new state, customarily carries with it an immense array of challenges on outstanding issues with the mother state, and the sharing and managing of common resources. Further, it concluded that the challenges in South Sudan are compounded by the inability of South Sudan and The Sudan to resolve some of the outstanding issues before secession. For reasons related to hydro-politics, the SPLM/A relinquished all responsibility for the Nile waters during the interim period to the central government. It is recommended that South Sudan should begin to implement the call of the policy guidelines to protect its portion of the Nile River basin and to generate poverty reduction activities through a good governance system which views the Nile, the resources and the people who live along its basin as shared resources

## **ABBREVIATIONS AND ACRONYMS**

<b>AU</b>	African Union
<b>CFA</b>	Cooperative Framework Agreement
<b>CPA</b>	Comprehensive Peace Agreement
<b>DRC</b>	Democratic Republic Of Congo
<b>EAC</b>	East African Community
<b>GAP</b>	Southeast Anatolia Development Project (Turkish acronym)
<b>GOSS</b>	Government of Southern Sudan
<b>HYDROMET</b>	Hydro-Meteorological Survey Project
<b>ICCON</b>	International Consortium for Cooperation on the Nile
<b>ICSS</b>	Interim Constitution of Southern Sudan
<b>IDSA</b>	Institute for Defence Studies
<b>NBC</b>	Nile Basin Commission
<b>NBI</b>	Nile Basin Initiative
<b>OAU</b>	Organization of African Unity
<b>PHG</b>	Palestine Hydrology Group
<b>PJTC</b>	Permanent Joint Technical Commission
<b>PKK</b>	Kurdish Workers Party
<b>SPLM/A</b>	Sudan People's Liberation Movement/ Army
<b>TECCONILE</b>	Technical Cooperation Committee for Development and Environment Protection
<b>UN</b>	United Nations
<b>USA</b>	United States of America

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## CHAPTER ONE: INTRODUCTION TO THE STUDY

### 1.1 Introduction

The study carried out was on investigation of The River Nile Politics with emphasis on the role of South Sudan Because of population increase and increasing demands for more water for agriculture and industry, a large number of countries fall into the category of 'water-scarce' nations. It was projected that in Africa alone 300 million people, a third of the continent's population, would be forced to live under water scarcity situations by the year 2000. Nine of the fourteen countries that make up the Middle East already face the problem of water scarcity.<sup>1</sup>

The Nile River is subject to political interactions. The waters of the Nile; which is one of the great rivers of the world, has been feeding millions, and bringing forth life in the region, and has fascinated humankind. It is the world's longest rivers and has captivated economic, social, and political policymakers before the dawn of colonialism.<sup>2</sup>

The name 'Nile' comes from the Greek word 'Neilos', which means a valley or river valley. It is the world's longest river flowing 6700 kilometers (km) through eleven nations of Central, East and North Africa comprising of Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, and Uganda. It has two major tributaries; the Blue Nile and the White Nile.<sup>3</sup> Considering the catchment area of the Nile Basin is 3 Million square meters and covers almost 10 percent of the Africa's land surface and 2.3 percent of the world's land surface, Sudan has the largest size (1.9 million km<sup>2</sup>) whereas, of the four major tributaries to the Nile, three originate from Ethiopia - the Blue Nile, Sobat and Atbara. The modern history of hydro politics in the Nile basin is very complex and has had wide ramifications both for regional and global developments.<sup>4</sup>

Water is a critical resource for all countries that share the basin, but it is especially important for the development and survival of Egypt, Eritrea, Ethiopia and the Sudan. For many years,

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<sup>1</sup> Tafesse, T. (2009). *The Hydropolitical Assessment of the Nile Question: An Ethiopian Perspective*. Retrieved August 3, 2013, from Water International: <http://www.tandfonline.com/doi/abs/10.1080/02508060108686945#.UjwdidJ7c8M>

<sup>2</sup> Cesar, Guvele. (2003). "The Nile Basin Initiative and its Implication on Post Conflict South Sudan". *Preparatory workshop*. Missouri: University of Missouri

<sup>3</sup> M. El-Fadel, (2003). "The Nile Basin: a Case Study in Surface Water Conflict Resolution". *Journal of Natural Resources and Life Sciences Education*, 32(7), pp. 107-117

<sup>4</sup> Gebeto , P. J. (2010). *No More Thirst: Citizens of The Nile*. Rehobot Printers. pp1-7

there have been tensions among these countries over the use of the Nile<sup>5</sup>. At the heart of the tensions are the 1929 and 1959 Nile Water Agreements, respectively between Britain and Egypt and Sudan and Egypt, which have been rejected by upstream states. Tanzania, for example, has declared that it would use Lake Victoria, which feeds the Nile, to supply its parched communities, straining relations with Egypt. Tanzania is an impoverished nation of 35 million people, and suffers recurrent droughts due to inadequate rainfall, deforestation, and soil erosion. In 2004, Tanzania began to build a pipeline that would supply drinking water to approximately 1 million of its inhabitants. In a similar vein, Kenya has begun to exploit fresh-water related opportunities such as fisheries, energy, transport, cattle keeping, and agriculture for approximately 3 million people who live close to Lake Victoria.<sup>6</sup>

For Ethiopia, the Nile is critical. Some 40 percent of its population lives on rain-fed subsistence farming in the highlands, the zone of highest rainfall, which provides 86 percent of the Nile waters<sup>8</sup>. But the rainfall is highly erratic, and the population pressure on Ethiopia's land has made the system of extensive cultivation unsustainable. Ethiopia has expressed interest in developing its water resources by building a series of micro-dams on the Blue Nile. In the past such plans have led to tensions between Egypt and Ethiopia.

In 1980, Egypt nearly went to war with Ethiopia after Addis Ababa opposed attempts by Egyptian President Sadat to divert the Nile waters to the Sinai desert. In the 1990s, faced with the need to establish food security after the famines of the 1980s, Ethiopia's new leaders promoted plans to divert the Nile waters for irrigation. However, such efforts have not yet matured because of international financial institutions' policy of not funding any projects on the Nile without approval of all affected riparian states in the region.<sup>7</sup>

In pursuit of a long term development and management of the Nile, the Nile Basin Initiative (NBI) was conceived. Launched in 1999, NBI is an inter-governmental

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<sup>5</sup> Waterbury, J. (2002). *The Nile Basin: national determinants for collective action*. New Haven: Yale University Press.

<sup>6</sup> Waterbury, J. (2002). *The Nile Basin: national determinants for collective action*. New Haven: Yale University Press.

<sup>7</sup> Rwambali, Faustine. (2004). *Tanzania Ignores Nile Treaty, Starts Victoria Water Project*. Retrieved August 17, 2013, from All Africa: <http://allafrica.com/stories/200402110016.html>

Organization dedicated to equitable and sustainable management and development of the shared water resources of the Nile Basin. Its member states include Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda with Eritrea as an observer.<sup>8</sup>

## 1.1 Problem Statement

The Republic of South Sudan is the world's youngest nation. It became independent from Sudan after a referendum held in January 2011, and the newly formed country took on the difficult challenge of building a nation state after decades of civil war. As with any new country in this position, South Sudan is facing numerous political, economic, diplomatic, environmental and popular challenges.

According to the United Nations, it is one of the least developed countries in the world<sup>9</sup>, poverty is prevalent in every region of the country, economic development is proving slow and tedious, and tensions among the country's various ethnic groups remain extremely problematic, as was made clear by the recent outbursts of violence between armed groups of ethnic Dinka, loyal to current president Salva Kiir Mayardit, and Nuer, who support former Vice President Riek Machar<sup>10</sup>. The violence is still ongoing, and despite repeated requests for peace talks, currently no sustainable solution seems in sight.

The emergence of a new nation in a region invariably influences that region's political situation. When South Sudan became independent the Nile Basin gained an extra riparian state, bringing the total up to eleven<sup>11</sup>. Negotiations over the use of the Nile waters have been going on since colonial times, and despite numerous efforts to come to a comprehensive

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<sup>8</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press

<sup>9</sup> Ufulle Ga-Aro Festus, Kenyi. (2011). *Water Security and Hydro politics of the Nile River: South Sudan's National Security In the 21st Century* (Master's Thesis, U.S. Army Command and General Staff College).

<sup>10</sup> *Interim constitution of South Sudan*. (2005). Retrieved April 21, 2013, from <http://www.refworld.org/pdfid/4ba74c4a2.pdf>. pp. 87.

<sup>11</sup> Salman, S. (2011). "New State of South Sudan and the Hydro-politics of the Nile Basin". *Water International*, 36(2), pp.154-166.

agreement, so far none has been reached. South Sudan's emergence as a state brought a new player to the table, and at the beginning it was unclear which direction the country would go in, if it would stick to the positions it took under Sudanese rule, or seek to side more with equatorial states such as Uganda and Kenya.

The independence of South Sudan, and the birth of the fifty-fourth state on the African continent, was a pivotal and historic event for the state of South Sudan, and for the continent as a whole. The significance of the event goes beyond a mere change in the political history or geographical boundaries. South Sudan dominates, and is dominated by, the White Nile. It is the area where most of the tributaries of the White Nile converge. About 90% of South Sudan falls in the Nile Basin, and about 20% of the Nile Basin falls in South Sudan: that is, about one third of the size of the Nile Basin in all the Sudan before secession of the South.<sup>12</sup>

In pursuit of a long term development and management of the Nile, the Nile Basin Initiative was conceived. Launched in 1999, Nile Basin Initiative is an inter-governmental Organization dedicated to equitable and sustainable management and development of the shared water resources of the Nile Basin. Its member states include Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda with Eritrea as an observer<sup>13</sup>.

South Sudan sought full membership of the Nile Basin Initiative two months after it became independent on 9th of July, 2011 and was admitted on the 5th July, 2012 by the Nile Council of Ministers (Nile-COM), during their 20th regular meeting held in Kigali, Rwanda<sup>14</sup>. South Sudan, currently, also holds the Chairpersonship of the Nile Council of Ministers. Its membership comes amidst an ongoing dispute over Nile water usage between Ethiopia and Egypt. Member countries hope that Nile Basin Initiative would eventually replace a colonial era agreement that gave Egypt the lion's share of the Nile's resources

The study discusses water resources issues leading to a political problem which have been listed in the Southern Sudan Referendum Act as one of the pending issues between the two

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<sup>12</sup> Salman, S. (2011). "New State of South Sudan and the Hydro-politics of the Nile Basin". *Water International*, 36(2), pp.154-166.

<sup>13</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>14</sup> *South Sudan Admitted to the Nile Basin Initiative*. (2012). Retrieved June 12, 2013, from Nilebasin.Org:[http://www.nilebasin.org/newsite/index.php?option=com\\_content&view=article&id=127%3Asouth-sudan-admitted&catid=40%3Alatest-news&Itemid=84&lang=en](http://www.nilebasin.org/newsite/index.php?option=com_content&view=article&id=127%3Asouth-sudan-admitted&catid=40%3Alatest-news&Itemid=84&lang=en)

states. Consequently, southern Sudan is now demanding a share in the Nile waters allocated to the Sudan under the 1959 Agreement. The issue might have been easier to negotiate and resolve before the referendum when the two states were still one country<sup>15</sup>. This is because negotiations between two states are generally more difficult than between two parts of the same state.

Sudan has large irrigable lands that have hitherto not been developed, and it has recently revived the four-decade-old slogan of Sudan being the breadbasket of the Arab world. Following completion of the Merowe Dam on the Nile River in northern Sudan, the government of Sudan has started implementing a project for increasing the height of the Roseiris Dam. The government has also started the leasing of large tracts of land to foreign investors and other countries for the growing of food crops<sup>16</sup>.

On the other hand, southern Sudan is claiming a share of the Nile waters allotted to the Sudan to meet the needs of its agricultural projects that need rehabilitation, and its existing and planned projects, as well as the growing needs of the returning southern Sudanese. Work on the Bedden Dam on Bahr el Jebel, south of Juba, is already underway. This would mean that the competing demands of the two countries may not be easy to meet with the current allocation to the Sudan of 18.5 BCM. The factors enumerated under the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses regarding utilization of shared stipulates that watercourses should provide helpful guidance to the parties in deciding how to share the 18.5 BCM<sup>17</sup>. Such factors would include, *inter alia*, the current and planned uses of northern Sudan on the one hand, and the expected future uses of southern Sudan; the amount of Nile waters crossing from southern Sudan into northern Sudan and Egypt; as well as the heavy rains in southern Sudan as an alternative source of water for southern Sudan.

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<sup>15</sup> Salman, S.M.A., 2011, forthcoming. The Abyei territorial dispute and its resolution process. In: J.Unruh and R. Williams, eds. *Land and post-conflict peacebuilding*. Vol. 2 of *Peacebuilding and natural resources*. London: Earthscan.

<sup>16</sup> Salman, S.M.A., 2011, forthcoming. The Abyei territorial dispute and its resolution process. In: J.Unruh and R. Williams, eds. *Land and post-conflict peacebuilding*. Vol. 2 of *Peacebuilding and natural resources*. London: Earthscan.

<sup>17</sup> Garretson, A., 1967. The Nile basin. In: A.H. Garretson, R.D. Hayton and C.J. Olmstead, eds. *The law of international drainage basins*. New York: Oceana Publications, 284–292.

Negotiations may also bring up the issue of the waters lost in the swamps of the southern Sudan and the need to complete the Jonglei Canal to augment the flow of the White Nile, and provide more water for sharing. The fact that southern Sudan is not part of the Blue Nile that provides the bulk of the Nile waters is another factor. Thus, the negotiations on the reallocation of the 18.5 BCM allotted to the Sudan under the 1959 Agreement are not expected to be easy<sup>18</sup>.

There is need to investigate the prospects and implication of post-independence South Sudan on the water politics of Nile basin states. Specifically, to determine the implications they have on the security of the new state of South Sudan. The analyses the implication of Nile Basin Initiative for a post conflict South Sudan, the emergence of new strategic equations and its consequences on the water political realities of the region.

### **1.3 Research objective**

- (a) To analyze the implications of Nile Basin Initiative programmes in the reconstruction and development of the now the independent South Sudan.
- (b) To analyse the Nile Basin Initiative agreements for South Sudan through on the use of the Nile Waters and its implication on the hydro politics of the region.
- (c) To form a comprehensive and complete overview of the current situation, and sketch informed possible solutions in combating conflicts arising from shared river systems.

### **1.4. Research Questions**

1. To what extent does the potential conflict over the Nile affect South Sudan's national security strategy?
2. What strategies or roles which Nile Basin Initiative employs to aid South Sudan make political and economic agreement in the region?

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<sup>18</sup> Howell, P., Lock, M., and Cobb, S., eds, 1988. *The Jonglei Canal: impact and opportunity*. Cambridge: Cambridge University Press.

## **1.5. Justification**

The Nile River presents unabated challenge that may shape and dominate the politics of the region. It is also a present dilemma with the independence of South Sudan. The study of the Nile Basin is of great significance to Republic of South Sudan. It informs the young government in its national security and military strategies, and economic development policies.

## **1.6. Literature Review**

The literature review provides analysis justifying the approaches that have been employed to arrive at new knowledge which is still valid and reliable. It consists of a catalogue of literally contributions on this field. There is a gap in the existing literature on water issues of South Sudan as now an independent state. The new South Sudan Republic is yet to articulate most water policies and strategies so most of the research entails reverting to data collected before south Sudan's succession from Sudan<sup>19</sup>.

The purpose of this chapter is to review theories on water politics and the prevailing conditions and management of the river Nile resources. The various published studies conducted on water politics is reviewed both internationally and regional and subsequently issues pertaining the Nile basin and South Sudan.

## **1.7. Hydro - Politics in the International Arena**

According to Dinar.S<sup>20</sup> in his detailed analysis of water conflict posits that there are four elements embedded within as far as literature review is concerned. These collations are conflict, security, environment, society and culture. These elements are hydro based literature shaping them into distinct contents and forms conflict. Water conflicts can be traced back throughout history of mankind as argued by Gliek. He documents that there are over 150 episodes of tension and water relations conflicts amongst states since 3000BC however he warns that the world population explosion combined with environmental hazards in arid areas world water has become what he refers as high politics and possibilities.

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<sup>19</sup> *South Sudan Seeks Membership of Nile Basin Initiative*. (2011). Retrieved May 10, 2013, from Sudantribune.com: south-sudan%20-seeks-membership-of.4024

<sup>20</sup>Dinar, S. (1999). "The Israeli-Palestinian Water Conflict and its Resolution: A View through International Relations Theory". *40th Annual Convention*. Washington DC: School of International and Public Affairs Columbia University, International Studies Association.



Wilner<sup>21</sup> claims that water is now issue of national security. He contends that water security ought to replace traditional high politics. Ohlsson<sup>22</sup> admits that water has become matter of national security and may lead to international states conflict. There may be an area of cooperation among states that share trans-boundary international river systems. On contrary Dinner's study appears to have embraced the view that water scarcity may not be the major factor that drives state into war. In the case of Israel and Palestine conflict is one where water is causation of low politics becomes embedded in the high politics of both people of Israel and Palestine are struggling to establish or sustain states thus making it hard to justify that is a water relations conflict<sup>23</sup>.

### **1.8. The Hydro-politics of the Nile Basin**

As presented in the background, the White Nile amalgamates itself in the new state of South Sudan. Eritrea shares parts of the Setit River, which is a branch of the Atbara River, with Ethiopia, where the Blue Nile and its tributaries originate. Egypt and Sudan are the lowest downstream riparian states. The 11 states share the Nile River with wavering contribution, uses and stakes. The stakes and interests of Sudan, Ethiopia and Egypt are classified as very high; those of Uganda as high; those of Burundi, Tanzania, Kenya and Rwanda as moderate; and those of the Democratic Republic of Congo and Eritrea as low.<sup>24</sup> Because of the size of the White Nile in South Sudan, the heavy water losses at the swamps there, and the possibility of conservation of a good part of such water, the stakes of South Sudan can be classified as very high, almost at par with Egypt, the Sudan and Ethiopia.

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<sup>21</sup> Wilner, A. S. (2005). "Fresh Water Scarcity and Science of Fresh Water and the Politics of Conflicts". *Journal of Military and Strategic Studies*, 8(1).

<sup>22</sup> Ohlsson, L. (1995). "The Role of Water and the Origins of Conflicts". In L. Ohlsson (Ed.), *Hydropolitics Conflicts Over Water as a Development Constraints* (pp. 1-28). Dhaka: University Press Ltd

<sup>23</sup> Palestinian Hydrology Group (PHG). (2004). *Water for Life - Israeli Assault on Palestinian Water, Sanitation and Hygiene During the Intifada*. European Community Humanitarian Office, Oxfam-Great Britain, Palestinian Hydrology Group. Oxford: Alden Press Ltd Publication no 5, Alden Press Ltd, Oxford

<sup>24</sup> Waterbury, J. (2002). *The Nile Basin: national determinants for collective action*. New Haven: Yale University Press.

Notwithstanding, the wide range of interests and contributions to the River flow, Egypt and to a lesser extent Sudan, have for a long time dominated the Nile River. In 1959, Egypt and Sudan reached an Agreement for the Full Utilization of the Nile Waters (the 1959 Nile Agreement). This Agreement established the total annual flow of the Nile stood at Aswan as 84 BCM, and allocated 55.5 BCM to Egypt and 18.5 BCM to the Sudan<sup>25</sup>. The remaining 10 BCM represent the evaporation losses at the large reservoir created by and extending below the Aswan High Dam in South Sudan to The Sudan and Egypt. The construction of the Aswan High Dam in Egypt, and the Roseiris Dam on the Blue Nile in Sudan was also sanctioned in the Agreement. For assurance of cooperation in the management of the Nile waters, it was established in the Agreement for there to be a Permanent Joint Technical Committee with an equal number of members from each country. Despite the claims of the other riparian states to a share of the Nile waters, the two countries apportioned the entire flow of the Nile at Aswan to themselves. They also conferred the Permanent Joint Technical Committee with the authority to supervise the use of such share, if allowed.<sup>26</sup>

This position is rejected by the other riparian states which see it as an attempt to confirm the hegemony of Egypt and Sudan over the Nile, and to get them to recognize the 1959 Agreement. At the same time, those other riparians also reject the 1929 Nile Agreement which gave Egypt veto power over any project in the then British colonies of Sudan, Kenya, Tanganyika and Uganda which would negatively affect Egypt. They contend that they are not bound by this agreement because they were not parties to it.<sup>27</sup> These countries also entreated the Nyerere Doctrine, which gave treaties concluded during the colonial era two years to be renegotiated; otherwise they would lapse after that period.<sup>28</sup> Egypt, on the other hand, invokes the principle of state succession to support its claim that the 1929 Agreement remains valid and binding. Egypt and Sudan contend that their historic and existing uses and rights are protected under international law and not negotiable. The other riparian states also invoke international law in support of their claims to a share of the Nile waters. They argue that since

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<sup>25</sup> Gleick, P. H. (2000). "Coping with the Global Fresh Water Dilemma: The State, Market Forces, and global Governance". In P. S. Chasek (Ed.), *The Global Environment in the Twenty-first Century: Prospectus for International Cooperation*. New York: United Nations Printing Press. pp.204-222.

<sup>26</sup> Ibid

<sup>27</sup> Wilner, A. S. (2005). "Fresh Water Scarcity and Science of Fresh Water and the Politics of Conflicts". *Journal of Military and Strategic Studies*, 8(1).

<sup>28</sup> Ibid

almost the entire flow of the Nile originates within their territories, they are entitled to an equitable and reasonable share of that flow<sup>29</sup>.

The 1959 Nile Agreement also addressed the water losses in the vast swamps and marshes of South Sudan, and the need for conservation and use of such waters<sup>30</sup>. Under the Agreement, the two parties would carry out projects for conserving some of the waters of these swamps in order to increase the flow of the Nile. The benefits and costs of such projects are to be shared equally between the two parties. The Agreement gave Egypt the right to undertake this work by itself if it needs the water before Sudan does. When Sudan is ready to use its share, it would reimburse Egypt for its share of the cost of the work<sup>31</sup>. Thus, the swamps and marshes of South Sudan have been viewed by Egypt and The Sudan as a major potential source of additional water for their use.

### **1.9. Use of Water for South Sudan**

There exists no scientific data to show South Sudan's current water use or future needs. The 1959 Water Agreement gives Sudan 18.5 BCM per year<sup>32</sup>. This could be interpreted that South Sudan's share could be within the total share allocated to the country<sup>33</sup>. Two ways to consider the apportionment of water rights would be based on population or land areas. In this regard and in reference to pre- July 2011 Sudan, 27 percent of the total population lives in South Sudan, while 33 percent of the total land area is now in the country of South Sudan. Since 1959, there have been no major projects that require the additional use of water<sup>34</sup>. The

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<sup>29</sup> Wilner, A. S. (2005). "Fresh Water Scarcity and Science of Fresh Water and the Politics of Conflicts". *Journal of Military and Strategic Studies*, 8(1).

<sup>30</sup> Gleick, P. H. (2000). "Coping with the Global Fresh Water Dilemma: The State, Market Forces, and global Governance". In P. S. Chasek (Ed.), *The Global Environment in the Twenty-first Century: Prospectus for International Cooperation*. New York: United Nations Printing Press. pp.204-222.

<sup>31</sup> Ohlsson, L. (1995). "The Role of Water and the Origins of Conflicts". In L. Ohlsson (Ed.), *Hydropolitics Conflicts Over Water as a Development Constraints* (pp. 1-28). Dhaka: University Press Ltd.

<sup>32</sup> Waterbury, J. (1979). *Hydropolitics of the Nile Valley. Contemporary Issues in the Middle East*. Syracuse, NY: Syracuse University Press. pp.69

<sup>33</sup> Ufulle Ga-Aro Festus, Kenyi.(2011). *Water Security and Hydro politics of the Nile River: South Sudan's National Security In the 21st Century* (Master's Thesis, U.S. Army Command and General Staff College). Retrieved May 10, 2014 from <http://dtic.mil/cgi-bin/GetTRDoc?AD=ADA556296>

<sup>34</sup> EWOC (2002). *Water and Wastewater Situation in the West Bank Governorates During and Following the IDF Re-occupation March, April 2002 - Draft Interim Report*. Jerusalem: Emergency Water Operations Centre (USAID, UNDP, Oxfam).

major agricultural projects proposed to be implemented in South Sudan were not implemented or few of those, which did take off, used rain fed water thus, South Sudan's current use of Nile River water is minimal.

After the signing of the Comprehensive Peace Agreement in 2005, the Republic of South Sudan made ambitious plans to change the face of the new country in the region. The government declared that its major priority would be assuring the country's enormous agricultural potentials are realized and it attains food security to meet the food demand of its growing population.

South Sudan has plans to construct a number of dams on the White Nile in order to provide hydroelectric power and water for its economic development. The largest of these dams is Fula Full hydroelectric dam. It would produce 1,200 MW which would be able to supply the Greater Equatoria Region of South Sudan and supply Northern Uganda as well as Northern DRC.<sup>35</sup> Turning South Sudan into an agriculture producing country requires more water. Moreover, construction of more dams on the Nile means significantly reducing the overall flow of water in the lower Nile since dams produce an overall loss in water, primarily through surface evaporation. Still more, the demand for clean drinking water per capita is also expected to increase too. In sum, in the next few years the water demand for South Sudan would increase rapidly and significantly.

### **1.10. Water Resources under the Comprehensive Peace Agreement (CPA)**

One feature of the CPA that may come as a surprise to the reader is that the Wealth Sharing Agreement that addressed, *inter alia*, oil, land and other natural resources did not address water resources. Instead, water resources were addressed under the Power Sharing Agreement. The Power Sharing Agreement and subsequently the Interim Constitution (Schedule A, paragraph 33 of each document), granted the national government exclusive jurisdiction over "Nile Water Commission, the management of the Nile Waters, trans boundary waters and disputes arising from the management of interstate waters between northern states and any dispute between northern and southern states."<sup>36</sup> Both instruments devolved to the government of South Sudan the authority to coordinate South Sudan services

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<sup>35</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>36</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

and establish minimum standards in a number of areas, including water provision and waste management (Schedule B, paragraph 9 of each document).

The government of South Sudan was also given jurisdiction over natural resources and forestry, as well as over disputes arising from the management of interstate waters within South Sudan. Thus, jurisdiction over the Nile and other transboundary waters was placed exclusively with the national government in Khartoum, while local water-resources management was devolved to the government of South Sudan. Given the size of the Nile Basin in South Sudan and the fact that most of the projects to augment the flow of the Nile would take place there, it may seem counterintuitive that the SPLM/A did not push for a more active role in Nile water management during the interim period, as it did with oil, land and other natural resources. In the author's view, there are two main reasons for this decision<sup>37</sup>.

The primary reason relates to the wide and acute controversies surrounding rights to the Nile River waters, as described in the previous section. Attempting to bridge their differences and to establish a more conducive environment for cooperation, the 10 riparian states set up, with the assistance of the World Bank, the United Nations Development Programme (UNDP) and some donors, the Nile Basin Initiative (NBI) in 1999. The NBI has described its vision as achieving "sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources".<sup>38</sup> One of the goals of the NBI has been to get the Nile River Basin Cooperative Framework Agreement (CFA) concluded by all the Nile riparian countries for regulating the sharing and management of the Nile Basin. However, despite intense discussions and negotiations on the CFA since 2001, the Nile riparian states have failed to reach a final agreement on the CFA. Five of the riparian states – Ethiopia, Kenya, Rwanda, Tanzania and Uganda – signed the CFA in May 2010. Burundi and the Democratic Republic of Congo have indicated their intention to sign, and Burundi did so on 28 February 2011. However, the Democratic Republic of Congo, as of the time of writing, has not signed the CFA. Sudan and Egypt vehemently oppose the CFA, and Eritrea has remained an observer, and not a full member, of the NBI, perhaps because of its limited

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<sup>37</sup> Ibid

<sup>38</sup> Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 201-214.

interests and stakes in the Nile.<sup>39</sup> To enter into force and effect, the CFA requires ratification by six of the riparian countries.<sup>40</sup>

One of the major differences over the CFA relates to the existing uses of water by Sudan and Egypt, for which the two countries demand recognition by the other riparians, as well as in the CFA. Another difference relates to treaties concluded during the colonial era, particularly the 1929 Agreement. Other differences concern notification for planned projects, and whether the CFA should be amendable by a majority, or by consensus.

Differences on the first three issues have dominated the Nile discussions since the 1960s when the Nile Equatorial countries gained their independence, and when Ethiopia's request to be a party to the 1959 Nile negotiations was ignored by Egypt and Sudan. As such, major differences between the Nile riparian states existed for a long time, and were brought to a head, and indeed exacerbated, by the negotiations over the CFA, resulting in heightened tension, accusations and threats.

While the SPLM/A left responsibility for the Nile waters under the CPA and the Constitution to the national government, the SPLM/A practically affirmed itself in this area from the very beginning of the interim period. The SPLM/A made it clear during the interim period that the Jonglei Canal Project was not in its list of priorities, and indicated the need for more thorough studies of the canal and its environmental and social effects.<sup>41</sup>

### **1.11. Theoretical Framework**

#### **1.12. Collier-Hoeffler Theory**

There have been several applications of the earlier conflict theorists propounded by earlier scholars such as Lenin, Weber and Karl Marx one of such interpretation of recent times. Collier-Hoeffler Theory also known as C-H model<sup>42</sup> analysis conflict is based on the framework of many valuables such as tribes, identities, economics religion and social status

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<sup>39</sup> Salman, S. (2011). "New State of South Sudan and the Hydro-politics of the Nile Basin". *Water International*, 36(2), pp.154-166.

<sup>40</sup> Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 201-214.

<sup>41</sup> Mayardit, S. K. (2010). "Salva Kiir: Supranational or Separatist?" (R. Yassin, Interviewer) Juba, South Sudan: Sudanile

<sup>42</sup> Zewdie, A. (1990). *Ethiopian Perception on Environmental Protection and Management: Cooperation in the Nile Basin*. Nairobi: The Integrated Development of Nile Basin Waters Centre of Near and Middle Eastern studies, SOAS, University of London.

in Africa. The data is subjected to regression analysis and concluded with many valuables identified in Africa. The theory examines five year increment in which conflict occurs and of five years 1600 inputs in which no conflicts occur concluded those economic factors rather than ethnic or religious identities are the cause of conflict in Africa.

Karl Marx<sup>43</sup> recognized the significance of the social and interactions within a given society. Interactions that are depicted by conflict hence the conflict between the have and have not's forms a blend of the forces of the interactions within a system. Marx reiterated the fact that these social and human interactions is dialectical in the sense that when a dominant nation seeks to control dependent nations or peripheral countries what yields in consequence is the tension to rebel against the oppressor by dependent states in order to agitate for equitable and fair share of natural resources.

This point is consistent with the C-H MODEL when they argued with empirical data on the causes of conflicts in Africa and concluded that economic factors are the significant predictor of conflict in many parts of the African continent. Therefore according to C-H economic reasons contributed to a large extent the greater portion of conflicts in Africa while these economic reasons are valid and numerous due to the resources available in a given region and the allocation of resources whether naturally endowed or man made any form of competition to control these resources or allocations of resources would naturally generate two outcomes tension and potential conflict and cooperation.

In this case Egypt's sole access to the Nile for centuries now has invariably gratified itself as the sole control of the Nile water resources<sup>44</sup>. As a result of the 1929 mandate that gave Egypt absolute control of water resources in the Nile she has worked to sabotage many riparian countries through other diplomatic and international treaties.<sup>45</sup> Ethiopia have vowed to engage Egypt over the control of water resources in the Nile riparian countries to abrogate all previous agreement hitherto entered by Egypt consequently, Ethiopia is a recipe for conflict in the north eastern Africa regional water intelligence report.

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<sup>43</sup> Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 201-214.

<sup>44</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>45</sup> Mayardit, S. K. (2010). "Salva Kiir: Supranational or Separatist?" (R. Yassin, Interviewer) Juba, South Sudan: Sudanile

Cascao<sup>46</sup> argued that the asymmetrical flow of water resources in the Nile river basin and the access to physical flow of the blue Nile by Egypt and Sudan in the downstream has extremely heighten hydro political tension over the Nile. These tensions have attracted the United Nations organizations intervention and the international organizations on matters concerning the distribution and allocation of water resources in the Nile river basin and in which compensation are offered to other riparian countries unequal access to the distribution of water resources especially those on upstream that only benefit from rainfall<sup>47</sup>.

### **1.10 Methodology**

The present research employed a qualitative approach, as it sought to cover the exploratory, descriptive and explanatory elements of the research process. The research is considered exploratory, as it sought to understand the phenomenon of the independence of South Sudan, the implications and prospects on water politics of the Nile Basin. Other attempts at delivering a comprehensive analysis of the water politics of the Nile basin tended to be more historical which will be useful. The research aim is to contribute to understanding the water politics given the prevailing conditions of the now independent South Sudan.

The research seeks both descriptive and explanatory through descriptions and analysis of current research applying Collier Hoetter empirical data to provide assessment of both findings through perspective<sup>48</sup>. The research relied on deductive and inductive hypothesis testing and hypothesis generating. Each section of the research lay out a chronological sequence of events paying attention to the manner in which each affect other and going further to articulate a cohesive structure for the analysis of the events configuring them in a particular manner which emphasis aspects of importance for research purpose.

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<sup>46</sup> Cascão, A.E. (2009). "Changing Power Relations in the Nile River Basin: Unilateralism Vs. Cooperation?". *Water Alternatives* 2(2) p.p 245.

<sup>47</sup> Granit, J., Cascão, A., Jacobs, I., Leb, c., Lindström, A., & Tignino, M. (2010). *The Nile Basin and the Southern Referendum*. SIWI, UNDP Water governance. Stochkolm: Regional Water Intelligence Report

<sup>48</sup> Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 201-214



### **1.11 Research Design**

This approach contains considerable advantages to the research undertaken here, as no deductive arguments about the changing purpose of force are sufficiently well specified to test with dispositive results. On the other hand, the use of induction only does not provide clear guidance as to where the process of inquiry should commence. Thus, combining both deduction and induction provides a good starting point for the research, but also allows the research design to be flexible enough to meaningfully evaluate the usefulness of findings in a reflexive manner.<sup>49</sup>

### **1.12 Methods of Data Collection**

The research mainly relied on secondary method of data collection. This is what has already been written by different authors and is in the libraries on the River Nile Politics and the role of South Sudan

### **1.13 Data Analysis**

Building on this approach the research used discourse analysis as a primary means of investigation. Using secondary for instance academic research analysis of primary materials reports, media analysis and other forms of documentation will be the source of material to apply discourse analysis to generate, compare and assess findings. The study provides critical analysis of the data collected in order to justify the approaches that have been employed to arrive at a new knowledge and remained valid and reliable

### **1.15. Chapter Outline**

Chapter one introduces the topic of the research study by first setting the broad context of our research study, the statement of the problem, justification, theoretical framework, literature review, and the methodology of the study. Chapter Two provides an analysis of International water problems. It looks at the Geographical and political implications of water conflicts citing examples from South Asia and The Middle East.

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<sup>49</sup> Ibid

Chapter Three provides the background of the Hydro politics and the Regional Stability of the Nile Basin. This chapter would give an account of the background of hydro politics in the Nile Basin providing a chronological evolution of cooperation in the Nile Basin

Chapter Four looks at the implication of an independent South Sudan on the Nile Basin. It would also embark on identifying and providing mechanisms and tools for the analysis of the implications and prospect for South Sudan's future in the Nile Basin.

Chapter Five is the final chapter in the research in which conclusions and recommendations of the study are provided.

## **CHAPTER TWO: ANALYSIS OF INTERNATIONAL WATER PROBLEMS**

### **2.1. Introduction**

Research carried out on conflict and cooperation in regard to trans-boundary water generally consider that relations between states (interstate) over shared water resources as being distinct from relations within a state (intrastate). Despite the fact that connections have been made between international and regional water relationships, it is plausible that, in some instances, international water conflict and cooperation may also be affected or influenced by domestic water events and in return domestic water events may be affected or influenced by international water events. Trans-boundary rivers are shared by multiple sovereign states, creating conflicting demands on the river's resources and further complicating already difficult political legacies. This combination hinders cooperation over the communal resource and makes trans-boundary river basins areas of conflict.

To resolve such conflicts, the involvement of a third party mediator with the capabilities to offer incentives to reluctant riparians, coupled with the creation of a management institution to address conflicts as they arise, offers the best means of addressing both the short term issues of getting states to agree to a cooperative arrangement for the river and the long term commitment problems that would lead states to renege on the agreement. This chapter basically seeks to investigate the relationship of water interactions to the broader international affairs as well as its dynamics across geographical scales.

### **2.2. Geographical and political implications of water conflicts**

Direct manifestations of water conflict are well documented; however, water related disputes can also have broader geographical and political repercussions. This is evident in the *intifada*,<sup>50</sup> or Palestinian uprising, that broke out in the Gaza Strip in 1987

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<sup>50</sup> Nishat, A., & Faisal, M. (2000). "An Assessment of the Institutional Mechanisms for Water Negotiations in the Ganges-Brahmaputra Meghna Basin". *International Negotiation*, 5 (2), 289–310.

and quickly spread to the West Bank. During three decades that constituted the Israeli occupation in the Gaza Strip, it was noted that there was deterioration of quality of surface and groundwater supplies. Water related disease was also on the rise during this time<sup>51</sup>

Water security issues have played a role in regional instabilities in many parts of the world. Nishat (2000) points that in 1960; India built a barrage at Farakka on the Ganges River to control siltation at Calcutta's seaport some 100 miles to the south. According to Nishat, this decision had a number of adverse impacts on Bangladesh like impeded navigation, degraded surface and groundwater supplies, declining fisheries, and other water associated public health risks. In Southern Africa, it has been suggested that water security concerns was one possible motive behind South Africa's 1998 deployment of troops to Lesotho. South Africa deployed troops to the upstream riparian state in response to political turmoil because of the importance to the Orange River to the region.<sup>52</sup>

In spite of the history of water related discord, conflict and cooperation, it has rarely been methodically assessed if there conclusively exists relationships between water related events at the domestic and international geographic scales and between water and non-water relations. According to Wolf *et al*, in spite of recent empirical study having found an overall correlation between general bilateral relations among nations and bilateral relations regarding water resources, the study did not clarify the directionality or consistency of linkage across countries and regions. The study which assessed factors contributing to international water conflict and cooperation also did not explain if international issues drive domestic relations over water or vice versa.<sup>53</sup>

### **2.3. Water conflict in South Asia**

In South Asia, water related are especially threatening because the highly volatile political relations between a numbers of the countries in the region is highly volatile, be it relations between India and Bangladesh, India and Pakistan, or India and Nepal. Most of the articles and reports allude that the major problem with water issues in South Asia, seem to be

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<sup>51</sup> Ibid

<sup>52</sup> Wolf, A. T. ( 2000). "Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations". In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.

<sup>53</sup> Ramaswamy Iyer.(2003). "Relations with Neighbours." *Water: Perspectives, Issues, Concerns*. New Delhi: Sage Publications India Pvt. Ltd.

political. Ramaswamy Iyer in his seminal work explains that the main problem when it comes to water issues is not that water issues complicate political issues; he claims that this is a rare occurrence. He goes on to point out that it is actually complicated political issues or situations that make the smallest water issues between countries, intractable.<sup>54</sup> This is evident in the relationship between, India and Bangladesh where the issues of Chakma refugees, illegal immigrants, insurgency operations, trade balance and border demarcation issues, trade balance, just to mention but a few, that have been credited in making any resolution of the water issues problematical. In this instance, India has demanded that these problems must be resolved before laying the ground work to tackle the water issues; the issue of illegal migrants seems to particularly complicate matters between the two countries. The two nations signed two treaties in 1977 and 1996 as well as two Memorandums of Understanding (MOU) in 1983 and 1985 to share Ganges water and to find out long-term solution by augmenting the flow of River Ganges.<sup>55</sup>

However, these two countries have generally distrusted each other, hence; the longevity of the treaty is seen to be unattainable. According to an article by Sarfaraz Alam, currently, the migration to India still continues unabated. Initially, this movement was mostly limited to the border states like Tripura, Assam and West Bengal but eventually it extended to further states like Gujarat, Delhi like Tamil Nadu and Maharashtra. According to reports, there are approximately 20 million illegal Bangladeshis spread all over India.<sup>56</sup> What has ensued as a result of this migration has led to tensions because of destabilizing political, social, economic, ethnic and communal situations. Despite lack of definite figures of the illegal immigrants, it is noted that since the 1970s, over 2 million Bangladeshis have immigrated to India, with most of them settling in West Bengal and Assam. Eruption of ethnic conflicts between the indigenous inhabitants of the place and the refugees has been the consequences of this migration. In the early 1980s, Assam suffered such a migrant conflict that resulted in the loss of lives of more than four thousand people and these tensions are still on persist till date.<sup>57</sup>

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<sup>54</sup> Mizanur M. Rahaman. (2006). "The Ganges Water Conflict: A Comparative Analysis of 1977 Agreement and 1996 Treaty". Helsinki: *Journal of International & Peace Studies*, Vol. 1/2, pp. 195-208

<sup>55</sup> Sarfaraz, Alam. (2003). *Environmentally Induced Migration from Bangladesh to India*. New Delhi: Institute for Defence Studies and Analyses

<sup>56</sup> *India Bangladesh Water Dispute*. (1997). Retrieved July 15, 2013, from American University: <http://www1.american.edu/ted/ice/indobang.htm#r2>.

<sup>57</sup> *Water: Asia's Next Challenge*. (2009). Retrieved July 16, 2013, from Asia Society: <http://sites.asiasociety.org/taskforces/water/interactive/?gclid=CJ2pnqPVgqACFU1B6wodX2Z1kQ>

Such illegal immigration continues to act as a crucial aggravation as it obstructs political deals on the various problems between the two countries. The dispute over the Ganga between India and Bangladesh is an example of such deficit. It is a highly acceptable notion that the Ganga dispute was magnified by a complete lack of appreciation of the one to the other side's point of view. India has been inclined to deem the Ganga as more or less an Indian river and as an important source of water for meeting its citizenry needs from different parts of the country ranging from the West to the South. It seems that India has been unable to appreciate consequential effects of the reduction in water supplies caused by the reduced flow in the Ganga. Bangladesh, on the other hand, has failed to recognize the needs of the upper riparian populations and has been adamant to country,<sup>58</sup> explore or pursue any new avenues that would allow for it to satisfy its water needs. Bangladesh's reluctance seems to be exacerbated by its omnipresent fear of India, the larger and more powerful

According to a report by the Asia Society titled, "*Water: Asia's Next challenge*" is pointed out that India and Bangladesh have clashed over the sharing of the Ganges River immediately after India's independence in 1947. However, it was not until four years later, in 1951 that India opted to construct the Farakka barrage. The barrage was constructed about 11 miles from the border with Bangladesh with main aim to divert water from the Ganges River to Hooghly River (in India). In 1975, the construction of the Farakka barrage commenced in 1975 and it provided irrigation and drinking water to adjacent Indian states, it also helped in improving India's navigability and provided better access to the port. However, according to Bangladesh, this has resulted in an increasing control over the Ganges River's water flow into Bangladesh.<sup>59</sup> Bangladesh also complains that its territory gets flooded during the monsoons because of the release of the excess waters by India.<sup>60</sup> With regards to the Farakka barrage, Bangladesh has signed two water sharing treaties so far, the most recent one in 1996, to manage the water between the two countries during the dry season. However, this agreement

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<sup>58</sup> *Water: Asia's Next Challenge*. (2009). Retrieved July 16, 2013, from Asia Society: <http://sites.asiasociety.org/taskforces/water/interactive/?gclid=CJ2pngPVgqACFU1B6wodX2Z1kQ>

<sup>59</sup> Khan, M. (2009). *Towards Better India-Bangladesh Relations*. New Delhi: Institute for Defence Studies and Analyses

<sup>60</sup> Tufts University. (2009). *Contributing Factors in the Ongoing Water Conflict between Bangladesh and India*. . Washington: Tufts University

has not been adequate in the extreme drought situations and it also has limited provisions for improvements.<sup>61</sup>

According to a report by Datta at the Institute for Defence Studies and Analyses (IDSA), New Delhi, the Tipaimukh dam is an equally worrying concern for Bangladesh. Bangladesh feels that the dam would again affect the quantity of water that comes in Bangladesh.<sup>62</sup>

Teesta is another highly emotive subject between the two countries. The two countries have been trying to negotiate a deal on the same but Bangladesh expects India to release 3000 cusecs of water per day during the lean season and that might not be easily agreed to by India. At the latest meet of the JRC, Bangladesh presented an “interim agreement” on the Teesta to India and India has agreed to propose a deal on the same, in a timely fashion but there has been limited progress on the same, thus far.<sup>63</sup> Similarly, water issues between India and Nepal have been affected to a major extent by a lack of appreciation of the other side’s perspective. Water issues between India and Nepal are affected to a considerable extent, by the bilateral relations between the two. In an article by Medha Bisht of the IDSA, the Kosi Agreement has not gone off very smoothly between the two countries. India and Nepal signed the Kosi agreement in 1954 to regulate the flow of the river and ensure flood management. A barrage straddling the India-Nepal border was to be constructed for this purpose, and embankments were to be raised on either side of the river.<sup>64</sup> At the same time, the project was also to be utilized for power generation and irrigation purposes. There have been various disputes over this agreement fuelled by floods in the Kosi region. In April 2008, there was a devastating flood in the Kosi Basin, which displaced 30 lakh people in India and around 50,000 people in Nepal.

Both the sides blame each other for failing to prevent such a massive disaster. According to Nepal, this was the result of India’s neglect in maintaining the upkeep of the embankments of the barrage. The Nepalese government holds India responsible for a breach of the embankment.

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<sup>61</sup> Sreeradha Datta, (2010). *Indo-Bangladesh Relations: An enduring partnership*. New Delhi: Institute for Defence Studies and Analyses.

<sup>62</sup> Pia Malhotra. (2010). *Time for Teesta*. New Delhi: Institute of Peace and Conflict Studies

<sup>63</sup> Medha Bisht. (2008). *Revisiting the Kosi Agreement: Lessons for Indo-Nepal Water Diplomacy*. New Delhi: Institute of Defence Studies and Analyses

<sup>64</sup> Ibid

According to a report in the South Asian Journal, Nepal, being an upper riparian, has a different relationship with India and faces many problems in constructing its dams due to opposition by the lower riparian and has serious doubts about the projects proposed by India. Nepal's mistrust, beside other factors, has been reinforced by what it perceives to be various unequal treaties starting from Sharada Dam construction (1927), 1950 Treaty and Letters of Exchange of 1950 and 1965, Koshi Agreement (1954), Gandak Agreement ((1959), Tanakpur Agreement (1991) and the Mahakali Treaty (1996). Since 400 million people live in the Ganges, Brahmaputra and Meghna region, India needs Nepal to meet its energy needs and for management of water.<sup>65</sup>

India and Nepal have traditionally disagreed over the interpretation of the Sugauli Treaty signed in 1816 between the British East India Company and Nepal, which delimited the boundary along the Maha Kali River in Nepal. The dispute intensified on 1997 when Nepal was planning to consider a treaty on hydroelectric development of the river. India and Nepal differ as to which stream constitutes the source of the river. Nepal regards the Limpiyadhura as the source; India claims the Lipu Lekh. The dispute between India and Nepal might seem minor but it gains strategic importance, because the disputed area lies near the Sino-Indian border.<sup>66</sup>

#### **2.4. Water conflict in the Middle East**

‘The next war in the Middle East would be fought over water’ or ‘the trans boundary nature of water creates interdependency between states that obliges cooperation. These conflicting cries have been associated for decades with the Jordan River basin, which may be paradoxical than it is predictable. Its dry climate and political instability regularly lead the media and politicians to raise the spectre of “water-wars”, led or followed by academia in attempts at demonstrating an environment-conflict causal link. In light of the cautious optimism of an enduring political agreement between Israel and the Palestinians inspired by the mid-1990’s process known as the ‘Oslo Accords’, the theories on water-cooperation and

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<sup>65</sup> “Water Issues in South Asia”. (2005). *South Asian Journal*.

<sup>66</sup> Tribhuvan University. (1984). *Indo-Nepal Migration: Problems and Prospects*. (Vol. 11). Nepal: Tribhuvan University



its benefits grew.<sup>67</sup> With the eventual demise of the accords and the resumption of an Israeli occupation of the Palestinian Territories from roughly 2000 onwards, analysis of a graver tone is emerging while older works highlighting the negative aspects of the Palestinian-Israeli water conflict are gaining currency.

Lowi, M. Lowi<sup>68</sup> states that even before the establishment of Israel, Zionists viewed access to water resources as a necessary component for the long-term viability of a Jewish state. Additionally, he points that at the 1919 Paris Peace Conference, for example, the World Zionist Organization insisted that the future Jewish state control not only the water resources within the British Mandate of Palestine but also the sources of their flow. Since Israel founded in 1948, water has remained intricately linked with national security and water use has been viewed as a means for both agricultural and economic output as well as national survival.<sup>69</sup>

Israel's leaders have been constantly concerned with access to adequate water supplies to support a growing population and agriculture largely dependent upon irrigation since the nation's establishment. Israel is reliant upon the Jordan River and its tributaries as well as delicate groundwater reserves to meet ever-increasing water resource demands. Since 1949, for example, Israel's population and irrigated area have both increased severely straining the nation's water supplies. The country's primary water sources are located in the northern part, a substantial distance from the nation's agricultural, industrial and population centres, and the Mediterranean climate separates winter rainy season supplies from peak summer irrigation demands.

Perceiving agriculture, and the supporting water resources, as necessary for the nation's economic and political vitality, the Israeli government has maintained central control over water supplies and management. According to Postel<sup>70</sup> since its founding, the Israeli government has committed substantial resources to increase the efficiency of the country's scarce water supplies through research and development; water allocation, monitoring and pricing structures; and financial incentives. Israel's first national project, in the 1950s, for

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<sup>67</sup> Ibid

<sup>68</sup> Lowi, M. (1993). *Water and Power - The Politics of a Scarce Resource in the Jordan River Basin*. Cambridge: Cambridge University Press.

<sup>69</sup> Lowi, M. (1993). *Water and Power - The Politics of a Scarce Resource in the Jordan River Basin*. Cambridge: Cambridge University Press.

<sup>70</sup> Ibid

example, was the draining of the Huleh swamps just north of the Sea of Gallilee, expanding agricultural land and increasing runoff to the Gallilee, Israel's only major surface reservoir. Its second national project, in the 1960s, was to build the National Water Carrier, to bring approximately 500 cb m a year from the Gallilee to the coastal plains, which contain the bulk of Israel's population, agriculture and industry.<sup>71</sup>

Israel's water supplies, however, depend not only on conditions within its borders. The Jordan River is shared with four other political units, Lebanon, Syria, Jordan, and the Palestinian Authority, the hydrologic interdependency of these countries and territory has become increasingly apparent as utilization rates within the Jordan basin increase. Along the Jordan River, interactions over water issues between Palestinians in the West Bank and Gaza and Israelis shift repeatedly, subjugated as they are to the constantly changing political climate.<sup>72</sup>

Interaction between the unborn state of Palestine and Israel have changed in form from military occupation from 1967-1994 to cold relations as partners in the Oslo political process from 1994 until roughly 2000. As levels of demand continue to rise in a region marked by significant resource supply constraints, disputes between Israel and its co-riparian neighbours over water have not been an uncommon occurrence. These disputes have included not only numerous verbal exchanges but also two incidents of armed conflict between Israel and Syria in the early 1950s and mid-1960s over proposed water development projects.<sup>73</sup>

If a causal relation between the Water Event Intensity Scale and conflict classifications were hypothesized, one would expect to find water related 'events' along the Jordan River ranging in intensity from "extensive war acts causing deaths, dislocation or high strategic costs" to "strong verbal expressions displaying hostility in interaction". Certainly there is enough evidence to support this claim. The Palestinian Hydrology Group (PHG), for instance, has documented the effects of 2000-2004 Israeli military activity and less-intense levels of violence on water resources and water infrastructure. Their report reveals that over the four-

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<sup>71</sup> Ibid

<sup>72</sup> Wolf, A. T. ( 2000). "Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations". In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press

<sup>73</sup> Wolf, A. T. ( 2000). "Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations". In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.

year period, approximately 137 communities throughout Palestine suffered indiscriminate or deliberate damages to their water networks, primarily due to Israel Defence Forces armoured personnel carriers, tanks and bulldozers.<sup>74</sup> Israeli settlers in the West Bank, as non-state actors, have intentionally damaged traditional Palestinian springs near Yanun in October 2002 and Madama on several occasions.<sup>75</sup> The extent of the damages to the water sector has been estimated by various international organisations at between 50 and 200 million dollars.<sup>76</sup> The water in Palestine and Israel is a highly politicized – or securitized – issue a quick review of the media shows hundreds of articles and expressions of interest, usually during a drought period or following a high-profile incident. Consider briefly the Wazzani Springs dispute in 2002 which resulted in Israeli war drum-beating and official threats of intervention to counter a small Lebanese drinking-water project along a tributary to the Hasbani River.<sup>77</sup> Under the banner of national security, the Israeli public's attention was effectively diverted away from much more serious internal water-management issues.<sup>78</sup> Consideration of the Israel- Palestine security complex is also instructive, the power-balance is greatly tilted in favour of the regional hegemon, and that Israel enjoys a position of dominance in four of the sectors. The apparent linkage between water and non-water events can also be seen in more recent movements towards peace in the region. In the 1990s, Israel signed two bilateral peace agreements, both of which included substantial provisions concerning shared water: the 1994 Treaty of Peace between Israel and Jordan and the 1995 Israeli Palestinian Interim Agreement on the West Bank and the Gaza Strip. In the 1994 agreement, Israel and Jordan outlined the allocation of shared surface and groundwater supplies and agreed to cooperate in the areas of supplementing water supplies and improving the quality of shared water sources. The 1995 interim agreement between Israel and the Palestinian Authority, while postponing

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<sup>74</sup>Ibid

<sup>75</sup> Palestinian Hydrology Group (PHG). (2004). *Water for Life - Israeli Assault on Palestinian Water, Sanitation and Hygiene During the Intifada*. European Community Humanitarian Office, Oxfam-Great Britain, Palestinian Hydrology Group. Oxford: Alden Press Ltd Publication no 5, Alden Press Ltd, Oxford. Pp. 55

<sup>76</sup>Ibid Pp. 60

<sup>77</sup> *Palestine village encases spring in concrete to thwart further settler attack*. (2003). Retrieved June 15, 2013, from Oxfam: [http://www.oxfam.org.uk/what\\_we\\_do/where\\_we\\_work/israel\\_palterr/springconcrete.htm](http://www.oxfam.org.uk/what_we_do/where_we_work/israel_palterr/springconcrete.htm)

<sup>78</sup> EWOC (2002). *Water and Wastewater Situation in the West Bank Governorates During and Following the IDF Re-occupation March, April 2002 - Draft Interim Report*. Jerusalem: Emergency Water Operations Centre (USAID,UNDP, Oxfam).

full elaboration on water sharing units until permanent status negotiations are held, did incorporate joint water sharing principles and provided for the establishment of cooperative water sharing mechanisms.<sup>79</sup>

## 2.5. Tigris-Euphrates River Dispute

The Tigris and Euphrates Rivers, originating in Turkey and cutting through both Syria and Iraq, have experienced drastic reductions in water flows in recent years due, primarily, to Turkish hydro-engineering and regional droughts. This is of significance for Iraq, which has historically prospered because of the rich agricultural harvests based on water supplies sourced from these waterways. Turkish initiatives aimed at massively expanding their exploitation of the water from the two rivers have coincided with severe droughts in the region and resulted in a burgeoning water shortage crisis in Iraq. This problem threatens an environmental catastrophe. Political negotiations between the three countries have so far fallen short of reaching agreement on providing the necessary increases in flow rates to address the deteriorating situation in Iraq.<sup>80</sup>

Under the rule of the Ottoman Empire, the Tigris-Euphrates River Basin was effectively managed. After the collapse of the empire in 1922, and the establishment of the independent states of Turkey, Syria and Iraq, these rivers became a shared resource with the potential for conflict. Iraq has historically been the predominant user of water from these rivers and a large network of Karez, or man-made underground irrigation channels, has existed there for centuries. This was not a problem in the early and mid-twentieth century, as Turkey and Syria did not develop expansive systems using dams and irrigation. When this began to change in the 1970s, however, Iraq's claim to the bulk of the basin's water resources was suddenly under threat.

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<sup>79</sup> Zeitoun, M. (2007, March). "The Conflict vs. Cooperation Paradox: Fighting Over or Sharing of Palestinian-Israeli Groundwater?" *Water International*, 32(1), pp. 105-120.

<sup>80</sup> Zisser, E. (2002). *Israel and Lebanon: The Battle for the Wazzani*. Tel Aviv: Moshe Dayan Centre for Middle Eastern and African Studies /Jafee Centre for Strategic Studies, Tel Aviv University

In 1975, unilateral water developments came very close to leading to warfare along the Euphrates River. The three riparian's to the river Turkey, Syria, and Iraq had co-existed with varying degrees of hydro political tension through the 1960s. At that time, population pressures drove unilateral developments, particularly in southern Anatolia (Turkey), with the Keban Dam (1965-73), and in Syria, with the Tabqa Dam.<sup>81</sup> Additional tensions between Turkey and Syria involving Syrian support for Kurdish separatists (Kurdish Worker's Party, or PKK) and Turkey's military support for Israel have exacerbated the water dispute.<sup>82</sup> Military tensions flared between Turkey and Iraq in 1997, as Turkey invaded northern Iraq to attack Kurdish rebels in the area.<sup>83</sup> In August of 1998, Turkey threatened military action against Syria if it continued to support the PKK.<sup>84</sup>

The Southeast Anatolia Development Project (GAP is the Turkish acronym) has given a sense of urgency to resolving allocation issues on the Euphrates. GAP is a massive undertaking for energy and agricultural development that, when completed, would include the construction of 21 dams and 19 hydroelectric plants on both the Tigris and the Euphrates. 1.65 million ha of land are to be irrigated and 26 billion kWh would be generated annually with an installed capacity of 7,500 MW. If completed as planned, GAP could significantly reduce downstream water quantity and quality.<sup>85</sup>

Turkey's decision to begin the construction of GAP drew immediate criticism from both Syria and Iraq. Both countries knew the extent of this project meant they would inevitably experience reduced availability of water resources and this resulted in significantly heightened tensions in the region. The completion of Syria's Tabqa Dam in 1975 brought Syria and Iraq to the brink of war, as this coincided with the start of GAP and with a drought in Iraq that created serious shortages of water resources. In 1990, Turkey mobilised its forces when it cut the Euphrates to fill the Atatürk Dam, temporarily reducing water flow into Syria

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<sup>81</sup> Lowi, M. (1992). "West Bank Water Resources and the Resolution of Conflict in the Middle East". *Environment Change and Acute Conflicts* (pp. 29-60). American Academy of Arts and Sciences.

<sup>82</sup> Mideast Mirror. (1998). *Turkey-Syria crisis: Saudis to join mediation efforts*. 12 (195). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)

<sup>83</sup> Lowi, M. (1992). "West Bank Water Resources and the Resolution of Conflict in the Middle East". *Environment Change and Acute Conflicts* (pp. 39-60). American Academy of Arts and Sciences.

<sup>84</sup> Mideast Mirror. (1997). *Turks attacks northern Iraq after renewing mandate of U.S.-led force*. 11(2).. (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf.2009)

<sup>85</sup> Middle East News file. (1998). *OIC offers to mediate between Turkey, Syria*. (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)

and Iraq by 75 per cent. Iraq threatened to blow up the dam, which led Turkey to threaten to cut off the water flow to Syria and Iraq completely.<sup>86</sup>

Tensions between these countries remain high because of the issue of water management. A number of droughts in Iraq in recent years have increased the likelihood of conflict in the future as years of duress caused by water shortages are making the Iraqi people increasingly desperate. With projections by the Intergovernmental Panel on Climate Change indicating a changing climate and the potential for a permanent decrease in rainfall, add in rapidly increasing populations and all the ingredients required to create major conflict in the future exist.<sup>87</sup>

Turkey would continue to construct GAP with an expected completion date of 2017. Once finished, it is projected to withdraw up to 70 per cent of the Euphrates' water, which is likely to lead to a further deterioration in Iraq's, already dire situation and exacerbate the strained relations between the two countries. Earlier Iraq threatened to take its case for an increase in water flows from Turkey and Syria to the UN, a significant escalation in the rhetoric between the three countries. This may be a precursor to an increasingly aggressive stance by Iraq towards its northern neighbours. As water is the most fundamental and crucial resource to sustain life, the seriousness of water shortages in Iraq inflicted by Turkey and Syria cannot be underestimated. A Protocol of the Joint Economic Committee was established between Turkey and Iraq in 1980, which allowed for Joint Technical Committee meetings relating to water resources. Syria began participating in 1983, although meetings have been intermittent at best.

A 1987 visit to Damascus, Syria, by Turkish Prime Minister Turgut Ozal reportedly resulted in a signed agreement for the Turks to guarantee a minimum flow of 500 m<sup>3</sup>/sec across the border with Syria. According to Kolars and Mitchell, this total of 16 BCM/yr. is in accordance with prior Syrian requests. However, according to Naff and Matson, this is also the amount that Iraq insisted on in 1967, leaving a potential shortfall. A tripartite meeting

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<sup>86</sup> Wolf, Aaron T. and Joshua T. Newton. (2008). "Case Studies of Transboundary Dispute Resolution." Appendix C in, Delli Priscoli, Jerry and Aaron T. Wolf. *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press [http://www.transboundarywaters.orst.edu/research/case\\_studies/Tigris-Euphrates\\_New.htm](http://www.transboundarywaters.orst.edu/research/case_studies/Tigris-Euphrates_New.htm)

<sup>87</sup> Mideast Mirror. (1998). *Turkey-Syria crisis: Saudis to join mediation efforts*. 12 (195). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)

between Turkish, Syrian and Iraqi ministers was held in November 1986, but yielded few results.<sup>88</sup>

Talks between the three countries were held again in January 1990, when Turkey closed the gates to the reservoir on the Ataturk Dam, the largest of the GAP dams, essentially shutting off the flow of the Euphrates for 30 days. At this meeting, Iraq again insisted that a flow of 500 m<sup>3</sup>/sec cross the Syrian-Iraqi border. The Turkish representatives responded that this was a technical issue rather than one of politics and the meetings stalled. The Gulf War that broke out later that month precluded additional negotiations.<sup>89</sup>

In their first meeting after the war, Turkish, Syrian, and Iraqi water officials convened in Damascus in September 1992, but broke up after Turkey rejected an Iraqi request that flows crossing the Turkish border be increased from 500 m<sup>3</sup>/sec to 700 m<sup>3</sup>/sec. In bilateral talks in January 1993, however, Turkish Prime Minister Demirel and Syrian President Assad discussed a range of issues intended to improve relations between the two countries. Regarding the water conflict, the two agreed to resolve the issue of allocations by the end of 1993. Prime Minister Demirel declared at a press conference closing the summit that, "There is no need for Syria to be anxious about the water issue. The waters of the Euphrates would flow to that country whether there is an agreement or not".<sup>90</sup> Despite this pledge, no agreement was reached in the allocated timeframe.

In February 1996, a joint Syria-Iraq water coordination committee convened in Damascus, where the two sides discussed what would be a fair and reasonable distribution of the Euphrates and Tigris between Turkey, Syria, and Iraq. In this meeting, Syria and Iraq decided to coordinate their positions on the water dispute. In May of the same year, Turkey called on Syria to engage in talks over water. Turkey wanted to resolve the dispute by dividing water by cultivated land, whereas Syria wanted to divide the water equally.<sup>91</sup>

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<sup>88</sup> Wolf, A. T. (2000). "Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations". In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.

<sup>89</sup> Mideast Mirror. (1998). *Turkey-Syria crisis: Saudis to join mediation efforts*. 12 (195). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)

<sup>90</sup> G. Gruen. (1993). "Recent Negotiations Over the Waters of the Euphrates and Tigris". In *Proceedings of the International Symposium on Water Resources in the Middle East: Policy and Institutional Aspects, Urbana, IL, October 24-27*.

<sup>91</sup> Kemal Ilter Ankara. (2000). "Analysts expect no drastic change in Turco-Syrian relations". *Turkish Daily News*, 12 June.

Tension between Syria and Turkey escalated in late 1998 over Kurdish rebels. To avert invasion by Turkey, Syria agreed to ban the PKK from Syria<sup>105</sup> with the signing of the Adana Agreement on October 20, 1998.<sup>92</sup>

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<sup>92</sup> Mideast Mirror. (2000). *Turkey's water weapon*. 14(61). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)



## CHAPTER THREE: HYDROPOLITICS AND REGIONAL STABILITY IN THE NILE BASIN

### 3.1. Introduction

For many years there have been tensions among nations through which the Nile runs. Nonetheless, nowadays tensions are increasing due to other reasons including population growth, poverty, and degradation of the ecosystem and water scarcity that characterized the region. The constant threat of droughts increases the urgency of the problem, and pollution from land-use activities affects downstream water quality. Finally, except for Kenya and Egypt, all of the basin countries are among the world's 50 poorest nations, making their populations even more vulnerable to famine and disease.<sup>93</sup> Previously, the tensions derived from the dominance and constant threat of military use from the side of Egypt, the civil wars in Sudan, Ethiopia and the negligible use of water by upstream riparian states.<sup>94</sup> Recently the divergences have risen in the region due to the constant dominance of Egypt over the water of the river and the treaties under which the country supports its power over it.

The centre of the tensions is the 1929 and 1959 Nile Water Agreements. Through these agreements Egypt assured that the Nile waters could not be interrupted by any circumstances by the rest of the basin countries, the agreements also prohibited any construction on tributaries that would interrupt the flow of Nile to Egypt and Sudan.<sup>95</sup>

Such agreements have recently been questioned by the rest of the riparian countries which claim their right to equitable water distribution. The need for a sufficient and constant water supply is essential for these countries in particular in order to protect the lives of the population, support food production among other needs.

These countries depend for their economic and social stability on the access to the waters of the river. Ethiopia for example, wants to use the Nile River for hydro-electrical plants and industrial development. Egypt has already said that it won't hesitate to use military force to assure its control over the Nile River, which explains the enormous importance that the water

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<sup>93</sup> Mideast Mirror. (2000). *Turkey's water weapon*. 14(61). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf, 2009)

<sup>94</sup> Kameri-Mbote, P. (2011). *Conflict and Cooperation: Lessons from the Nile River Basin*. Retrieved August 4, 2013, from Wilson Center: [www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssuePKM.pdf](http://www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssuePKM.pdf)

<sup>95</sup> Tesfaye, A. (2006). *Hydropolitics and Regional Stability in the Nile Basin*. New Jersey: Wouliam Paterson University.

means to this country. Ethiopians on their part claims to have rights to exploit her natural resources and even went further to renounce the colonial treaties.

The main riparian states involved in the conflict are Egypt, Sudan, Ethiopia and South Sudan. Egypt continues to claim that it has historical and natural rights on the river and hence it would be governed by the hydro-political doctrines of 'primary need', 'prior use' and 'acquired water rights'. As a result of these claims, Egypt's top foreign policy priority has always been to safeguard the uninterrupted flow of the Nile water.<sup>96</sup> In the case of Sudan the problem of water is closely linked to economic development. Sudan has the twin needs of irrigation and hydroelectric power coupled with the need to protect its citizens near the banks of the Nile from annual rainy season floods coming from the highlands of Ethiopia. Finally, for Ethiopia, the Nile represents economic interests in the agrarian sector.

Approximately 40 percent of its population depends on rain-fed subsistence farming in the highlands, the zone of highest rainfall, which provides 86 percent of the Nile waters. Additionally, Ethiopia has also expressed interest in developing its water resources by building a series of micro-dams on the Blue Nile. Not surprisingly, such plans have led to tensions between Egypt and Ethiopia.<sup>97</sup>

It is worth noting that there has been not yet any violent conflict between these countries for water rivalry. Further, the Nile basin countries continue to seek cooperative solutions that could bring a more equitable partition of the river. In 90s for example the parties involved in the conflict participated in various dialogues with the help of the international community, targeting cooperation on the use of Nile River. The dialogue intensified and various initiatives were created, one example is the Technical Cooperation Committee for Development and Environment Protection (TECCONILE) which had the task of promoting Nile Development agenda.<sup>98</sup>

A transitional cooperation mechanism namely Nile Basin Initiative (NBI), was officially launched in 1999 by the council of Ministers of water affairs of these countries funded by the World Bank. Although the NBI was originally designed as a way to share scientific

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<sup>96</sup> Ibid

<sup>97</sup> Tafesse, T. (2009). *The Hydropolitical Assessment of the Nile Question: An Ethiopian Perspective*. Retrieved August 3, 2013, from Water International: <http://www.tandfonline.com/doi/abs/10.1080/02508060108686945#.UjwdidJ7c8M>

<sup>98</sup> Tesfaye, A. (2006). *Hydropolitics and Regional Stability in the Nile Basin*. New Jersey: WOULDIAM Paterson University.

information, today it brings together ministers from the basin countries *“to achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile basin water resources,”* as stated in its shared vision.<sup>99</sup>

The NBI can also be described as a break-through and a positive move which prevented the conflict to intensify and go into violence,<sup>100</sup> cooperation and communication must continue to be the policy under which the Nile River, in this particular case water cooperation has helped to create an environment of trust and maintenance of friendly relations between the countries for the region. Hence, Countries have to manage the relations between each other and the water resources. As Martha Karua, former Kenyan Minister of Water Resources Management and former Chairperson of the Nile Basin Council of Ministers said: *“our success depends on our ability to work as a team to overcome the hurdles and exploit the opportunities that exist. This means that cooperation and only cooperation is the key to our future.”*<sup>101</sup>

Water is ambient and the consequences of its use or removal by upstream countries are immediately felt downstream. Unless an international waterway such as the Nile is viewed as a unified whole, human undertakings in any part of the system, more particularly in the source country, could adversely affect lower riparian states. Much of the strain surrounding shared waters stems from the fact that one nation's gain is usually another's loss. If Ethiopia develops upper Nile waters, Egypt would lose out, and if Egypt insists on maintaining the status quo, that is, insisting on becoming the sole beneficiary of the Nile, all other riparian states would lose out.

Starr (1991)<sup>102</sup> points that in mid-1980s, the U.S. government intelligence services estimated that in at least 10 places in the world war could break out over dwindling shared-water resources. The major crisis spots are, according to the same sources, the Middle East and the Nile basin. In 1975 Syria and Iraq were very close to full-scale war because of disagreements over the use of the Euphrates. In the 80s disputes over the usage of the Euphrates and Tigris rivers were common between Turkey, Syria and Iraq. Elhance (1999),<sup>103</sup> has put "...in a

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<sup>99</sup> Ibid

<sup>100</sup> Ibid

<sup>101</sup> Tafesse, T. (2009). *The Hydropolitical Assessment of the Nile Question: An Ethiopian Perspective*. Retrieved August 3, 2013, from Water International: <http://www.tandfonline.com/doi/abs/10.1080/02508060108686945#.UjwdidJ7c8M>

<sup>102</sup> Tesfaye, A. (2006). *Hydropolitics and Regional Stability in the Nile Basin*. New Jersey: Wouldiam Paterson University.

<sup>103</sup> Ibid

geopolitical sense, water is likely to become the 'oil of the next century'. The World Bank's Vice-President, Ismael Seageldin, once said "Many wars this century were about oil, but the wars of the next century would be about water".<sup>104</sup> It is such scenarios that make up the content of Hydro-(Water) Politics.<sup>105</sup>

Hydro politics prevails when water disputes shape the political landscape in a region and when it is taken as a strategic resource of political significance. Elhance<sup>106</sup> points that "hydropolitics is the systematic study of conflict and cooperation between states over water resources that transcend international borders". Egypt has been the most aggressive user of the Nile waters; all the basin's riparian states have not been in a position to utilize the waters of the Nile equally. The other countries that have benefited from the Nile Rivers are Sudan and Uganda.

### **3.2. Cooperation in the Nile Basin**

Cooperation among some of the Nile Basin countries begun in the form of bilateral agreements at the beginning of the twentieth century, while regional cooperation commenced in 1967 by the formation of the Hydro-meteorological survey of the catchments of Lakes Victoria, Kyoga, and Albert (the Hydromet Project). Later, countries of the Nile Basin have been engaged in regional cooperative activities over the past thirty years: "HYDROMET", 1967-1993; "TECCONILE", 1993-1999; and "NBI", 1998-now. The transitional mechanism was officially launched in February 1999 by the Council of Ministers of Water Affairs of the Nile Basin States under the title of Nile Basin Initiative NBI.<sup>107</sup>

The Initiative provides a unique forum for the countries of the Nile to move forward a cooperative process to realize tangible benefits in the Basin and build a solid foundation of

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<sup>104</sup> Kameri-Mbote , P. (2011). *Conflict and Cooperation: Lessons from the Nile River Basin*. Retrieved August 4, 2013, from Wilson Center: [www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssuePKM.pdf](http://www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssuePKM.pdf)

<sup>105</sup> Kairo, L. G. (2006). *Hydropolitics in the Nile: Smoothing the waters of Conflict*. *Irenees.net*. Retrieved August 5, 2013, from Irenees.net: <http://www.irenees.net>

<sup>106</sup> Starr, J. (1991). "Water Wars". *Foreign Policy*, 82, pp. 17-32.

<sup>107</sup> Arun P. Elhance , (1999). *Hydro-politics in the 3rd World Conflict and Cooperation in International River Basin*. Washington, DC: United States Institute of Peace Press

trust and confidence. The Nile Basin countries have invested significant time, effort, and resources in launching and sustaining the NBI.<sup>108</sup>

The Initiative provides a transitional institutional mechanism for cooperation, an agreed vision and basin-wide framework, and a process to facilitate substantial investment in the Nile Basin. It represents deep commitment by the Nile riparian countries to foster cooperation and pursue jointly the sustainable development and management of Nile water resources for the benefit of all. Lessons learned from this history of cooperation include the importance of allowing "enough time" to build trust, the necessity of yielding positive results for a "carry on" conviction, the value of the role of the international community in bridging gaps, the indispensability of the political will, the weight of investments, the significance of setting a dialogue, the worth of bringing people together (exchanging visits, etc.) and the role of the civil society organizations in boosting cooperation at a national level.<sup>109</sup>

### **3.3. Sudan's Hydro political Dilemma**

Sudan looks at Egypt as the only sister Arab country in the Nile basin whereas Egypt considers Sudan as the key to their appropriation of the Nile water. The relations between the two countries have, however, been changing their rhythms from time to time. It went lower after the ousting of Nimeiry, more particularly after the military coup d'état that brought Omar Al Bashir to power. Tensions rose higher after the June 1995 assassination attempts at the life of the Egyptian President, Hosni Mubarak, in Addis Ababa, where the Sudanese had been alleged to be behind it.

Given the facts that about two-thirds of the area of the Nile lies within the Sudan and its closeness to Egypt has galvanized Egyptian special interest in the Sudan across history. This is best illustrated by Howell et al<sup>110</sup> when they reiterated by saying that "what means life or death to Egypt means only the difference between sufficiency and stringency to the Sudan". This is the reason why the Egyptians have gone time and again to the extent of meddling in

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<sup>108</sup> *Race for Water Security begins*. (1999). Retrieved July 19, 2013, from Daily Mail & Guardian Online: <http://www.mg.co.za/mg/news/99May2/26May-water.html>

<sup>109</sup> Arun P. Elhance , (1999). *Hydro-politics in the 3rd World Conflict and Cooperation in International River Basin*. Washington, DC: United States Institute of Peace Press

<sup>110</sup> Tesfaye, A. (2006). *Hydropolitics and Regional Stability in the Nile Basin*. New Jersey: Wouldiam Paterson University.

Sudanese internal affairs because they have “a fear that a hostile government in the Sudan could restrict the Nile river water”<sup>111</sup>

Sudan, however, finds itself in a real dilemma. On the one hand, it would prefer to have a cooperative agreement with Ethiopia because the water that could be stored on the Blue Nile (Abbay) can easily be delivered to Sudan's agricultural lands by gravity flow at the same time reducing siltation in the already existing dams in their territory which costs them lots of money.<sup>112</sup> That is why Whittington and McClelland have commented on this issue by stating that “...*the status quo that excludes Ethiopia is not to Sudan's advantage*”<sup>113</sup>.

On the other hand, they have a neighbouring state downstream, viz. Egypt, which frequently knocks at their door when anything imagined or real surfaces on the Nile water utilization. For instance, in August, 1994, Egypt had planned and subsequently cancelled an air raid on Khartoum, when a dam had presumably been planned to be built in the Sudan.<sup>114</sup> The Egyptians do also have other vested interests in the Sudan. In case of Ethiopia's utilization of the Nile water, they would like to use Sudanese air space and airbases to bombard Ethiopia.<sup>115</sup>

The Sudanese dilemma is further exacerbated by the fact that they are economically dependent on Egypt. It is reported that there are an estimated 2 million Sudanese working in Egypt.<sup>116</sup> One thing that can also be stated with certainty is that the Sudanese government would like a quick revision of the 1959 agreement which entitled them to only one-fourth of the total flow of the Nile.

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<sup>111</sup> Sutcliffe, J. V., & Parks, Y. P. (1999). *The Hydrology of the Nile*. Wallingford: International Association of Hydrological Sciences

<sup>112</sup> Tesfaye, A. (2006). *Hydropolitics and Regional Stability in the Nile Basin*. New Jersey: Woldiam Paterson University.

<sup>113</sup> Paul, Howell. (1988). *The Jonglei Canal: Impact and Opportunity*. Cambridge: Cambridge University Press.

<sup>114</sup> Wedeman, B. (1999, October 30). “Peace Hope rise in Sudan”. *CNN Online*.

<sup>115</sup> Klot, N. (1994). *Water Resources and Conflict in the Middle East*. London: Routledge.

<sup>116</sup> Klot, N. (1994). *Water Resources and Conflict in the Middle East*. London: Routledge.

<sup>116</sup> Ibid, 153

### 3.4. Prospects of Nile as a Source of War

There is no documented major conflict over access to fresh water. To that effect it can be argued that there is no reason to get exercised about a possible war over water in the Nile Basin. Brown<sup>117</sup>, argues that water scarcity is the "single biggest threat to global food security," adding there is little water left when the Nile reaches the Mediterranean. Brown adds that historically, water scarcity was a local issue. It was up to national governments to balance water supply and demand. Now this is changing as scarcity crosses national boundaries via the international grain trade.<sup>118</sup> It takes 1,000 tons of water to produce one ton of grain, importing grain is the most efficient way to import water. Countries are, in effect, using grain to balance their water books. Similarly, trading in grain futures is in a sense trading in water futures.<sup>119</sup> After China and India, there is a second tier of smaller countries with large water deficits Algeria, Egypt, Mexico, and Pakistan. Algeria, Egypt, and Mexico already import much of their grain. With its population outgrowing its water supply, Pakistan too may soon turn to world markets for grain.<sup>120</sup> At what point does water scarcity translate into food scarcity? David Seckler and his colleagues at the International Water Management Institute, the world's premier water research group, summarized this issue well: "Many of the most populous countries of the world China, India, Pakistan, Mexico, and nearly all the countries of the Middle East and North Africa have literally been having a free ride over the past two or three decades by depleting their groundwater resources. The penalty for mismanagement of this valuable resource is now coming due and it is no exaggeration to say that the results could be catastrophic for these countries and, given their importance, for the world as a whole."<sup>121</sup>

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<sup>117</sup> Ronald Bleier, (1997). "Would the Nile Water go to Israel? North Sinai Pipelines and the Politics of Scarcity". *Middle East Policy*, 5(3), pp. 113-124.

<sup>118</sup> Waterbury, J. (1994). "Trans boundary Water and the Challenge of International Cooperation in the Middle East." In Rogers *et al.* (eds.). (1994). *Water in the Arab World: Perspectives and Prognosis*. Harvard: Harvard University Press.

<sup>119</sup> Brown, L. R. (2008). *Plan B 3.0: Mobilizing to Save Civilization*. (1st ed.). New York: Earth Policy Institute, W.W. Norton & Company.

<sup>120</sup> Ibid

<sup>121</sup> Ransom, A. & Myers, B (2003, May 15). "Rapid Worldwide Depletion of Predatory Fish Communities". *Nature*. pp. 280-283

The Aswan Dam now holds back most of the silt that once formed the rich agricultural land in the Nile Delta, which is eroding into the sea in some places at a rate of 100 meters annually. International conflict expert Thomas Homer<sup>122</sup> has suggested that conflict is most probable when a downstream riparian is highly dependent on river water and is militarily and economically strong in comparison to upstream riparian. This is precisely the case with Egypt. It depends on the Nile and is far stronger militarily, politically, and economically than South Sudan, Sudan or Ethiopia.

Egyptian President Anwar el-Sadat stated in 1980: "If Ethiopia takes any action to block our right to the Nile waters, there would be no alternative for us but to use force. Tampering with the rights of a nation to water is tampering with its life and a decision to go to war on this score is indisputable in the international community."<sup>123</sup> The former Egyptian defense minister reiterated in 1991 Egypt's readiness to use force, if necessary, to protect its control of the Nile. Ethiopia's minister of water resources announced in 1997 at a conference in Addis Ababa on the Nile River Basin Action Plan that "as a source and major contribution of the Nile waters, Ethiopia has the right to have an equitable share of the Nile waters and reserves its rights to make use of its waters." Ethiopia's foreign minister stated in 1998 that "there is no earthly force that can stop Ethiopia from benefiting from the Nile." The Egyptian irrigation minister announced in 2004 in advance of a meeting with other riparians that the talks must not "touch Egypt's historical rights" to Nile water. Rather, riparian states should focus on ways to recover water that is being wasted.<sup>124</sup>

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<sup>122</sup> Alan Cowell, (2003, October 21). "Migrants Found off Italy Boat Piled with Dead". *International Herald Tribune*.

<sup>122</sup> Brown, L. R. (2008). *Plan B 3.0: Mobilizing to Save Civilization*. (1st ed.). New York: Earth Policy Institute, W.W. Norton & Company.

<sup>122</sup> Ibid

<sup>122</sup> Ransom, A. & Myers, B (2003, May 15). "Rapid Worldwide Depletion of Predatory Fish Communities". *Nature*. pp. 280–283

<sup>122</sup> Alan Cowell, (2003, October 21). "Migrants Found off Italy Boat Piled with Dead". *International Herald Tribune*.

<sup>123</sup> Ibid

Homer-Dixon, T. F. (1999). *Environment, Scarcity, and Violence*. Princeton: Princeton University Press

<sup>124</sup> Homer-Dixon, T. F. (1999). *Environment, Scarcity, and Violence*. Princeton: Princeton University Press



Ethiopian Prime Minister Meles Zenawi warned in 2005 that "if Egypt were to plan to stop Ethiopia from utilizing the Nile water it would have to occupy Ethiopia and no country on earth has done that in the past." (Italy, of course, did just that from 1936-41. Egypt is in no position today, however, to occupy Ethiopia although it could inflict considerable damage by air.) Former Egyptian foreign minister, in response to demands by upstream riparians to review the Nile treaties, commented in 2005 that Egypt would not give up its share of Nile water. Former Egyptian Foreign Minister and UN Secretary General Boutros Boutros Ghali told the BBC in 2005 that military confrontation between the countries of the Nile Basin was almost inevitable unless they could agree to share water equitably. He concluded that "the next war among countries would not be for oil or territorial borders, but only for the problem of water."<sup>125</sup>

It should be eminently possible to avoid war over water in the Nile Basin. But to suggest that it would not happen just because there has not been a war over access to fresh water in the past is not persuasive. This is an issue that would require careful attention by the concerned parties and the international community to ensure that conflict does not break out.

### **3.5. Water Scarcity Yields Political Strains**

Typically well-being is measured in economic terms, in income per person, but water well-being is measured in cubic meters or tons of water per person. A country with an annual supply of 1,700 cubic meters of water per person is well supplied with water, able to comfortably meet agricultural, industrial, and residential uses. Below this level, stresses begin to appear. When water supply drops below 1,000 cubic meters per person, people face scarcity. Below 500 cubic meters, they face acute scarcity. At this level people are suffering from hydrological poverty living without enough water to produce food or, in some cases, even for basic hygiene.<sup>126</sup>

Burke hold that the world's most severe water stresses are found in North Africa and the Middle East, While Morocco and Egypt have fewer than 1,000 cubic meters per person per year, Algeria, Tunisia, and Libya have fewer than 500. Some countries, including Saudi

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<sup>125</sup> <http://sudanow.info/new/uncategorized/hydro-politics-of-the-nile-basin-the-zionist-factor-and-the-arab-spring-middle-east-nile-waters-to-israel-for-settlement-of-conflict/>

<sup>126</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

Arabia, Yemen, Kuwait, and Israel, have less than 300 cubic meters per person per year. A number of sub-Saharan countries are also facing water stress, including Kenya and Rwanda.<sup>127</sup>

While national averages indicate adequate water supply in each of the world's three most populous countries. Water is scarce throughout the northern half of China. In India, the north-western region suffers extreme water scarcity. For the United States, the south-western states from Texas to California are experiencing acute water shortages.<sup>128</sup>

Although the risk of international conflict over water is real, so far there have been remarkably few water wars. Water tensions tend to build more within societies, particularly where water is already scarce and population growth is rapid. Recent years have witnessed conflicts over water in scores of countries. In other countries the conflicts are between tribes, as in Kenya, or between villages, as in India and China, or upstream and downstream water users, as in Pakistan or China. In some countries local water conflicts have led to violence and death, as in Kenya, Pakistan, and China.<sup>129</sup>

In Pakistan's arid southwest province of Baluchistan, water tables are falling everywhere as a fast-growing local population swelled by Afghan refugees is pumping water far faster than aquifers can recharge. The provincial capital of Quetta, as noted earlier, is facing a particularly dire situation. Naser Faruqi, a researcher at Canada's International Development Research Centre, describes the situation facing Quetta: "With over a million people living there now, many of whom are Afghan refugees, the possibility of confrontation over decreasing water resources, or even mass migration from the city, is all too real."<sup>130</sup>

Not far to the west, Iraq is concerned that dam building on the Euphrates River in Turkey and, to a lesser degree, Syria would leave it without enough water to meet its basic needs. The flow into Iraq of the Euphrates River, which gave birth to the ancient Sumerian civilization, has shrunk by half over the last few decades.<sup>131</sup>

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<sup>127</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>128</sup> Miller, J. W. (2007). "Global Fishing Trade Depletes African Waters". *Wall Street Journal*.

<sup>129</sup> Burke, L., Kura, Y., Kassem, K., Revenga, C., Spalding, M., & McAllister, D. (2000). *Pilot Analysis of Global Ecosystems: Coastal Ecosystems*. Washington, DC: WRI.

<sup>130</sup> Nishat, A., & Faisal, M. (2000). "An Assessment of the Institutional Mechanisms for Water Negotiations in the Ganges-Brahmaputra Meghna Basin". *International Negotiation*, 5 (2), 289–310.

<sup>131</sup> UNEP and GPA. (2006). *The State of the Marine Environment: Trends and Processes*. The Hague: UNEP, GPA

Another water flash point involves the way water is divided between Israelis and Palestinians. A U.N. report notes that “nowhere are the problems of water governance as starkly demonstrated as in the Occupied Palestinian Territories.” Palestinians experience one of the highest levels of water scarcity in the world. But the flash point is as much over inequity in the distribution of water as it is over scarcity. The Israeli population is roughly double that of the Palestinians, but it gets seven times much water. As others have noted, peace in the region depends on a more equitable distribution of the region’s water. Without this, the peace process itself may dry up.<sup>132</sup>

At the global level, most of the projected population growth of nearly 3 billion by 2050 would come in countries where water tables are already falling. The states most stressed by the scarcity of water tend to be those in arid and semiarid regions, with fast-growing populations and a resistance to family planning. Many of the countries high on the list of failing states are those where populations are outrunning their water supplies, among them Sudan, Iraq, Somalia, Chad, Afghanistan, Pakistan, and Yemen. Unless population can be stabilized in these countries, the continually shrinking supply of water per person would put still more stress on already overstressed governments.<sup>133</sup> Although spreading water shortages are intimidating, there are the technologies needed to raise water use efficiency, thus buying time to stabilize population size. Prominent among these technologies are those for more water-efficient irrigation, industrial water recycling, and urban water recycling.

### **3.6. Avoiding Conflict over Nile Water Issues**

The Nile Basin Initiative has become the most important mechanism so far to encourage cooperation among the riparian countries. Each NBI member has agreed to share information with other riparian on projects it intends to launch and, if possible, undertake joint studies to ensure the sustainable utilization of water. The NBI, with strong support from the World Bank, UN Development Program, and Canada, emphasizes basin-wide cooperation. Although the NBI has had some positive accomplishments, Nile expert Robert Collins believes it has actually done very little so far other than provide technical training for member country personnel. He argues that each riparian continues, for the most part, to proceed with projects

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<sup>132</sup> UNEP. (2004). *Further Rise in Number of Marine ‘Dead Zones*. Nairobi: UNEP, GEO Yearbook 2003. pp. 58.

<sup>133</sup> Organization for Economic Co-operation and Development. (2001). *OECD Environmental Outlook*. Paris. pp. 109–120.

without reference to other members and that Egypt, Sudan and Ethiopia, in particular, ignore the other riparian's. Finally, Collins says there is still no overall plan for managing water in the basin.<sup>134</sup>

The World Bank coordinates the International Consortium for Cooperation on the Nile (ICCON), which promotes financing for cooperative water resource development and management in the basin. The Bank also administers the Nile Basin Trust Fund, a mechanism to implement basin-wide programs. Providing there is good will among the riparian's, these programs can work to the benefit of riparian by encouraging the cultivation of crops that require less water, reusing drainage water, and improving the environment in watershed areas. Countries with significant hydroelectric power potential like Ethiopia can build dams and sell power to Sudan and Egypt. Upstream dams in Ethiopia can trap sediment that is causing problems for reservoirs in Sudan and Egypt. Sudan can do the same in the case of Egypt. Because of lower evaporation, Ethiopia can store water more efficiently for use during times of scarcity in Sudan and Egypt. It can also hold back water to prevent flooding. Cooperative Nile Basin development can provide the riparian's greater net benefits than they would achieve through unilateral development projects. The Nile Basin offers an opportunity for the international community to engage in conflict prevention.

For its part, the US should elevate Nile Basin cooperation to a major foreign policy priority in the region and treat Nile water questions as a potentially significant conflict that can be prevented. The US has been reluctant to do this so far for bureaucratic and substantive reasons. Egypt is located in the Bureau of Near Eastern Affairs in the State Department while the other nine riparian's are in the Bureau of African Affairs. In recent decades, Egypt has been more important to US policy than the other nine riparian's combined. Egypt does not want to hear from the US about Nile water issues unless the US expresses full support for Egyptian Nile policies. In order to avoid another potentially contentious issue, the US has largely complied.

The US is, nevertheless, well positioned to encourage cooperative solutions for the use of Nile water as a routine part of its diplomatic dialogue with Egypt, Sudan, Ethiopia, and the seven other riparian's. The US should also work with and support financially the NBI, the Nile Basin Trust Fund, and ICCON. It should offer to finance technical assistance by appropriate US institutions to develop regional climatic models, short and long-term hydro

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<sup>134</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press

meteorological forecasting, and modelling of environmental conditions. Finally, the US should encourage the NBI to draw on American technical expertise in areas such as remote sensing and Geographical Information Systems for the multitude of technical and environmental issues that face Nile Basin riparian's.<sup>135</sup>

### **3.7. Highlights of Conflict and Cooperation over the Nile**

A main determining element of the conflict history of the Nile River Basin is the historic asymmetry between Egypt as the hydro-hegemony of the basin on the one side and the upstream states on the other.<sup>136</sup> Hydro-hegemony rests on the three pillars of riparian position, power (political, bargaining, military, economic, ideational), and exploitation potential. Despite its downstream position, Egypt has been by far the dominating country in the other two dimensions and has shaped the dialogue and actions on water allocation in the Nile River Basin. This status of Egypt dates back to the extensive external support Egypt enjoyed historically due to its particularly important strategic geographic position, most importantly from Great Britain in colonial times, from the Soviet Union, which supported the construction of the Aswan High Dam, and the USA. It also is connected to Egypt's high dependence on the Nile waters, with basically no other sources of renewable water.<sup>137</sup>

The two treaties forming the base of today's water allocations and of the conflict date back to colonial times. The 1929 treaty between the colonial United Kingdom and Egypt granted 48 km<sup>3</sup> per year to Egypt and 4 km<sup>3</sup> per year to Sudan, institutionalizing the belief that Egypt and Sudan had 'natural and historic rights' to the Nile water<sup>138</sup>. It was never recognized by Ethiopia and, after their independence, was also contested by the other former colonies in the Nile River Basin.

The construction of the Aswan High Dam, necessitated an adjustment of the water allocations between Egypt and Sudan. The 1959 agreement entitled Sudan to 18.5 km<sup>3</sup> per year and

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<sup>135</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>136</sup> Zeitoun, M., & Warner, J. (2006). "Hydro-Hegemony: A Framework for Analysis of Transboundary Water Conflicts". *Water Policy*, 8, 435-460.

<sup>137</sup> Allan, J. A. (2009). "Nile Basin Asymmetries: A Closed Fresh Water Resource, Soil Water Potential, the Political Economy and Nile Transboundary Hydropolitics". In H. J. Dumont (Ed.), *The Nile* (pp. 749-770). Netherlands: Springer.

<sup>138</sup> Ana Elisa, Cascão, (2009). "Changing Power Relations in the Nile River Basin: Unilateralism Vs. Cooperation?". *Water Alternatives* 2(2) p.p 245, 63

Egypt to 55.5 km<sup>3</sup> per year. Thus, this treaty implicitly left no water to the upstream countries of the Nile River. Subsequently, this agreement established a strong division among the different geographic regions of the Nile River Basin. On one side, there is an alliance between Egypt and Sudan who want to maintain this agreement. On the other side this treaty is opposed by the upstream states that criticize this bilateral agreement and want to replace it by an agreement that is based on equitable water shares<sup>139</sup>.

Notwithstanding the contrary positions and much conflictive rhetoric, many initiatives for cooperation have been brought forward by the Nile countries. The most extensive efforts, which for the first time included all 10 riparian's, started in 1999 with the goal to negotiate a new water agreement "to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources". It includes the Nile Basin Initiative (NBI), an institutional framework that has established multiple cooperative projects on the ground in the last decade. In parallel a negotiation process towards a new Cooperative Framework Agreement (CFA) was initiated.

In 2010 and 2011, several considerable upheavals occurred in the Nile River Basin, which are still unfolding and whose implications for future intra-basin relations remain to be seen. The first was the unilateral opening of the signature process for the draft CFA by the upstream states in May 2010. A draft CFA was negotiated in 2007 but was not signed for three years due to disagreements over its status in relation to the former treaties (supplement or replacement). The first signatories of the draft CFA, known as Entebbe Treaty, were Ethiopia, Uganda, Rwanda and Tanzania, followed by Kenya<sup>140</sup>. With the signature of Burundi in February 2011 as the sixth country, the ratification of the agreement can now proceed even if Egypt and Sudan continue to oppose this move on the grounds of retaining their veto power on water developments in the Nile River Basin<sup>141</sup>. These events reflect the increasing ability and desire of the upstream states to challenge Egypt's status as hydro-hegemon and the overall status quo. This can be related to increasing economic development

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<sup>139</sup> Waterbury, J. (1979). *Hydropolitics of the Nile Valley. Contemporary Issues in the Middle East* Syracuse, NY: Syracuse University Press.

<sup>140</sup> Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

<sup>141</sup> The Nile Council of Ministers Responsible for Water Affairs. (2007). *(Nile-COM) Concluded Negotiations*. Bagamoyo: Nile Basin Initiative (NBI).

and stability as well as international support by a new actor, China, which improves the upstream exploitation potential.

Besides the developments directly related to water issues, there were considerable political changes in the region that can have a significant influence on the boundary conditions under which any future cooperation on water resources is set up. The revolution in Egypt and the toppling of President Mubarak in February 2011 opens the opportunity for a new Egyptian approach towards regional integration and cooperation over the Nile waters. The independence of South Sudan in July 2011 and therefore the emergence of a new riparian state harbouring the Sudd Swamps, an ecosystem crucial for the flow of the White Nile due to its large evaporation rates, has the potential of influencing upstream-downstream relations by new coalition opportunities. While it is too early for a detailed analysis of the impact of these events, they would be important for the future of cooperation in the Nile River Basin.

### **3.8. Probable Win-Win Solutions**

The most fundamental solution to the problems contained the Nile water utilization is regional or basin-wide cooperation in water development. Egypt has more to gain than any other co-riparian from increased cooperation. According to Kinfu Abraham "...the attempt by Egypt to maintain the status quo leaning on historical rights would be untenable morally, ethically and politically, for it would be tantamount to depriving others of life while caring for their own"<sup>142</sup>. Zewdie Abate's remarks deserve to be mentioned here: "...water management in the highly water dependent Nile basin is a complex and multi-faceted challenge. A broad and integrated approach should be taken".<sup>143</sup>

It is very difficult to come out with a cookie-cutter solution that can satisfy each and every Nile basin state. Some suggestions could, however, be made by way of a win-win solution to break the stalemate and pave the way for settling such an overarching problem.

(a) First and foremost, Egypt and the Sudan must scrap the unfairly handled 1959 agreement, which was a bilateral deal that ignored the natural rights of all the other riparian states. It should be revised and renegotiated to accommodate the interests of the other co-basin

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<sup>142</sup> Youm, A. M. (2010). *'Kenya signs Nile Basin deal, rules out discussion with Mubarak*.

<sup>143</sup> "Nile Basin Rights". (2011). *Global Insider*. Retrieved July 18, 2013, from World Politics Review: <http://www.worldpoliticsreview.com/trend-lines/8520/global-insider-nile-basin-water-rights>

countries, particularly Ethiopia, which contributes 85% of the Nile waters. To this effect, an independent panel of international specialists could be established who could come out with clearer guidelines for equitably distributing the Nile water supply. The panellists would have to do their utmost to do justice and equity in the distribution of the waters of the Nile by considering a number of variables in the equation including water contribution to the basin, economic conditions, degree of dependence on the river, food security status and potential water demands.

(b) Some Nile experts such as Whittington and McClelland have suggested the establishment of reservoirs on the Blue Nile in Ethiopia, for, they say "it offers the greatest opportunity over the long term for dramatic improvements in the overall management of Nile resources"<sup>144</sup>. Wild also echoed an identical proposal by saying that "the main method of achieving this [the exploitation of joint gains in the Nile basin] would be the transfer of much of the storage of Lake Nasser upstream to the Ethiopian highlands". Elhance too has underlined the same argument when he reiterated that "such storage on the Blue Nile in Ethiopia would have much lower evaporation rate than any alternative storage reservoir that could be built within Egypt or Sudan or on the headwaters of the White Nile"<sup>145</sup>. These and some other writers argue by saying that the transfer could be of help in having much water in the basin, reducing evaporation to a much lower rate than at Egypt's Aswan High Dam, eliminating the annual Nile flood and diminishing siltation in dams and barrages in the Sudan and Egypt. What is interesting in this regard is that the water savings so made, which could be in the order of 12-21.4 billion m<sup>3</sup> per year<sup>146</sup> would quadruple Ethiopia's irrigated area without reducing supplies to Egypt and the Sudan.

(c) There are some scholars who have made their own suggestions regarding the future share of Ethiopia from the Nile waters. For example, Whittington and McClelland have suggested that Ethiopia's share of the Nile water should be at least equal to Sudan's. The approximate allocations they have forwarded are 52 billion m<sup>3</sup> for Egypt, 14 billion m<sup>3</sup> for the Sudan and

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<sup>144</sup>Kinfe, A. (1997). "The Nile Issue: Psycho-political Hurdles to an Agreement and the way forward towards Rapprochement". *5th Nile 2002 Conference*. Addis Ababa.

<sup>145</sup> Zewdie, A. (1990). *Ethiopian Perception on Environmental Protection and Management: Cooperation in the Nile Basin*. Nairobi: The Integrated Development of Nile Basin Waters Centre of Near and Middle Eastern studies, SOAS, University of London.

<sup>146</sup> Ibid



14 billion m<sup>3</sup> for Ethiopia (assuming 6 billion m<sup>3</sup> or more of water could be saved by building storages in the Blue Nile basin of Ethiopia). However, the Egyptian engineer Shahin proposed the diversion of 2 billion m<sup>3</sup> of water from Aswan to Ethiopia as a sign of good gesture to alleviate drought problems in Ethiopia. The author of this paper has strong reservations on both of the above proposals. As one could also easily guess, such overtures may not be acceptable to Ethiopians. The author of this paper presumes that the future share of Ethiopia should fall somewhere around the suggestions made by Kliot<sup>147</sup> where he says "if principles of equity are adopted by all the co-riparian's of the Nile, and Ethiopia is allowed to go ahead with its Blue Nile basin plan, Egypt and the Sudan would benefit from the construction of the reservoirs on the Blue Nile and would lose no more than 25 billion m<sup>3</sup> of water".

(d) For an international river basin such as the Nile where there is water scarcity that would fall short of satisfying the various human needs in the basin, scholars such as Tony Allan (1997) suggest the import of 'virtual water' in food staples instead of relying on shared 'watershed water'. It is under a situation where it takes about 1000 tons of water to produce every ton of grain that 80% of all the water consumption in the Nile basin goes to agriculture. This should, somehow, be changed if one opts to have water security in the future. The economic and financial situations in Egypt and the Sudan could permit them to import 'virtual water' embedded in food staples. Egypt has a huge oil and tourist revenue while the Sudan has recently begun exporting oil with the first consignment of 600,000 barrels shipped to Singapore in August 1999 (BBC News Online, 30 August, 1999). On the contrary, Ethiopia does not have the financial resources to do so now. So, if Egypt and the Sudan import some 'virtual water', they would leave some water to the hitherto disadvantaged riparian states such as Ethiopia.

(e) Increasing joint efforts in the use of water-saving technologies such as drip irrigation which pipes only as much water as crops need delivering it directly to their roots (so-called green water). Besides, more efficient on-field use and reduced release of water at Aswan for navigational purposes could also save the much needed water in the Nile basin.

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<sup>147</sup> Arun P. Elhance , (1999). *Hydro-politics in the 3rd World Conflict and Cooperation in International River Basin*. Washington, DC: United States Institute of Peace Press

## CHAPTER FOUR: IMPLICATIONS OF SOUTH SUDAN ON THE HYDROPOLITICS OF THE NILE BASIN

### 4.1. Introduction

Over the past century, freshwater resources and their management have captured the attention of the international community. Lack of access to safe drinking supplies and sanitation for much of the developing world's population combined with competing demands, depleting groundwater resources, and degrading water stocks worldwide have prompted greater international involvement in water management issues, particularly concerning the world's international basins. More than 140 sovereign states share at least one of the world's 263 international river basins, which together are home to roughly 40 percent of the world's population, cover approximately one-half of the earth's surface area<sup>148</sup>, and generate an estimated 60 percent of global freshwater discharge. Managing international freshwater systems is complicated by the need for cooperation between nations, a problem that is exacerbated when manifold countries are involved. At present, approximately one-third of all international basins are shared by at least three countries, 19 basins contain five or more countries and one, the Danube, involves 17 riparian states. Studies on transboundary water conflict and cooperation generally consider interstate relations over shared water resources as distinct from intrastate relations. While connections have been made between international water relations and regional relationships in general, it is conceivable that international water conflict and cooperation may also be influenced by domestic water events and vice versa. The Republic of South Sudan is the newest country in the world and the 55th independent state in Africa. This chapter mirrors on the potential effects of South Sudan's independence on hydropolitics in the Nile Basin.

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<sup>148</sup> Wolf, A. T. (2000). "Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations". In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press. 70

#### 4.2. The Nile Treaties That Have a Direct Effect on South Sudan and the Hydro politics

A number of treaties signed in the past centuries have dictated the use of The Nile waters by the countries along the Nile Basin: April 15, 1891: the Anglo-Italian Protocol. Article III states that "the Italian government engages not to construct on the Atbara River, in view of irrigation, any work which might sensibly modify its flow into the Nile<sup>149</sup>,"

May 15, 1902 – Article III of the Treaty between Great Britain and Ethiopia. Article three states "His Majesty the Emperor Menilik II, King of Kings of Ethiopia, engages himself towards the Government of His Britannic Majesty not to construct or allow to be constructed any work across the Blue Nile, Lake Tana, or the Sobat, which would arrest the flow of their waters except in agreement with His Britannic Majesty's Government and the Government of Sudan<sup>150</sup>". This agreement has become one of the most contested agreements over the use of the Nile waters. The aim of this treaty was to establish the border between Ethiopia and the Sudan. One of its articles, number III, related to the use of Nile water<sup>151</sup>.

May 9, 1906 – Article III of the agreement between Britain and the Government of the Independent State of the Congo. Article III states "The Government of the independent state of the Congo undertakes not to construct, or allow to be constructed, any work over or near the Semliki or Isango river which would diminish the volume of water entering Lake Albert except in agreement with the Sudanese Government". Belgium signed this agreement on behalf of the Congo despite the agreement favouring only the downstream users of the Nile waters and restricting the people of the Congo from accessing their part of the Nile<sup>152</sup>.

December 13, 1906: the Tripartite Treaty (Britain-France-Italy). Article 4(a) states "To act together... to safeguard; ... the interests of Great Britain and Egypt in the Nile Basin, more especially as regards the regulation of the waters of that river and its tributaries without prejudice to Italian interests". This treaty, in effect, denied Ethiopia its sovereign right over

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<sup>149</sup> Rwambali, Faustine. (2004). *Tanzania Ignores Nile Treaty, Starts Victoria Water Project*. Retrieved August 17, 2013, from All Africa: <http://allafrica.com/stories/200402110016.html>

<sup>150</sup> Granit, J., Cascão, A., Jacobs, I., Leb, c., Lindström, A., & Tignino, M. (2010). *The Nile Basin and the Southern Referendum*. SIWI, UNDP Water governance. Stockholm: Regional Water Intelligence Report

May 15, 1902 – Article III of the Treaty between Great Britain and Ethiopia

<sup>151</sup> Garretson, A. (1967). "The Nile Basin". In A. H. Garretson, R. D. Hayton, & C. J. Olmstead (Eds.), *The Law of International Drainage Basins* (pp. 256-297). New York: Oceana.

<sup>152</sup> Ibid

the use of its own water. Ethiopia has rejected the treaty their military and political power was not sufficient to regain its use of the Nile water<sup>153</sup>.

The 1925 exchange of notes between Britain and Italy concerning Lake Tana which states "...Italy recognizes the prior hydraulic rights of Egypt and the Sudan... not to construct on the head waters of the Blue Nile and the White Nile (the Sobat) and their tributaries and effluents any work which might sensibly modify their flow into the main river<sup>154</sup>."

May 7, 1929: The Agreement between Egypt and Sudan. This agreement included: Egypt and Sudan utilize 48 and 4 billion cubic meters of the Nile flow per year, respectively; The flow of the Nile during January 20 to July 15 (dry season) would be reserved for Egypt; Egypt reserves the right to monitor the Nile flow in the upstream countries; Egypt assumed the right to undertake Nile river related projects without the consent of upper riparian states; Egypt assumed the right to veto any construction projects that would affect her interests adversely. In effect, this agreement gave Egypt complete control over the Nile during the dry season when water is most needed for agricultural irrigation. It also severely limits the amount of water allotted Sudan and provides no water to any of the other riparian states<sup>155</sup>.

The 1959 Nile agreement between the Sudan and Egypt for full control utilization of the Nile waters. This agreement included: The controversy on the quantity of average annual Nile flow was settled and agreed to be about 84 billion cubic meters measured at Aswan High Dam, in Egypt; The agreement allowed the entire average annual flow of the Nile to be shared among the Sudan and Egypt at 18.5 and 55.5 billion cubic meters, respectively; Annual water loss due to evaporation and other factors were agreed to be about 10 billion cubic meters<sup>156</sup>. This quantity would be deducted from the Nile yield before share was

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<sup>153</sup> 169 Tafesse, T. (2009). *The Hydropolitical Assessment of the Nile Question: An Ethiopian Perspective*. Retrieved August 3, 2013, from Water International: <http://www.tandfonline.com/doi/abs/10.1080/02508060108686945#.UjwdidJ7c8M>

<sup>154</sup> 171 Zewdie, A. (1990). *Ethiopian Perception on Environmental Protection and Management: Cooperation in the Nile Basin*. Nairobi: The Integrated Development of Nile Basin Waters Centre of Near and Middle Eastern studies, SOAS, University of London. May 7, 1929

<sup>155</sup> 172 Kinfe, A. (1997). "The Nile Issue: Psycho-political Hurdles to an Agreement and the way forward towards Rapprochement". *5th Nile 2002 Conference*. Addis Ababa.

<sup>156</sup> 173 Kairo, L. G. (2006). *Hydropolitics in the Nile: Smoothing the waters of Conflict*. *Irenees.net*. Retrieved August 5, 2013, from Irenees.net: <http://www.irenees.net>

assigned to Egypt and Sudan; Sudan, in agreement with Egypt, would construct projects that would enhance the Nile flow by preventing evaporation losses in the Sudd swamps of the White Nile located in the southern Sudan. The cost and benefit of these projects would be divided equally between them. If claim would come from the remaining riparian countries over the Nile water resource, both the Sudan and Egypt shall, together, handle the claims; If the claim prevails and the Nile water has to be shared with another riparian state, that allocated amount would be deducted from the Sudan's and Egypt's and allocations/shares in equal parts of Nile volume measured at Aswan; The agreement granted Egypt the right to construct the Aswan High Dam that can store the entire annual Nile River flow of a year; It granted Sudan to construct the Rosaries Dam on the Blue Nile and, to develop other irrigation and hydroelectric power generation until it fully utilizes its Nile share; A Permanent Joint Technical Commission to be established to secure the technical cooperation between them<sup>157</sup>.

#### **4.3. The Nile Basin Initiative**

The Nile Basin Initiative (NBI) is a partnership among the Nile riparian states that seeks to develop the river in a cooperative manner, share substantial socioeconomic benefits, and promoteregional peace and security<sup>158</sup>. The NBI began with a dialogue among the riparian states that resulted in a shared vision to “achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources. “It was formally launched in February 1999 by the water ministers of nine countries that share the river: Egypt, Sudan, Ethiopia, Uganda, Kenya, Tanzania, Burundi, Rwanda, Democratic Republic of Congo (DRC), as well as Eritrea as an observer<sup>159</sup>.

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<sup>157</sup> 174 Shahin, M. (1986). Discussion of the Paper entitled “Ethiopian Interests in the Division of the Nile River Waters”. *Water International*, (21)1 pp. 16-22

<sup>158</sup> 175 Kairo, L. G. (2006). *Hydropolitics in the Nile: Smoothing the waters of Conflict*. *Irenees.net*. Retrieved August 5, 2013, from Irenees.net: <http://www.irenees.net> 176 Cesar, Guvele. (2003). “The Nile Basin Initiative and its Implication on Post Conflict South Sudan”. *Preparatory workshop*. Missouri: University of Missouri

<sup>159</sup> 177 Salman, S. (2011). “New State of South Sudan and the Hydro-politics of the Nile Basin”. *Water International*, 36(2), pp.154-166. 178 Cesar, Guvele. (2003). “The Nile Basin Initiative and its Implication on Post Conflict South Sudan”. *Preparatory workshop*. Missouri: University of Missouri

The NBI arose out of recognition that the Nile Basin, an area traditionally characterized by suspicion and mistrust among riparian, should be a region of cooperation, not conflict, in regard to shared water resources. The founding of the NBI formally demonstrated this changed geopolitical atmosphere, as all existing Nile Basin nations joined the NBI at its founding.

The Cooperative Framework Agreement is a product of the Nile Basin Initiative. In May 2010, five upstream states signed a Cooperative Framework Agreement to seek more water from the River Nile — a move strongly opposed by Egypt and Sudan. Ethiopia, Kenya, Uganda, Rwanda and Tanzania were original signatories with Burundi signing in February 2011. The DRC is also expected to sign, while Egypt and Sudan are not expected to do so. Representatives of upstream countries said they were "tired of first getting permission from Egypt before using river Nile water for any development project like irrigation", as required by a treaty signed during the colonial era between Egypt and Britain in 1929<sup>160</sup>.

#### **4.4. Implications on the Hydro politics of the Nile**

As earlier indicated, that the Nile River is the longest river in the world flowing through eleven countries in north and east of Africa: Burundi, Democratic Republic of Congo (DRC), Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, and Uganda. Further, the revelations show that the Nile River exploitation and use is largely a political affair among the countries through which it flows. These political interactions regarding the Nile basin use came about during the colonial era when treaties were made by the colonialists concerning the exploitation of the Nile waters<sup>161</sup>.

The study further found that the dependence on the Nile by the countries through which the Nile flows varies dramatically. It was noted that Egypt and Sudan are completely dependent on the Nile waters. Existing literature shows that Egypt perceives herself as having a historical right over the use of the Nile waters. The existence of this perceived right poses implications of national security matters should there be any attempt by any other nation to

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<sup>160</sup>179 Kinfe, A. (1997). "The Nile Issue: Psycho-political Hurdles to an Agreement and the way forward towards Rapprochement". *5th Nile 2002 Conference*. Addis Ababa

<sup>161</sup> 180UNEP and GPA. (2006). *The State of the Marine Environment: Trends and Processes*. The Hague: UNEP, GPA.

reduce the amount of water supply by the Nile River to Egypt<sup>162</sup>. In addition, Egypt's economy is largely dependent on Agriculture. Being a desert country, her economy therefore is sustained by the Nile River. To this extent the river may be a subject of conflicts between Egypt and other involved states. Historically, there has been a conflict between Egypt, Ethiopia and Tanzania over the Nile River waters<sup>163</sup>.

Documentations demonstrate that the interests of the colonial powers in the colonial era largely contributed to the varying use of the Nile waters among the Nile riparian states. The colonialists' agriculture activities largely depended on Egypt and Sudan<sup>164</sup>. The two states being largely deserts and semi-deserts, the Nile water was of great use to meet the agricultural needs. Sudan has created four dams along the Nile River which have served thousands of kilometres square of irrigated land.

Having gained independence on 9th July 2011, South Sudan is the newest state in the world. The state seceded from Sudan following a referendum of independence of the south from Sudan. The Comprehensive Peace Agreement was signed by Sudan and South Sudan prior to the secession, and it provided the roadmap for the eventual breakup of Sudan. Water supply in South Sudan is faced with numerous challenges. It is estimated that between 50% and 60% of the population of South Sudan has access to an improved water source, such as a hand pump, a protected well or, for a small minority, piped water supply. Although the White Nile runs through the country, water is scarce during the dry season in areas that are not located near the river. South Sudan being a young state, it has numerous development prospects which require substantive water supply<sup>165</sup>.

Reports indicate that the young state relies on generators as the main source of power. This practice is however unsustainable as the generators emit polluted gases into the air which are

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<sup>162</sup> 182 Wolf, A. T. (2008). "Case Studies of Transboundary Dispute Resolution". In A. T. Wolf, & J. D. Priscoli, *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press

<sup>163</sup> 183 Ramaswamy Iyer. (2003). "Relations with Neighbours." *Water: Perspectives, Issues, Concerns*. New Delhi: Sage Publications India Pvt. Ltd

<sup>164</sup> 184 Kairo, L. G. (2006). *Hydropolitics in the Nile: Smoothing the waters of Conflict*. *Irenees.net*. Retrieved August 5, 2013, from Irenees.net: <http://www.irenees.net>

<sup>165</sup> 185 Granit, J., Cascão, A., Jacobs, I., Leb, C., Lindström, A., & Tignino, M. (2010). *The Nile Basin and the Southern Referendum*. SIWI, UNDP Water governance. Stockholm: Regional Water Intelligence Report

dangerous to human and animal health. Hydroelectric power is however the most advanced and economically viable source of renewable energy utilized in every modern state.<sup>166</sup>

South Sudan's economy, like many other developing economies, is largely dependent on agriculture. The region having been neglected in the former state prior to secession, South Sudan is yet to explore fully its agricultural potential. In a bid to realise her agricultural venture to a sustainable level, the country experiences an increasing demand for water. In addition, the countries' population is growing, a situation that is creating a demand for food. The most efficient way to meet this growing demand for food is to revert to irrigation (Juba 2013). To this extent, it is worth noting that South Sudan relies on the Nile as the principal source of water, as much as Sudan and Egypt<sup>167</sup>.

The Comprehensive Peace Agreement (CPA) between Sudan and South Sudan did not include an agreement on South Sudan's rights to the Nile after her independence. South Sudan's independence from Sudan directly impacts the Nile Basin's legal framework. Prior to independence, Nile usage by South Sudan, through Sudan, was governed by the 1959 Nile Waters Agreement. The CPA proved to be less than comprehensive in the realm of water rights. During the six-year interim period between the adoption of the CPA and the 2011 South Sudanese vote for independence, issues concerning the Nile and other rivers crossing the border between the northern and southern regions belonged solely to the Government of the Republic of the Sudan in Khartoum<sup>168</sup>. No provision of the CPA discussed the division of Nile water rights in the event that the people of South Sudan decided to vote in favour of independence. South Sudanese independence as a result, adds to the already complex situation for Nile water rights.

South Sudan is a country endowed with natural resources such as oil, water, fertile land, livestock, wetlands, and wildlife. For the country's economic development, the natural resources would be essential; in fact the leadership has indicated that even though the most valuable of the resources is oil, they do not plan to rely completely on oil. The development

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<sup>166</sup> 186Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 204.

<sup>167</sup> 187 Ibid

<sup>168</sup> 188Mutayoba, W. (2008). Tanzania: Water Resources Management Structure. *Symposium on Science and Policy Linkages*. Entebbe: United Nations University.



and management of resources such as water and fertile land would be crucial in any strategic decision-making process in the new independent country.<sup>169</sup>

The South Sudanese government is developing an agriculture policy that aims to guarantee food security for its population of nine million. It is expected that this policy would focus on rain-fed agriculture, but would also include plans for irrigating farmland with Nile waters. With its independence, South Sudan became the eleventh Nile country,<sup>170</sup> a basin already experiencing complex hydro political dynamics. It is not clear what the position of the new midstream riparian would be towards the 1959 agreement. If Southern Sudan decides to succeed into rights and obligations of this agreement, this would be a clear signal of alignment with the downstream riparians. Water allocations under the agreement would need to be renegotiated and it is unlikely that Egypt would accept a reduction of its allocated share. North and South would have to negotiate within the current allocation to Sudan. The Fifth Article of the Agreement, which requires a unified position in negotiations concerning Nile waters with any other riparian State, also apply to South Sudan.<sup>171</sup> The requirements of a unified negotiation position curtail South Sudan's freedom in engaging in project with its upstream neighbours.

This alignment with the downstream riparians is likely to undermine South Sudan's ambitions to join the EAC. Furthermore, the 1959 Agreement provides for the construction of water conservation schemes in Southern Sudan. This is an implicit reference to the Jonglei canal project, a project which is not very popular in the South. With respect to succession to international treaties, Southern Sudan could follow the Nyerere Doctrine<sup>172</sup>; reviewing earlier treaties regarding their binding force. With respect to treaties dating from before 1956, it

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<sup>169</sup> 189 Ibid

<sup>170</sup> 190 Tadesse, D. (2008). *The Nile: Is it a curse or blessing?* Pretoria: Institute for Security Studies (ISS). pp. 4.

<sup>171</sup> 191 Knobelsdorf, V. (2013). "The Nile Waters Agreements: Imposition and Impacts of a Trans boundary Legal System". *African Law Reporter*.

<sup>172</sup> 192 Tadesse, D. (2008). *The Nile: Is it a curse or blessing?* Pretoria: Institute for Security Studies (ISS). pp. 4.

could claim further that it was under colonial rule and that even after 1956 it continued its struggle for political autonomy and independence.<sup>173</sup>

In not accepting the binding force of the 1959 agreement, a possible sovereign Southern Sudan would signal alignment with the upstream neighbours. It might further decide to sign and ratify the CFA, a step that would most likely antagonise Northern Sudan and Egypt in particular if Southern Sudan becomes the sixth country to ratify. The treaty States in Article 42 that it shall enter into force “on the sixtieth day following the date of the deposit of the sixth instrument of ratification or accession with the African Union”. The treaty does not limit signature to the ten States listed. Article 40 states that it is “open to signature by all States in whose territory part of the Nile River Basin is situated”.

Egypt, though it brands itself historically as ‘the gift of the Nile’ and wishes not to be dethroned of that title, would have to maintain a good relation with South Sudan. Relations between South Sudan and Egypt can very well contribute to significant changes in the regional hydro political relations. For Egypt, the hydro-hegemonic power in the Basin<sup>174</sup>, South Sudan represents both a real threat and a great opportunity. A threat because South Sudan’s secession might contribute to break apart the strong dyad between downstream riparians (Egypt and Sudan), who continue to refuse to acknowledge a 1959 Nile Waters Agreement that allocated water rights for basin countries. In the event of secession, a country can decide to reject international agreements signed by the former country. If South Sudan elects, it could align with the upstream Nile riparians that have always contested the 1959 Agreement as valid and acceptable<sup>175</sup>. This is a very likely scenario if South Sudan’s axis of political and economic cooperation moves southwards, as the country is expected to join the East Africa Community (EAC).

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<sup>173</sup> 193 *Palestine village encases spring in concrete to thwart further settler attack*. (2003). Retrieved June 15, 2013, from Oxfam:  
[http://www.oxfam.org.uk/what\\_we\\_do/where\\_we\\_work/israel\\_palterr/springconcrete.htm](http://www.oxfam.org.uk/what_we_do/where_we_work/israel_palterr/springconcrete.htm)

<sup>174</sup> 194 *Palestine village encases spring in concrete to thwart further settler attack*. (2003). Retrieved June 15, 2013, from Oxfam:  
[http://www.oxfam.org.uk/what\\_we\\_do/where\\_we\\_work/israel\\_palterr/springconcrete.htm](http://www.oxfam.org.uk/what_we_do/where_we_work/israel_palterr/springconcrete.htm)

<sup>175</sup> 195 Wolf, A. T. ( 2000). “Hydrostrategic territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations”. In Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.

The EAC links South Sudan with its main economic and trade partners, aiming to deepen the relationship, with plans such as building a future oil pipeline from South Sudan to the port of Lamu in Kenya. South Sudan is also expected to join the Nile Basin Initiative (NBI) and the ‘upstream bloc in the signing and ratification processes of the new Nile treaty – the Cooperative Framework Agreement (CFA) – which would establishment a Nile Basin Commission (NBC).<sup>176</sup>

Opportunity because, South Sudan’s independence could mean the prospects of resuming longstanding plans to increase Nile flows by means of river engineering in South Sudanese wetlands, as envisaged by the 1959 Agreement, which Egypt hopes South Sudan would acknowledge.<sup>177</sup> An independent and stable South Sudan could make the resumption of the Jonglei Canal project possible. Implementation of this canal started in the 1970s with the strong financial and logistical support of Egypt but was halted by the civil Sudanese war during the 1980s. For Egypt the gains are startling: four additional billion cubic metres of water to be shared equally with Sudan. In order to achieve this ambition, Egypt’s foreign policy towards South Sudan has been one of ‘seduction’ – including economic aid and cooperation, support in infrastructure development, and political recognition<sup>178</sup>.

For South Sudan, hydropolitical choices would be mainly determined by its calculations in terms of regional economics and foreign policy<sup>195</sup>. South Sudanese leaders want to keep good geopolitical relations with powerful downstream riparian’s, and at the same time, to get a specific water allocation for the country if it decides to acknowledge the 1959 Agreement. South Sudanese leaders are also aware that the Jonglei Canal is not a popular project domestically and that is known to bring little direct advantages for their country. Moreover, the political symbolism associated with the destruction of the project in 1983 is still very fresh in the minds of the South Sudanese. Alternatively, South Sudan can opt for the

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<sup>176</sup> 196 Khan, M. (2009). *Towards Better India-Bangladesh Relations*. New Delhi: Institute for Defence Studies and Analyses

<sup>177</sup> 196 Khan, M. (2009). *Towards Better India-Bangladesh Relations*. New Delhi: Institute for Defence Studies and Analyses

<sup>178</sup> 199 Mideast Mirror. (1997). *Turks attacks northern Iraq after renewing mandate of U.S.-led force*. 11 (2). (as cited in, Delli Priscoli, Jerry and Aaron T. Wolf. 2009)

multilateral path and benefit from the future cooperative projects (energy, agriculture, etc.) to be implemented in the Basin through the EAC and the NBI/NBC<sup>179</sup>. This could be compatible with good relations with Egypt and Sudan, but it is very likely that the Equatorial riparians and Ethiopia would pressurise the country to sign the new Nile Agreement (CFA) and this would be totally at odds with the unified position between the parties required by the 1959 Agreement, and Egypt and Sudan's rejection of the CFA. Ultimately the Southern Sudanese government would have to choose between a rock and a hard place.

#### **4.5. Impact of South Sudan Independence on Regional Politics**

The independence of South Sudan has a lot of implications on the Nile Basin states; the country's independence holds a host of potentials, Ethiopia for example has announced that its Grand Ethiopian Renaissance Dam project on the Blue Nile would begin diverting the Blue Nile at the end of 2014<sup>180</sup>. Ethiopia's decision has set off alarm bells down river in Sudan and Egypt, which are both critically dependent on the Nile for drinking water, irrigation, and in the case of Egypt's Aswan High Dam, electric power<sup>181</sup>. A 1959 agreement between Egypt and Sudan guarantees Egypt 70 percent and Sudan 30 percent of the Nile's water flow. Amidst the Ethiopia's announcement, it is not clear what the position of South Sudan would be on the issue.

Egypt's government has warned Ethiopia, a historical rival, not to restrict the Nile water flow to the extent that it would adversely affect the Aswan Dam or Egypt's water supply. Sudan has voiced similar warnings. Cairo and Khartoum are also aware that their mutual enemy, Israel, has close relations with Ethiopia and the Republic of South Sudan, the world's newest nation. The independence of South Sudan would not have been possible without the backing of Israel's leading neo-conservative allies in Washington and London.

The White Nile flows from the Tanzania, Rwanda, Burundi, through Uganda and South Sudan, to Sudan. Egypt and Sudan have also been concerned about Israel's heavy presence in

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<sup>179</sup> 200 Tadesse, D. (2008). *The Nile: Is it a curse or blessing?* Pretoria: Institute for Security Studies (ISS).

<sup>180</sup> 201 Salman, S. (2011). "New State of South Sudan and the Hydro-politics of the Nile Basin". *Water International*, 36(2), pp.154-166.

<sup>181</sup> 202 Cesar, Guvele. (2003). "The Nile Basin Initiative and its Implication on Post Conflict South Sudan". *Preparatory workshop*. Missouri: University of Missouri

South Sudan<sup>182</sup>. The South Sudanese secession put tremendous pressure on the future territorial integrity of Sudan, which faces additional Western- and Israeli-backed breakaway movements in Darfur and north-eastern Sudan. Splitting of Sudan into an Arab Muslim north and a black Christian and animist south was also long a goal of Israel, which yearned for a client state in South Sudan that would be able to squeeze the supply of the Nile's headwaters to Egypt and north Sudan<sup>183</sup>.

Egypt has been lending quiet support to Ethiopian and Somali secessionists, which Cairo sees as a counterweight to Ethiopian neo-imperialist designs in the Horn of Africa. Although Ethiopia maintains good relations with the breakaway Republic of Somaliland, Addis Ababa does not want to see Somalia fragmented any further. But that is exactly what is desired by Cairo to keep Ethiopia's military and revenues preoccupied with an unstable and collapsing neighbour to the east<sup>184</sup>.

Two other parts of Somalia, Puntland and Jubaland, also spelled Jubbaland, have declared separatist states. Jubaland should not be confused with the capital of South Sudan, Juba, which is being relocated to Ramciel, close to the border with Sudan. However, all this confusion and map redrawing is a result of increasing hydropolitics in the region, as well as the ever-present turmoil caused by the presence of oil and natural gas reserves. The Rahanweyn Resistance Army is fighting for an independent state of South-western Somalia<sup>185</sup>.

Somaliland has its own secessionist movement in the western part of the country, an entity called Awdalland, which is believed to get some support from neighbouring Djibouti, the site of the U.S. military base at Camp Lemonier. Ethiopian troops, supported by the African Union and the United States, are trying to prop up Somalia's weak Federal government but

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<sup>182</sup> 203 Granit, J., Cascão, A., Jacobs, I., Leb, c., Lindström, A., & Tignino, M. (2010). *The Nile Basin and the Southern Referendum*. SIWI, UNDP Water governance. Stockholm: Regional Water Intelligence Report

<sup>183</sup> 204 Kemal Ilter Ankara. (2000). "Analysts expect no drastic change in Turco-Syrian relations". *Turkish Daily News*, 12 June.

<sup>184</sup> 205 Swain, A. (2008). "Mission not yet accomplished: Managing water resources in the Nile River Basin". *Journal of International Affairs*, 6(2), pp. 201-214.

<sup>185</sup> 206 Knobelsdorf, V. (2013). "The Nile Waters Agreements: Imposition and Impacts of a Tran boundary Legal System". *African Law Reporter*.

Somalia's fracturing continues unabated with Kenya supporting a semi-independent entity called «Azania» in a part of Jubaland in Somalia<sup>186</sup>.

There are also a number of nascent separatist movements in Ethiopia, many being brutally suppressed by the Ethiopian government with military assistance from the United States, Britain, and Israel. Some of these movements are backed by Eritrea, which, itself, broke away from Ethiopia two decades ago. Chief among the groups are the Ogadenis, who want a Somali state declared in eastern Ethiopia and the Oromo, who dream of an independent Oromia<sup>187</sup>.

Ethiopia's ruling dictatorship has tried to placate the Oromos and Ogadenis with peace talks but these moves are seen as window dressing to placate Ethiopia's benefactors in Washington and London. However, separatist movements throughout the Horn of Africa took pleasure in the advent of South Sudan because they saw the inviolability of colonial-drawn borders, long insisted upon by the Organization of African Unity and the African Union, finally beginning to wither. In fact, that process began with Eritrea's independence in 1993. Eritrea also faces its own secessionist movement, the Red Sea Afars. The Afars also maintain separatist movements in Ethiopia and Djibouti, the latter having once been known as the French Territory of the Afars and Issas<sup>188</sup>. In another U.S. ally, Kenya, Muslims along the coast have dusted off the Sultan of Zanzibar's 1887 lease to the British East Africa Company of the 10-mile strip of land along the present Indian Ocean coast of Kenya. Legally, when the lease expired the strip was to revert back to control of the sultan. Since the Sultan was ousted in a 1964 coup, the coastal Kenyans argue that the coastal strip was annexed illegally by Kenya and that, therefore, the coastal strip should be the independent Republic of Pwani<sup>189</sup>. The discovery of major oil and natural gas reserves in Uganda and South Sudan has resulted in plans for pipelines to be built to the port of Mombasa, the would-be capital of Pwani on the

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<sup>186</sup> 207 Tadesse, D. (2008). *The Nile: Is it a curse or blessing?* Pretoria: Institute for Security Studies (ISS).

<sup>187</sup> 170 Granit, J., Cascão, A., Jacobs, I., Leb, c., Lindström, A., & Tignino, M. (2010). *The Nile Basin and the Southern Referendum*. SIWI, UNDP Water governance. Stockholm: Regional Water Intelligence Report

<sup>188</sup> 176 Cesar, Guvele. (2003). "The Nile Basin Initiative and its Implication on Post Conflict South Sudan". *Preparatory workshop*. Missouri: University of Missouri

<sup>189</sup> 178 Cesar, Guvele. (2003). "The Nile Basin Initiative and its Implication on Post Conflict South Sudan". *Preparatory workshop*. Missouri: University of Missouri

Indian Ocean. In Kenya, hydropolitics and petro-politics in the Horn of Africa has resulted in Balkanization spilling into Kenya. Hydropolitics, petro-politics, and the status quo, like water and oil, do not mix, especially when it comes to the preservation of current borders. North-eastern Africa is not unique in this respect<sup>190</sup>.

#### **4.6. Conclusion**

While South Sudan has not overtly discussed the possibility, it could choose to accede to the 1959 Nile Waters Agreement. South Sudan's hypothetical accession to the 1959 Nile Waters Agreement presents its own set of challenges because of the necessary modification of the actual terms, both textually and substantively. Language reflecting the bilateral nature of the original treaty peppers the 1959 Agreement. Another substantive issue related to a South Sudanese accession to the 1959 Agreement concerns renegotiation of water allotments. South Sudan's hypothetical accession likely poses a greater threat to Sudan's water allotment than Egypt's water allotment because the geographical area now contained within South Sudanese borders was once covered by the water allotment granted to Sudan in the 1959 Agreement. Egypt would fiercely contest any attempt to subtract from its water allotment, making Egypt's 55.5 km<sup>3</sup> effectively non-negotiable. A plausible scenario, given Egypt's interest in preserving the Nile's flow through both Sudan and South Sudan, is Egypt serving as the middleman in negotiations between the two countries concerning the division of 18.5 km<sup>3</sup> of Nile water. Acceding to the 1959 Nile Waters Agreement would not preclude South Sudan from participating in other regional bodies or other legal agreements concerning the Nile. Egypt and Sudan are already members of the NBI and participated in the negotiation for the CFA, but refused to sign. Using Article 5(2) of the 1959 agreement, South Sudanese accession means that the three countries would effectively participate as a unified bloc in any Nile-related negotiations with outside parties. This article could prove to be problematic if the three parties were to disagree, and, as a result of the disagreement, one party wishes to withdraw. The 1959 Agreement lacks a withdrawal provision, and is not governed by the Vienna Convention on Treaties, so parties do not have the legal right of withdrawal.

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<sup>190</sup> 178 Cesar, Guvele. (2003). "The Nile Basin Initiative and its Implication on Post Conflict South Sudan". *Preparatory workshop*. Missouri: University of Missouri

The Comprehensive Framework Agreement (CFA), an alternative to the 1959 Agreement, is an equitable utilization agreement that included all Nile Basin riparian in negotiations, but has only been signed (so far) by six upstream riparian. The CFA is not yet in force, but only requires six ratifications to bind members. The CFA serves as the only formalized alternative to the 1959 Nile Waters Agreement. The CFA does not specifically repudiate the 1959 Nile Waters Agreement, but the two agreements contain provisions that are in direct conflict with one another. Thus, unless the 1959 Nile Waters Agreement is modified, the CFA effectively replaces the Treaty in the eyes of its signatories. While South Sudan is eligible to accede to the CFA, by doing so, it would mean exchanging the fixed water allotment under the 1959 Nile Waters Agreement for a varying allotment dependent upon the equitable and reasonable utilization of upstream signatories. Unlike the 1959 Nile Waters Agreement, state succession does not play a role in the analysis of South Sudan's right to accede to the CFA. Sudan is a member of the NBI, but South Sudan is currently not, though it is seeking membership.

The CFA is not an agreement exclusively meant for NBI members Nile hydrology, not political affiliation or national identity, acts as the determinant for party eligibility. Under Article 41 of the CFA, and based on the definition of "Nile River Basin" in Article 2(a), South Sudan can ratify and accede to the CFA because of the White Nile's flow through its sovereign territory. Though the CFA has not entered into force, South Sudan's ratification or accession is eligible to count as one of the required six state ratifications or accessions necessary for the CFA to enter into force. Unlike the 1959 Nile Waters Agreement, post-accession/Ratification withdrawal is permissible.

South Sudan's third legal option is to pursue an independent claim to the Nile founded on one of the traditional international water doctrines: International Water Law Doctrine which is an alternative option to the CFA and 1959 Nile Waters Agreement available to South Sudan. South Sudan, an independent nation state not necessarily bound to any international agreement occupies a rare position along the Nile in that it is both an upstream and downstream riparian. While downstream from the White Nile's headwaters, South Sudan is also upstream in that several White Nile tributaries originate within its borders. It thus does not neatly fit into the upstream riparian/downstream riparian divide generally demonstrated by the signatories and non-signatories of the CFA. As an unaffiliated Nile riparian with its own domestic and foreign policy objectives and interests that were not integrated into either the CFA or the 1959 Agreement, South Sudan possesses the opportunity for the first time to exercise its right of self-determination on an international level; another option would be a



Unaffiliated Equitable and Reasonable Utilization which is an alternative course for South Sudan to pursue would be unaffiliated equitable and reasonable utilization.

This alternative course represents a legal strategy built around equitable and reasonable utilization, but influenced by the current geopolitical realities of the Nile Basin. A policy of unaffiliated equitable and reasonable utilization is founded upon South Sudan's inherent water rights as an independent nation state and utilizes as its legal framework the 1997 U.N. Convention on the Law of the Non-navigational Uses of International Watercourses (Watercourses Convention), much of which is already codified in the CFA. Unaffiliated equitable and reasonable utilization essentially moulds the inherent rights of an independent nation-state to Nile Basin geopolitics. The aim of such a policy is to enable South Sudan to maximize the achievement of its legal objectives and its economic, social, development, and foreign policy goals.

While the global community usually celebrates a nation's independence, the existence of a new state also means an additional competitor for common resources of differing scarcities. Of all common resources, water is the most valuable, not only for the sustenance of human life, but for economic development as well. Water is essential for economic development because it is through the combination of water with one or more natural resources that other secondary resources are made available. Reports by South Sudan government officials have indicated that the country intends to sign an agreement which would allow the state to explore the Nile waters. It is said that the government of South Sudan intends to build a dam across the White Nile to effect development projects. In addition, it is rumoured that the young state is intent on signing the Cooperation Framework Agreement treaty. Whatever course is taken, it can only be hoped that the Nile sharing consequences would foster cooperation and peace rather than complexities and conflicts.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATION**

### **5.1. Summary of Findings**

The research throughout this study has shown that the assumptions about the impacts of independence of South Sudan impact on the hydro-politics of the Nile Basin and thus, answer the secondary and primary questions. The River Nile draws its water from two main sources, tropical sources, which supply the Nile with about 14 percent of its income yearly, and Ethiopian sources, which supply the Nile with about 86 percent of its income. The Nile Basin includes eleven countries (Burundi - Rwanda - Uganda - DRC - Tanzania - Kenya - Eritrea - Ethiopia - South Sudan - Sudan - Egypt). The Nile Basin occupies a distinguished location on the African continent, which lies in the middle of three main water bodies, the Mediterranean, the Red Sea, and the Indian Ocean. It also controls two marine passages, the Suez Canal and the Strait of Bab el-Mandeb.

Egypt, which has depended on the waters of river Nile for thousands of years due to the lack of alternative sources. The annual flooding of the Nile was once sufficient to meet the needs of Egypt dating back to the days of the Pharaohs and up to the beginning of the nineteenth century; however, as a result of the population increase, Egypt has established several projects in an effort to organize and to achieve the best use of its Nile water. Egypt has also signed several agreements with other countries of the Nile Basin in an effort to get them to recognize Egypt's historical right to Nile waters. Egypt thus stands as the powerhouse in the hydro-politics of the Nile Basin. The 1959 agreement between Egypt and the Sudan addressed Egypt's quota of Nile water at 55.5 BCM per year; however, Egypt's current needs are constantly growing due to population growth and the demands of continual development. Egypt's estimated water needs in 1997 was about 63.9 BCM per year and is expected to increase in 2017 by additional 21.5 BCM per year. This extreme issue would force Egypt to establish many projects in order to reduce losses of Nile water and to consolidate its relations with the Nile Basin countries in hopes of guaranteeing its quota of Nile water (or in hopes of increasing it).

Nile Basin countries suffer from many problems as a direct result of their roots which were vested in colonialism, regime changes, coups d'état, and civil war. In particular, the conflict between Ethiopia and Eritrea, the fighting in Sudan and South Sudan, the instability in the DRC, and the continued Kivu threats facing Rwanda, create a semi-permanent climate of instability. Egypt is currently seeking to support and develop its leading role in the Nile Basin

at both the regional and global levels. If Egypt is to be successful in this endeavour, it would require enhanced cooperation among the other countries of the region.

The emergence of new states invariably carries with it a vast array of challenges. Some of these challenges relate to resolving outstanding issues with the mother state, and the sharing and managing of common resources. This is certainly the case with the new state of South Sudan. Indeed, the challenges in South Sudan are compounded by the inability of northern Sudan and southern Sudan to resolve any of the large number of outstanding issues before secession. For reasons related to hydro-politics the SPLM/A gave up any responsibility for the Nile waters during the interim period to the central government. Although this might have facilitated acceptance by the Nile riparians of the right to self-determination, it has resulted in major delays in the decisions on the sharing and management of the Nile waters between the two parts of the country, and eventually between the two states. Sudan and the new state of South Sudan now have to address, *inter alia*, the issue of sharing and managing the Nile waters. They also have to address the grazing and related water rights of the border communities in areas across some of the tributaries of the White Nile. Indeed, some of the disputed border areas that the two parties still have to resolve, including the dispute over the Abyei area, fall across the White Nile or some of its tributaries, thus extending the border disputes to water rights. The Jonglei Canal Project, as well as the other projects for conserving some of the waters of the swamps of southern Sudan, could as well be on the agenda of the Sudan. The Sudan may bring up completion of the Jonglei Canal Project as a way of providing more water for sharing with the new state. Aside from hydro-politics, the security situation in South Sudan may be an important factor in determining the future of the Jonglei Canal Project, as well as the other swamp projects.

Moreover, South Sudan would also face the issue of its relationship with the other Nile riparians, and how to deal with the Nile Basin CFA. As indicated earlier, the six countries that have thus far signed the CFA would do their best to woo, perhaps even pressure, southern Sudan to become a party to the CFA so as to provide the desperately needed sixth state for the CFA to enter into force and effect. On the other hand, Egypt and Sudan, who vehemently oppose the CFA, would do their best to court southern Sudan to their side, or at least keep it neutral on this issue. It remains to be seen how South Sudan would handle this matter. The centrality of water resources in the issues that need to be addressed in post-conflict situations has been reconfirmed by the emergence of South Sudan as an independent nation. In this case, the issues go well beyond the Sudan and the new state of South Sudan,

and extend to the other riparian states of the Nile Basin. The state of South Sudan has been born at a time of tense relations among the 10 Nile riparian countries, exacerbated by the acute differences over some basic principles and provisions of the CFA. Would the new state align itself with the equatorial lakes countries – as is widely expected, based on common interests on the White Nile, ethnicity, geography, and history? Would it accede to the Nile Basin CFA which has six signatories and needs six ratifications to enter into force, thus enhancing the CFA chances of entering into force? Would Sudan and Egypt claim that southern Sudan is bound by the 1959 Nile Agreement, particularly with regard to construction of the water conservation projects specified in that Agreement? If they make that claim, how can they enforce it? Would Egypt claim that the new state is bound by the 1929 Nile Agreement, based on the same reasoning it argues *vis-à-vis* Kenya, Tanzania and Uganda, and demand that any project in South Sudan be subject to its prior agreement? These are some of the difficult questions that may be posed now, adding more complexities to the already intricate relations within and among the Nile Basin states.

## **5.2. Conclusion**

The emergence of new states customarily carries with it an immense array of challenges. Most of these challenges relate to resolving outstanding issues with the mother state, and the sharing and managing of common resources. This is undoubtedly the case with the new state of South Sudan. Undeniably, the challenges in South Sudan are compounded by the inability of northern Sudan and southern Sudan to resolve any of the large number of outstanding issues before secession. For reasons related to hydro-politics the SPLM/A gave up any responsibility for the Nile waters during the interim period to the central government. Sudan and the new state of South Sudan now have to address, *inter alia*, the issue of sharing and managing the Nile waters. Some of the disputed border areas that the two parties still have to address, including the dispute over the Abyei area, fall across the White Nile or some of its tributaries, thus extending the border disputes to water rights. The Jonglei Canal Project, as well as the other projects for conserving some of the waters of the swamps of southern Sudan, could as well be on the agenda of the Sudan. South Sudan would also face the issue of its relationship with the other Nile riparians, and how to deal with the Nile Basin CFA. As indicated earlier, the six countries that have thus far signed the CFA would do their best to woo, perhaps even pressure, southern Sudan to become a party to the CFA so as to provide the desperately needed sixth state for the CFA to enter into force and effect. On the other

hand, Egypt and Sudan, who vehemently oppose the CFA, would do their best to court southern Sudan to their side, or at least keep it neutral on this issue. The centrality of water resources in the issues that need to be addressed in post-conflict situations has been reconfirmed by the emergence of South Sudan as an independent nation. In this case, the issues go well beyond the Sudan and the new state of South Sudan, and extend to the other riparian states of the Nile Basin.

### **5.3. Recommendation**

The findings of this study reveal that the effectiveness of the international community's generalized rules for the management of water quality in trans boundary settings has been hindered in large part by a lack of resolute commitment on the part of riparian states, and basin-level institutions, and hegemonic approach in sharing of the water resource. It is certain that the economic, political, and legal complexities associated with trans boundary water management may complicate institutional development; there is need for further research in designing comprehensive water management frameworks that can overcome the underlying obstacles. Further, the study recommends that South Sudan should begin to implement the call of the policy guidelines to protect its portion of the Nile River basin and to generate poverty reduction activities through a good governance system which views the Nile and the resources and people who live along its basin as shared resources.

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