

Power asymmetry and conflict over water resources in the Nile River Basin: the Egyptian hydro-hegemony

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Abstract

This study is an application of the *framework of hydro-hegemony* theory to the Nile basin. It shows that the realist concepts of *power* and *hegemony* are pertinent analytical tools to explain the *cold water-conflict* occurring in the basin characterised by an inequitable share of the Nile flows in favour of Egypt (and Sudan), at the expense of upstream riparians. It further demonstrates that through the use of all *power strategies, tactics and resources* available to a hydro-hegemon, Egypt has been capable of maintaining and consolidating this hegemonic position, attained during the colonial period, for more than forty years.

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List of Abbreviations and Acronyms

bcm	billion cubic meters
CIA	Central Intelligence Agency
DRC	Democratic Republic of Congo
GCI	Green Cross International
GDP	Gross Domestic Product
Hydromet	Hydrometeorological Survey of the Equatorial Catchments of Lake Victoria, Kyoga, and Mobutu
NBI	Nile Basin Initiative
NCP	New Civilisation Project
NGO	Non-Governmental Organisation
USA	United States of America
Tecconile	Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile basin
WB	World Bank
WEIS	Water Event Intensity Scale

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Chapter 1 – Introduction

1.1 Purpose of the study

The following study is an application of the *framework of hydro-hegemony* theory to the Nile basin, in order to analyse the role of power relations as an explanatory tool for the inequitable water distribution in the basin. It will be argued that the realist theories of *Power* and *Hegemony*, as well as the concepts of *Knowledge* and *Discourse*, are at the core of water relations and distribution schemes in the Nile basin.

1.2 Statement of scopes

The theoretical scope of the study is centred on the concepts of Power and Hegemony through a realist view of international relations (see 1.3).

The study focuses on states' interrelationships, and circumvents smaller scale's interactions and pressures. However, higher political grounds, such as the role of the international community in influencing power relations at the basin's scale, will be discussed.

Geographically, the Nile basin will be the case under study. However, greater attention will be given to the relations between the most important states in terms of water-related issues: Egypt, Ethiopia, and Sudan. Indeed, the other riparians do not have a determinant role in the outcome of water relations in the basin, although Uganda may have a voice to express (Waterbury, 2002).

In order to apply the framework of hydro-hegemony, a historical overview of interstate's power relations in the Basin will be presented, especially in chapter 5, from the mid-nineteenth century to the beginning of the twenty-first.

1.3 Literature review

Power is the ability to pursue and attain goals through mastery of one's environment (Mann, 1986: 6).

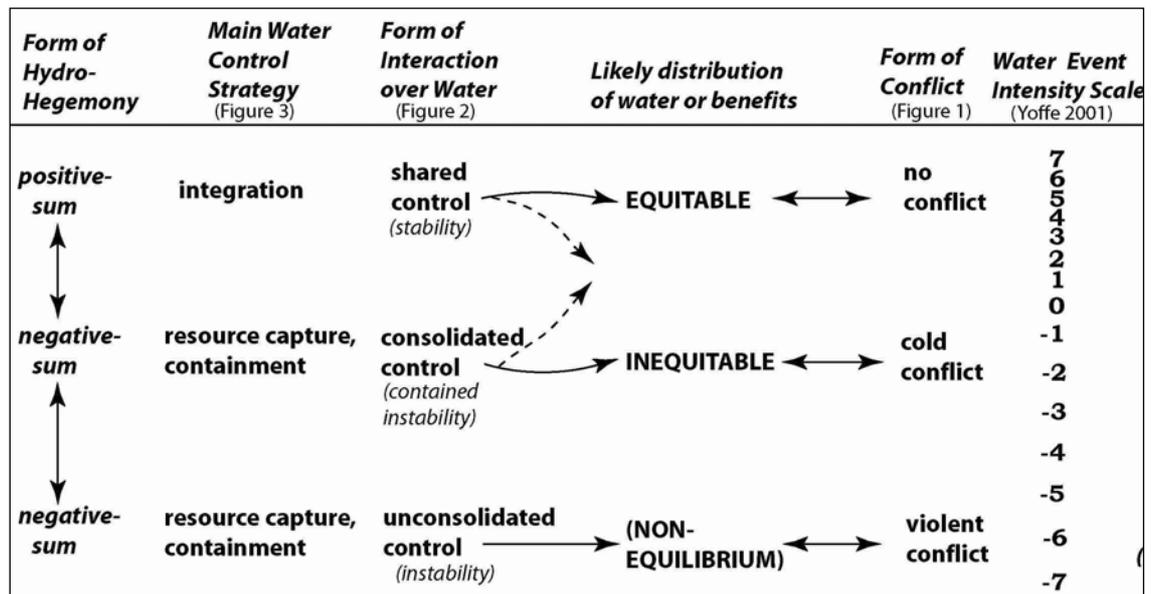
1.3.1 Theories and concepts

Hydro-hegemony is "hegemony at the river-basin level, achieved through water resource control strategies such as resource capture, integration and containment"

(Zeitoun and Warner, 2006a: 1). The framework of hydro-hegemony (figure 1.1) was developed in order to evaluate the extent to which the presence of a hydro-hegemon in a basin can impinge the development of its co-riparians.

The concept of hydro-hegemony is rooted in realist theories of: regimes (Keohane, 1982), power (Cox, 1992; Lukes, 2005) and hegemony (Gramsci, 1971; Lustick, 2002), knowledge and discourse (Foucault; Hajer, 1997), water conflict (Naff and Matson, 1984; Frey and Naff, 1985; Frey, 1993; Lowi, 1993; Homer-Dixon, 1999 and Wolf 2004), and water conflict intensity (Yoffe and Larson, 2001; Yoffe et al., 2003).

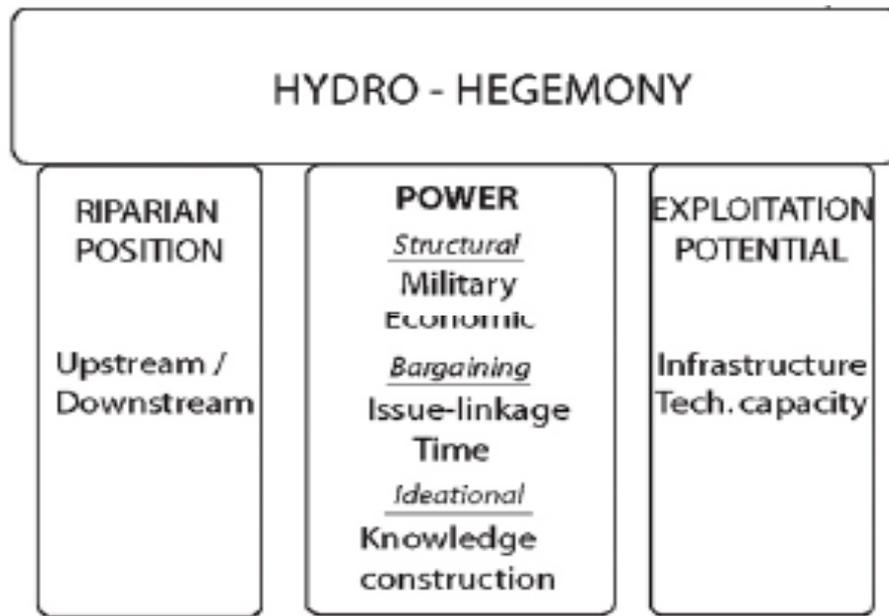
Figure 1.1. – The framework of hydro hegemony



Source: Zeitoun, 2006a

The framework of hydro-hegemony is applicable to situations where: there is considerable *asymmetry of power*; *control* of the flows is *consolidated* by the hydro-hegemon; and *competition* over water is *stifled* (Zeitoun, 2006a). It focuses on two under-developed theoretical concepts in situations of competition over water: the existence of *varying intensities of conflicts* and the extent of *power asymmetry* between riparians. The former permits to evaluate the intensity of a water conflict on the Water Event Intensity scale (WEIS) (Yoffe et al. 2001) (see fig 1.1). The level of *power asymmetry* in a river basin is determined by the domination of one or several states over the others with regards to the three “pillars of assessment of the level of hydro-hegemony” (see figure 1.2): its “exploitation potential” (technical capacity to build hydraulic infrastructures), its “riparian position” (geographical position), and the levels of its structural, bargaining and ideological powers (Lukes, 2005). It is argued to be the case in the Nile River Basin, with Egypt (Cascao, 2005).

Figure 1.2 - The pillars of assessment of the level of a state's Hydro-Hegemony



Source: Zeitoun and Warner, 2006.

The three dimensions of power are defined in table 1.1. Structural power is “power as might”, in other words the ability of a state to mobilise capabilities (military might, economic strength, political support, etc.), but also its riparian position. The second dimension of power (bargaining power) refers to control of the rules of the game (Zeitoun, 2006a). It consists of narrowing the weaker state’s alternatives to compliance, when confronted with the stronger party’s demands (Lukes 2005). Finally, ideological power is the “power to prevent people from having grievance by shaping their perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things” (Lukes, 2005 in: Zeitoun, 2006: 76). Hegemony, the core concept of the framework, relates to the third dimension of power. Gramsci defines hegemony as “political power that flows from intellectual and moral leadership, authority or consensus as distinguished from armed force” (Gramsci, 1971). It involves consent from the “hegemonised” riparians (Cascao, forthcoming).

Table 1.1 – The three dimensions of Power

Dimension of Power*	Equivalent 'Form' of Power	Characteristics
<i>First</i>	<i>Structural Power</i>	Power as might. (<i>puissance / coercive power / material power</i>) The possession of and ability to mobilise capabilities (military, economic, political might, etc.).
<i>Second</i>	<i>Bargaining Power</i>	Power as a relationship. (<i>pouvoir / legitimacy</i>) The impact that one's own options and alternatives may have on the other (moral high ground, authority, etc.).
<i>Third</i>	<i>Ideational Power</i>	Power in the realm of ideas. The ability to shape perceptions / issues/ thoughts, to determine the 'established order of things'.

Source: Lukes, 2005 in: Zeitoun, 2006a

The level of power asymmetry detained by a hydro-hegemon informs its power-related *strategies, tactics and resources* available, in order to achieve “consolidated control” over water resources (see fig 1.1). Indeed, “the more power a state has, the more tactics are available to it and the more able they are to deploy” (Zeitoun, 2005). *Containment and resource capture* are the key-strategies employed through the use of *tactics of compliance-producing mechanisms* like *military force, securitisation, sanctioned discourse*, etc. (Lustick, 2002). Other *coercive resources* are available to the hegemon, for instance its *ability to mobilise funds*. This dynamic is embedded within an *inequitable international context*, characterised by the *absence of a universally-acknowledged international water law*. It usually provides *negative-sum outcomes* where the hydro-hegemon seeks compliance from other riparians at their expense, thereby *containing and legitimising* the instability that prevails (Zeitoun and Warner, 2006). The *legitimisation* process is crucial, and implies a certain form of consent from the co-riparians (Cascao, forthcoming).

1.3.2 The Nile River Basin

The Nile is about 6700 Km long and is a complex case, because it borders ten countries: Egypt, Sudan, Ethiopia, Eritrea, Uganda, Kenya, Burundi, Rwanda, the Democratic Republic of Congo, and Tanzania (Evans, 1994). Indeed, only 12 out of 214 “shared-rivers” worldwide involve more than four countries (Dolatyar and Gray, 2000). Downstream Egypt is the most powerful state of the basin (Allan, 2001), due to the 1959 bilateral “Agreement on the Full utilisation of the Nile waters” with Sudan, which allows them to use respectively more or less 75% and 25% of the Nile flows

(Chesworth, 1994). This agreement stifles the competition and consolidates Egypt's control over the Nile flows.

Figure 1.3 – The Nile River Basin



Source: Phillips, 2006.

On the other hand, Ethiopia only uses 2.3% of it, although 86% of the flows of the whole Nile come from its highlands, as shown in table 1.2. Egypt has been maintaining this advantageous status quo for forty years, although upstream countries put more and more pressure to challenge it over time.

Table 1.2 - Contribution of main Nile sources

	Tributary	12-month water year (%)	Flood period (%)
Ethiopian sources	Blue Nile	59	68
	Sobat	14	5
	Atbara	13	22
	Total	86	95
Equatorial lakes	White Nile	14	5

Source: Waterbury, 1979.

Thus, the Nile is characterised by: the presence of a powerful state (which exercises consolidated control over the flows), an inequitable sharing of the resource, but also a long-lasting history of competition over its waters, punctuated by the influence of several external powers. These make of the Nile River Basin a very pertinent case for an application of the framework of hydro-hegemony.

1.4 Research Questions

The concepts at the heart of *hydro-hegemony* are useful analytical tools to analyse the complex hydropolitics of the Nile (Cascao, 2006b). A historical analysis of power relations between Nile riparians explains the current water policies in the basin, and raises several key questions that are presented in Box 1.1:

Is the framework of hydro-hegemony applicable to the case-study?

- Is there considerable asymmetry of power?
- Is the control of the flows consolidated by the hydro-hegemon?
- Is competition over water stifled?

What is the role of power in determining water distribution in the Nile River Basin?

How has Egypt achieved and maintained its hydro-hegemony?

- Is Egypt's hegemony based on the colonial era?
- Which have been the strategies, tactics and power resources used by the hegemonic power to achieve, maintain and consolidate its "unilateral" hegemonic control over water?
- Is the recent trend by Egypt to establish a basin-wide cooperative regime consolidation of Egypt's hydro-hegemony or a change in its nature?

What form of Hegemony is exercised by Egypt?

- What are the outcomes of this hegemony in the Nile River Basin?

The study attempts to answer these questions as completely as possible.

1.5 Outline of the study

The second chapter presents the methodology used to answer the research questions. The following chapters provide deeper theoretical explanations of the core concepts of the framework, and analyse the power relations in the Nile River Basin through the lenses of the framework of hydro-hegemony. Chapters 3 and 4 will focus respectively on evaluations of power asymmetry and conflict intensity in the Nile River Basin, in order to show that Egypt is ultimately the hydro-hegemon. Chapter 5 describes the main strategies and tactics used by Egypt since the nineteenth century to ensure its hydro-hegemony. Three different periods will be analysed separately: the pre- and colonial period, the post-colonial period and the 1990s, in order to highlight the potential trends over time. Chapter 6 focuses the "other coercive resources" used by Egypt, and its utilisation of the unstable international context during the period, which has always been in its favour concerning the Nile hydropolitics. The concluding chapter gathers all the evidence to address the research questions methodically.

Chapter 2 – Methodology

2.1 Introduction

This chapter discusses the methods and methodology used to produce this paper.

2.2 Methodology and Methods

Two different methods of investigation have been used for this study: *identifying general patterns and/or relations, including cross-national divergence* (in this case, studying interstate's power relations in the Nile basin), and *testing or refining existing theory* (applying the framework of hydro-hegemony to the basin) (Ragin, 1994). Hence, the study will be partly descriptive, discussing the historical roots of the Nile basin hydro-hegemonic situation, and partly analytical, analysing the relevance of the framework to a new case study (Cloke et al., 2004). Therefore, the research will be primary and secondary, respectively presenting new and original arguments, and collating and describing already developed arguments on hydro-hegemony (Carles, 2006).

Due to the sensibility of the subject (Allan, personal discussion, 2006), the key-method used to collect data has been the use of documentary sources (Bryman, 2004), with the exceptions of a few conferences, particularly the Second Hydro-Hegemony Workshop held in London in June 2006.

2.2.1 **Documentary sources**

Two types of documentary sources are relevant here: official and non-official sources (Cloke *et al.*, 2004). Official sources (or governmental sources) used in this study are: textual (reports), graphical (maps), and numerical (official statistics). Non-official sources used are developed by private entities (scholars, organizations, etc.), such as reference material (research papers, etc.) and reports (Hoggart *et al.*, 2002).

As a consequence, the study is built on a critical analysis of secondary data, in order to answer the research questions presented above. This data comprises information obtained from various published materials, maps, periodicals, books, and official and non-official statistics (see table 2.1). Almost all data was acquired through extensive library, Internet and archives research.

Table 2.1 – Research questions, data required and type of data used

Data required	Type of data used
<p>RQ: Is the framework of hydro-hegemony applicable to the case-study? - <i>Is there considerable asymmetry of power?</i> - <i>Is the control of the flow consolidated by the hydro-hegemon?</i> - <i>Is competition over water stifled?</i></p>	
<p>Extensive literature review on realist power-related theories and concepts (including the framework of hydro-hegemony)</p>	<p>Articles Books</p>
<p>Historical data related to riparians relations, with a particular focus on the history of Egyptian interactions and actions</p>	<p>Official Statistics (Ministries, etc.) Non-official statistics (International organisations, Non-Governmental Organisations (NGOs)) Articles Books</p>
<p>RQ: What is the role of power in determining water distribution in the Nile River Basin?</p>	
<p>Extensive literature review on realist power-related theories and concepts (including the framework of hydro-hegemony)</p>	<p>Articles Books</p>
<p>Numerical (historical) data on water distribution and allocation in the Nile River Basin</p>	<p>Official Statistics (Ministries, etc.) Non-official statistics (International organisations, NGOs) Articles Books</p>
<p>RQ: How did Egypt, historically, establish its hegemony? - <i>Is Egypt's hegemony based on the colonial era?</i> - <i>Which have been the strategies, tactics and power resources used by the hegemonic power to achieve, maintain and consolidate its "unilateral" hegemonic control over water?</i> - <i>Is the recent trend by Egypt to establish a basin-wide cooperative regime consolidation of Egypt's hydro-hegemony or a change in its nature?</i></p>	
<p>Historical data related to riparians relations, with a particular focus on the history of Egyptian interactions and actions</p>	<p>Articles Books Maps Official data</p>
<p>Extensive literature review on realist power-related theories and concepts (including the framework of hydro-hegemony)</p>	
<p>RQ: What form of Hegemon exercises Egypt? - <i>What are the outcomes of this hegemony in the Nile River Basin?</i></p>	
<p>Extensive literature review on realist power-related theories and concepts (including the framework of hydro-hegemony)</p>	<p>Articles Books</p>
<p>Historical data related to the Nile River Basin as a whole, with a particular focus on the history of Egypt's interstates' relations.</p>	

It is “important to evaluate carefully the information presented, to weigh potential biases, and to adopt an attitude of healthy scepticism” (Stewart and Kamins, 1993: 31) with documentary sources, because of *validity* and *objectivity* issues in this field (Frankfort-Nachmias and Nachmias, 1996). Indeed, data on power is value-laden, and its generation embodies biases. Furthermore, in a hegemonic framework, the interpretation of events tends to be consistent with the ruling power, and eliminates interpretations that are inconsistent with the orthodoxy (Cox, 1992). As a consequence, “triangulations” (Hoggart et al., 2002: 67) between different sources of data have been practiced, in order to give deeper insights to the analysis, but above all to ensure a minimisation of the validity problem linked with this study.

2.2.2 The Second Hydro-Hegemony Workshop

The Second Hydro-Hegemony Workshop, held in London in June 2006, was a meeting of an informal network of researchers on hydro-political issues. My participation in this workshop as an observer was very fruitful in terms of data and information gathered, via notes taking during presentations, and personal discussions with involved researchers.

2.3 Conclusion

The methodology used in the following study is very much “library-based”. Due to a lack of funds, the possibility for extensive interviews of researchers, professionals or politicians has been limited to a small number of personal discussions during conferences or workshops. Therefore, the paper is quasi-exclusively based on official and non-official documentary sources.

Chapter 3 – Conflict intensity in the Nile River Basin

3.1 Introduction

The application of the framework of hydro-hegemony to the Nile basin necessitates an analysis of the intensity of conflicts over the Nile waters. Cascao produced a database of 220 water-related events and interactions between Nile riparians during the 1945-2004 period, with particular attention given to interactions between Egypt, Ethiopia and Sudan (Cascao, 2004, see appendix 1). She also evaluated the intensity of these events with regards to the WEIS (see table 3.1.). Her data is crucial for this part of the study, which focuses on Egypt-Sudan and Egypt-Ethiopia bi-lateral interrelationships (174 events).

3.2 The Water Event Intensity Scale

The WEIS shows firstly that the implications of each different *level of intensity of conflict* on international relations are diverse, and secondly that “the absence of war does not mean the absence of conflict”. (Zeitoun and Warner, 2006: 9).

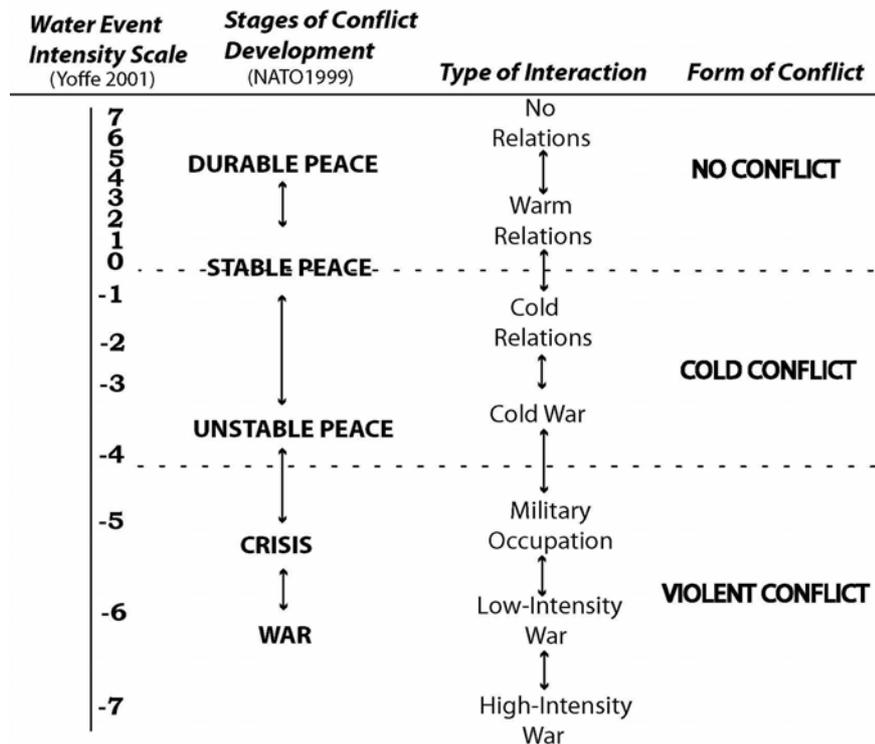
Table 3.1 – The Water Event Intensity Scale

	Scale	Event Description
Cooperation	7	Voluntary Unification into one nation
	6	Major Strategic Alliance (International Freshwater Treaty)
	5	Military, Economic or Strategic Support
	4	Non-military Economic, Technological or Industrial Agreement
	3	Cultural or Scientific Support (non-strategic)
	2	Official Verbal Support of goals, values, or regime
	1	Minor Official Exchanges, Talks or Policy Expressions
	0	Neutral or non-significant acts for the inter-nation situation
Conflict	-1	Mild Verbal Expressions displaying discord in interaction
	-2	Strong Verbal Expressions displaying hostility in interaction
	-3	Diplomatic-Economic Hostile Actions
	-4	Political-Military Hostile Actions
	-5	Small Scale Military Acts
	-6	Extensive War Acts causing deaths, dislocation or high strategic costs
	-7	Formal Declaration of War

Source: Yoffe *et al.*, 2003

The authors identified three forms of conflict with regards to their equivalent on the WEIS: “no significant conflict”, “cold conflict” and “violent conflict”, as shown in the “Conflict Intensity Frame” (figure 3.1). The WEIS therefore allows an analysis of water relations in river basins where cold conflicts are predominant, like the Nile River Basin (see below).

Figure 3.1 – Conflict Intensity Frame



Source: Zeitoun and Warner, 2006

3.3 Events and interactions in the Nile Basin (1945-2004).

Between 1945 and 2004, Cascao detected 61, 69 and 44 events and interactions between respectively Egypt and Ethiopia, Egypt and Sudan, and all Nile riparians. Table 3.2 summarises the intensity of these events in the 1945-1989, 1990-2004 and 1945-2004 periods. Truncating the period in two distinct ones will permit to identify any recent evolution.

Table 3.2 – Summary of conflict intensity of events in the Nile River Basin for the 1945-1989, 1990-2004 and 1945-2004 periods:

WEIS	Period 1945-1989				Period 1990-2004			
	Egy/Eth	Egy/Sud	NRB	Total	Egy/Eth	Egy/Sud	NRB	Total
7	-	-	-	-	-	-	-	-
6	-	1	-	1	-	-	1	1
5	-	1	-	1	-	-	-	-
4	-	5	-	5	3	1	8	12
3	-	3	2	5	-	-	6	6
2	-	4	1	5	4	5	4	13
1	1	8	-	9	10	6	8	24
0	1	1	-	2	8	10	2	20
-1	2	3	-	5	3	3	4	10
-2	15	5	3	23	3	5	1	9
-3	7	1	2	10	2	4	1	7
-4	2	1	-	3	-	-	-	-
-5	-	1	-	1	-	1	-	1
-6	-	-	1	1	-	-	-	-
-7	-	-	-	-	-	-	-	-
Total	28	34	9	71	33	35	35	103

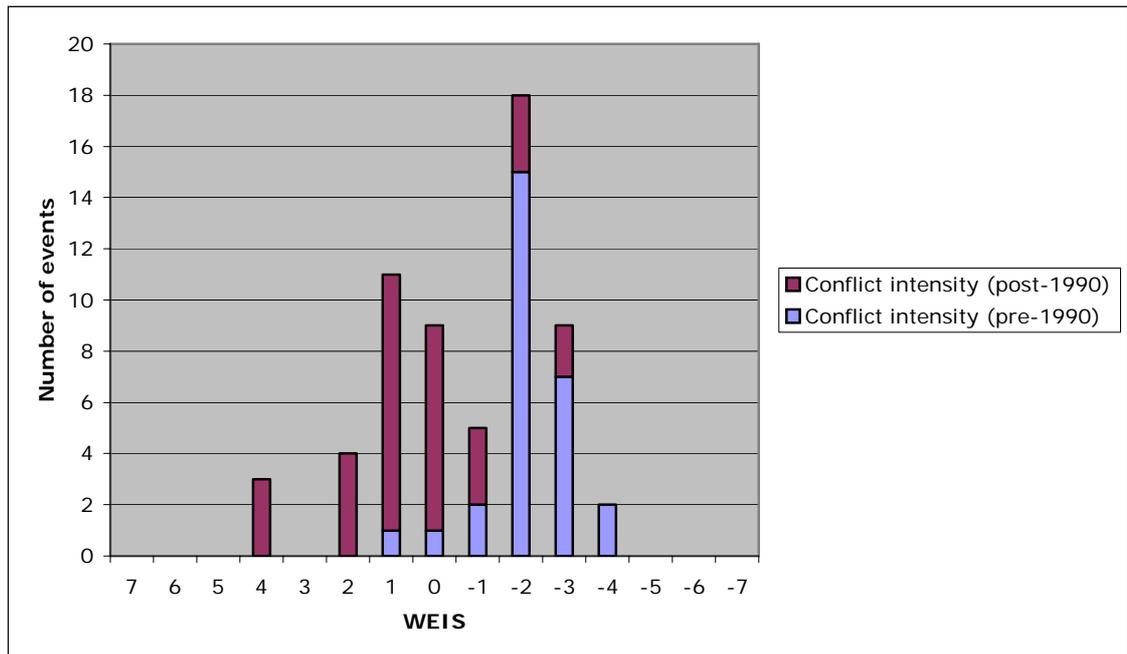
WEIS	Period 1945-2004			
	Egy/Eth	Egy/Sud	NRB	Total
7	-	-	-	-
6	-	1	1	2
5	-	1	-	1
4	3	6	8	17
3	-	3	8	11
2	4	9	5	18
1	11	14	8	33
0	2	11	2	22
-1	4	6	4	15
-2	18	10	4	32
-3	9	5	3	17
-4	2	1	-	3
-5	-	2	-	2
-6	-	-	1	1
-7	-	-	-	-
Total	53	69	44	174

Source: Cascao, 2004

3.3.1 Ethiopia vs. Egypt

Ethiopia has always been Egypt's recurrent "water-enemy", because it has the potential to control more than 85% of the flow of the Nile (UNESCO, 2001, 2003). Therefore, relations between these two riparians have long been more conflicting than cooperative.

Figure 3.2 – Pre- and post-1990 comparison of Egypt/Ethiopia intensity of conflict



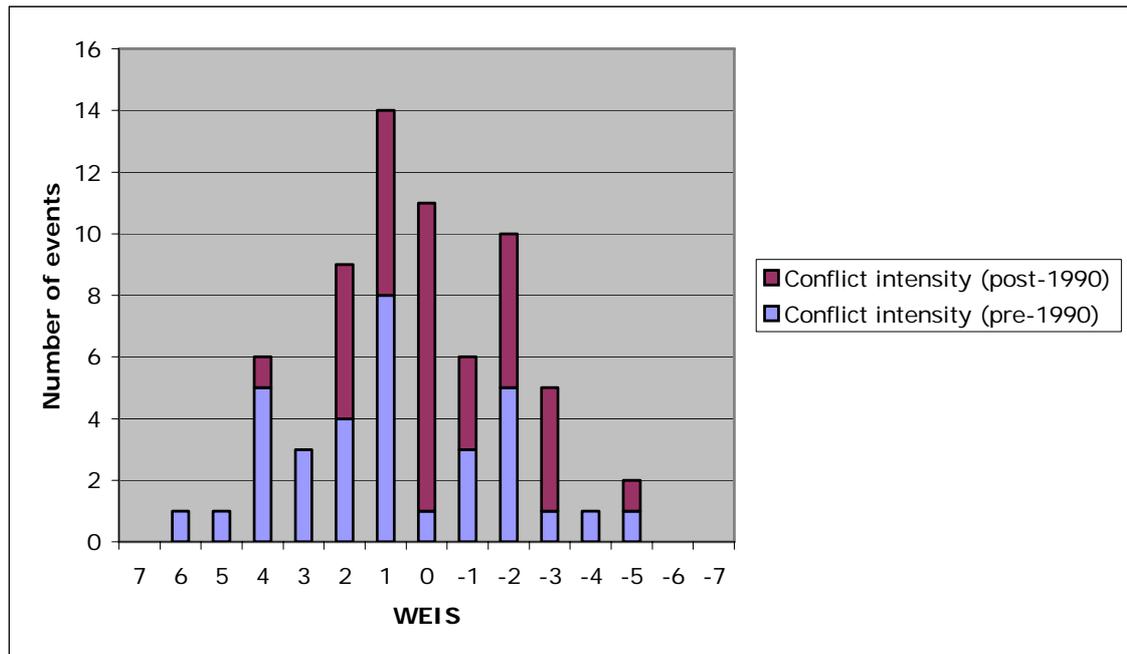
Source: Cascao, 2004

Indeed, as shown in figure 3.2, the 1945-1989 period was abundantly scattered by events rated “-2” and “-3” on the WEIS (see table 3.2). This refers to cold relations: a cold conflict stuck between “stable” and “unstable” peace (see fig. 3.1). However, figures show that there has been an evolution towards a more stable stage of conflict development after 1989. Most events are evaluated between “0” and “1”, which relates to a more stable situation, and warmer relations between both riparians. Finally, if the whole period is considered, the conflict can be evaluated below “0”, meaning a cold and unstable conflict.

3.3.2 Sudan vs. Egypt

On the other hand, Sudan has long been Egypt’s “co-opted” state in the hydro-hegemonic situation that occurs in the Nile River Basin, as discussed in the following chapters. Due to the 1929 and 1959 bi-lateral agreements, Sudan shares the Nile waters with its downstream riparian Egypt. As Eissa (2006b) argues, water-relations between both riparians have long been relatively cooperative. However, the persistent political instability of Sudan, and punctual geopolitical clashes during the period tempered this cooperative trend.

Figure 3.3 – Pre- and post-1990 comparison of Egypt/Sudan intensity of conflict



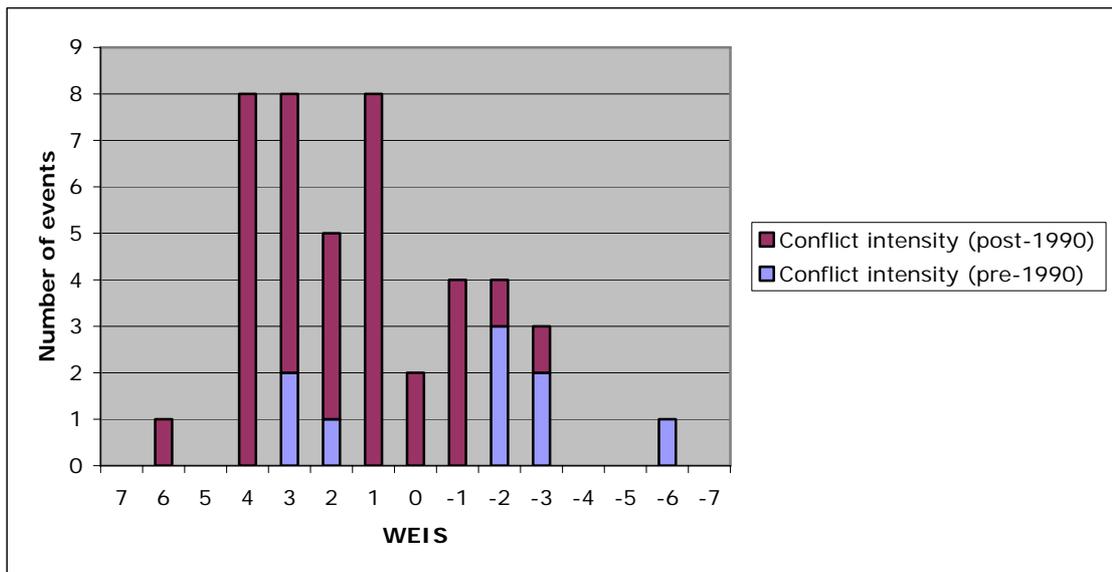
Source: Cascao, 2004

Therefore, as shown in figure 3.3, it is difficult to evaluate the intensity of conflict between both riparians, which varies from “-5” (interruption of the Jonglei Canal construction in 1984 by South Sudanese rebels) to “6” (1959 Agreement). As a consequence, and seeing figure 3.3, one can evaluate the conflict at a medium figure around “0” and a “stable peace” due to the 1959 Agreement, but with latent clashes that can change the situation to “unstable peace” and “cold conflict” at any time (see fig. 3.1).

3.3.3 The Nile River Basin conflict intensity

Although the focus of this study is Egypt’s interrelationships with Ethiopia and Sudan, there have been important water-related interactions and events that affected the whole basin. Cascao identified 44 of them (see table 3.1). Again, despite the small number of events in the pre-1990 period, figure 3.4 shows ameliorations in the intensity of conflicts between the pre- and the post-1990 periods.

Figure 3.4 – Pre- and post-1990 comparison of intensity of conflicts in the basin

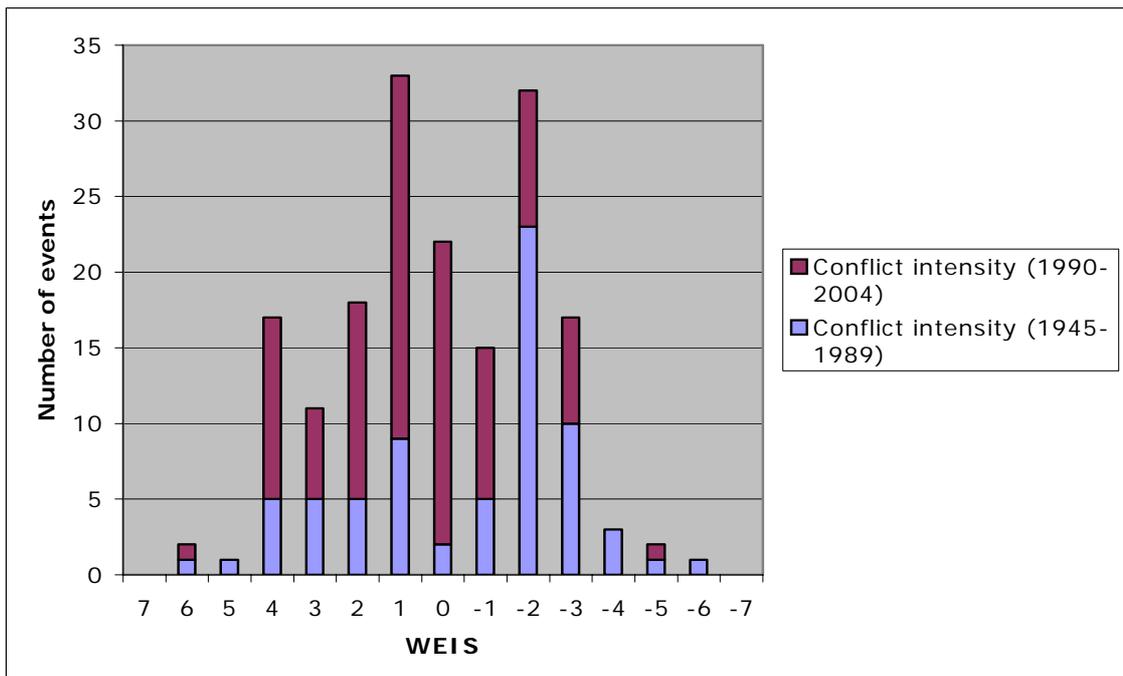


Source: Cascao, 2004

Indeed, post-1990 events are mostly “above-zero” events, and show a potential rapprochement of the Nile riparians towards a more cooperative regime.

Figure 3.5 presents a summary of all the 174 events (see appendix 1), which seems to confirm the trends identified above.

Figure 3.5 – Intensity of conflict in the basin in the 1945-1989, 1990-2004, and 1945-2004 periods



Source: Cascao, 2004

Figure 3.5 illuminates the fact that before 1990, events tended to be concentrated in the “cold conflicts” area, with an intensity evaluated around “-2” and “-3”. After 1990, there had been an increase of events above zero on the WEIS. If one considers the whole period, events are hardly ever extreme, and tend to be concentrated around zero.

3.4 Conclusion

As a conclusion, this brief review and evaluation of 174 pertinent events on the WEIS shows us that there **is** a conflict over Nile waters. It is a cold conflict, and refers to an “unstable peace” situation. However, a positive development towards warmer relations in the last fifteen years seems to have emerged. The following chapters will seek to deepen the research about this assumption; starting by analysing the power asymmetry occurring in the basin.

Chapter 4 - Power asymmetry in the Nile River Basin

Egypt is by far the most powerful riparian, and it still has formidable veto power (Waterbury, 2002: 167)

4.1 Introduction

Zeitoun and Warner (2006) include in their framework *the impact of power asymmetries* between riparians in the competition for control over water resources, in order to determine who is the strongest competitor, or hydro-hegemon (du Pré, 2005).

The objective of this part is not to measure the power of each riparians, but rather to show how extreme power asymmetry ensures the hydro-hegemony of Egypt. This will be achieved through an evaluation of Egypt's level on the three pillars of hydro-hegemony.

4.2 The three pillars of hydro-hegemony

The three pillars of a state's hydro-hegemonic power are summarised in figure 1.2.

4.2.1 Riparian position

Egypt's Achille's heel is its downstream position in the basin. Its contribution to the flow of the Nile is nil, especially when compared to Ethiopia (see table 1.2). However, Egypt controls 75% of the flows, thanks to the 1959 Agreement. This paradoxical situation can be explained by Egypt's ability to influence the basin thanks to other types of power.

4.2.2 Technical capacity.

Egypt has the largest exploitation potential of the basin, especially because it has the largest storage capacity amongst Nile riparians, symbolized by the High Aswan Dam and its storage lake: Lake Nasser. Egypt also leads the other Nile Riparians in its expertise in water resource management (Eissa, 2006b).

4.2.3 An application of the three dimensions of Power to Egypt.

The following is an evaluation of Egypt's level with regards to each dimension of power. Evaluating all dimensions of power is complex, because "power is at its most effective when least observable" (Lukes, 2005: 1). Therefore, a few assumptions will be submitted.

4.2.3.1 Structural Power

The study of the structural power of Egypt starts by an analysis of its economic power, before focusing on military resources and other political powers.

Economic power

First, the Gross Domestic Product (GDP) per capita of Egypt is the largest in the basin, (see table 4.1). Although not very impressive when compared to the best ranking states, Egypt is still very much in advance with regards to its upstream neighbours.

Table 4.1 – GDP per capita - World ranking of the Nile riparians

World Rank	Country	GDP per capita (US \$)
1	<i>Bermuda</i>	69900
2	<i>Luxembourg</i>	55600
3	<i>Equatorial Guinea</i>	50200
148	Egypt	3900
181	Sudan	2100
190	Uganda	1800
198	Rwanda	1500
212	Kenya	1100
214	Eritrea	1000
217	Ethiopia	900
226	Burundi	700
227	Tanzania	700
228	DRC	700
231	<i>Malawi</i>	600
232	<i>Gaza Strip</i>	600
233	<i>East Timor</i>	400

Source: CIA, 2006.

Furthermore, Egypt's economy is much more diversified, with a lower proportion of its GDP into the agricultural sector, and larger parts in the industrial and services sectors than the other riparians (Baecher *et al.*, 2000; El-Fadel *et al.*, 2003).

Military power

Again, it is very difficult to evaluate the military power of all Nile riparians, because of the long-lasting conflicts and the political instability in the region (Cascao, personal discussion, 2006a). However, there is common agreement that Egypt has the largest military potential of the Nile riparians (Eissa, 2006b). The “Strategy Page” website (Strategy Page, 2006a) attempted to evaluate numerically the military power of all states, through a complex collating of data, taking into account quantitative (number of men, aircrafts etc.) and qualitative (based on historical facts) factors. The figures for the Nile riparians are shown below, in table 4.2.

Table 4.2 – Military Power of the Nile riparians.

Riparian	Military Power
Egypt	149
Ethiopia	40
Eritrea	32
Sudan	23
Rwanda	16
DRC	9
Uganda	8
Burundi	5
Kenya	4
Tanzania	4

Source: Strategy Page, 2006b, 2006c

This evaluation however seems to be reasonably close to reality, and confirms Egypt as the military hegemonic state of the basin. Egypt indeed has a very developed army (AMI International, 2001), due to its historical *capacity to mobilise funds* in the international system (see chapter 6), especially from the United States of America (USA) (Marr, 1995).

Other elements of structural power

The *international support* on hand of Egypt gave it the capacity to reinforce its structural power. For instance, Egypt receives \$1,3 billion each year from the USA (Coulter, 2006), which represents more than the half of its annual military expenditures. Egypt’s high level of *geo-strategic weight* is also manifested in its *key position* in the Middle East Peace Process. Finally, the *prevalence of Egyptian individuals* in many of the world’s leading water resources organisations confirms Egypt’s leading structural power in the basin (Eissa, 2006b).

4.2.3.2 Bargaining Power

Egypt's bargaining power has been characterised by its ability to maintain the status quo during more than 40 years, and its tough veto power that helped Egypt impose its preferred solution in the basin (Waterbury, 2002). Its *negotiating capacity* and *strategic relations* with powerful states reinforced this bargaining power (see chapter 5).

Egypt has also been capable of “*securitising*” (Buzan, 1991; Buzan *et al.*, 1998) its relations with the Nile waters, by considering the latter a “national security” issue, declaring: “the survival of Egypt is based on the Nile” (Takele, 2005). This discourse downplays the options that Egypt has available to it, that upstream weaker riparians do not (Takele, 2004).

At the *International Water Law* level, Egypt's “prior use” claim relates to the same bargaining process (Phillips, 2006), balanced by the upstream states' demand for “equitable use”.

To conclude, Egypt's bargaining power has been critical in maintaining the status quo for so long, by helping Egypt to *legitimate* its hegemonic position at the basin and international levels.

4.2.3.3 Ideational Power

Ideational power is very much linked bargaining power. Indeed, Egypt has been able to *construct knowledge* about its very relation with the Nile waters, as seen above. Therefore, Egypt sanctioned the water discourse to its advantage (Phillips, 2006; Warner, 2006a), and has been capable of shaping perceptions concerning the Nile. Indeed, “there exists an organic link between the Nile and national security embedded in the collective consciousness of the people” (Nabil Abel Fatah, in: Chesnot, 1993). Egypt also *sanctions the discourse* by declaring that there is no conflict over the Nile, although this is contested in this study (chapters 3 and 5).

4.2.3.4 The other states of the basin

The other riparians have varying measures of each form of power. All in all, each is relatively weaker than Egypt. In general, the other states have been constrained by internal problems that impeded them to have access to large international support and water development funds: Tanzania is threatened by famine, Burundi and Sudan are suffering civil wars, and internal and regional friction has limited the capacities of the DRC, Eritrea, Uganda, Ethiopia, and Rwanda to develop water development systems (El-Fadel *et al.*, 2003).

4.3 Conclusion

Cascao (2006b) summarised this analysis by arguing that the “Egyptian hegemony has been sustained by an overwhelming asymmetry of power, made easier through the enduring weaknesses of riparian competitors”. Eissa (2006b) reached the same conclusions while evaluating the three pitfalls of hydro-hegemony in the Nile River Basin (see figure Box 4.1). Box 4.1 summarises Egypt’s dominance concerning the “three dimensions of power” and “exploitation potential compared to the others, despite its downstream position. Authors generally consider Egypt as a “hegemon” (Phillips, 2006; Cascao, 2006b), although not to the same extent. Waterbury (2002) argues that Egypt is a “quasi-hegemon”, and Allan as a “moderate” hegemon (2001). However, all agree on the fact that Egypt is definitely the most powerful state in the basin: the hydro-hegemon.

Further analysis of power relations and refinement of the three pitfalls of hydro-hegemony will be presented in the following chapters.

Box 4.1 – Comparison of relative positions of hydro-hegemony achieved between selected riparians in the Nile river basin

Egypt			Ethiopia		
Riparian Position: Downstream				Three dimensions of Power	Exploitation Potential
	Three dimensions of Power	Exploitation Potential	Riparian Position Upstream		

Sudan			Uganda					
Riparian Position: Midstream	Three dimensions of Power	Exploitation Potential	Riparian Position Upstream	<table border="1"> <thead> <tr> <th>Three dimensions of Power</th> <th>Exploitation Potential</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Three dimensions of Power	Exploitation Potential		
Three dimensions of Power	Exploitation Potential							

*Small, medium and large blocks represent respectively low, medium and large hydro-hegemonic power for one specific pillar.
These evaluations are based on Eissa (2006b), and on the author's assumptions about each state's power, after an extensive literature review on the topic.*

Source: Eissa, 2006a.

Chapter 5 - Historical review of Egyptian strategies and tactics

5.1 Introduction

This chapter studies the hydro-hegemonic strategies and their corresponding tactics used by Egypt to attain, maintain and consolidate its hydro-hegemony. This review will be separated into three periods: the pre-colonial and colonial, the post-colonial and cold war, and the 1990s periods, in order to analyse evolutions, and verify the assumptions presented above.

5.2 Strategies and Tactics

As developed in the literature review, the level of power asymmetry occurring in a river basin informs the strategies and tactics on hand of the hegemon, as means of ensuring compliance of other riparians. Table 5.1 presents each dimension of power, with their equivalent level of hegemony.

Table 5.1 – The three dimensions of power and the four levels of hegemony.

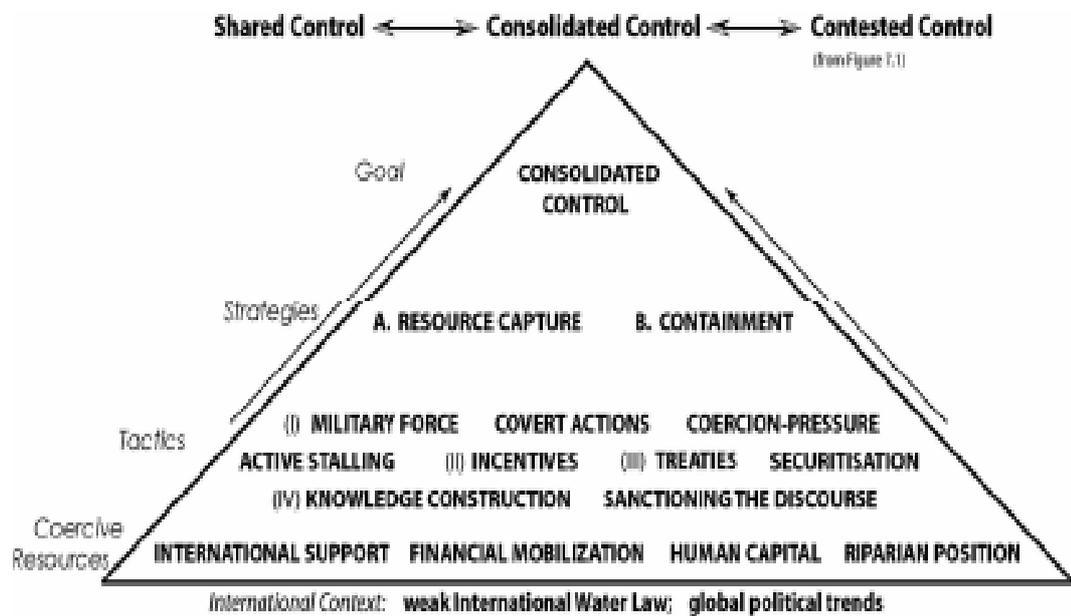
POWER (Lukes)			Efficiency	HEGEMONY (Gramsci, Lustick)	
Type	Features	Characteristics		Methods	Compliance Mechanisms
Structural Power	Coercion, Force	ability to <i>mobilize capabilities</i>	LOW  HIGH	direct coercion; action; no discussion	(I) Coercive (II) Utilitarian
Bargaining Power	Influence, Authority	ability to <i>influence</i>		agenda-setting; discourse	(III) Normative Agreement
Ideational Power	Manipulation	ability to <i>control thought</i>		knowledge construction; no discussion	(IV) Ideological Hegemony

Source: Zeitoun and Warner, 2006

Each type of power can be exercised through strategies and tactics that call upon different levels of compliance-producing mechanisms, which are of four types: (I) coercive, (II) utilitarian, (III) Normative agreement and (IV) ideological hegemony

(Lustick, 2002). The classification all strategies and tactics available to a hydro-hegemony are shown in figure 5.1. Other coercive resources and international context will be studied in the next chapter.

Figure 5.1 – Water resource control strategies and tactics



Source: Zeitoun, 2006a

Finally, table 5.2 presents the definitions of all key strategies and tactics at the heart of the framework of hydro-hegemony. It will be shown that Egypt used all strategies and tactics to achieve, maintain and consolidate its hydro-hegemony respectively in the pre- and colonial, post colonial and post-1989 periods.

Table 5.2 –Strategies and Tactics: key definitions

Strategies and tactics	Definition
Strategies	
Resource capture (RC)	Occurs when “powerful social groups shift resource distribution in their favour” (Turton 1998: 4 in Zeitoun, 2006a). Resource capture is usually carried out by creating ‘facts on the ground’ such as land acquisition, land annexation or the construction of large-scale hydraulic works.
Containment (C)	Occurs when the stronger state seeks to influence the weaker riparian(s) towards compliance of its preferred order of affairs through a variety of normative or hegemonic mechanisms and applications of power.
Integration (I)	Occurs when a hydro-hegemon seeks to encourage compliance with agreements through incentives, through the use of ‘utilitarian’ compliance-producing mechanisms.
(I) - Coercive Compliance producing mechanisms	
Military force	Using military forces to ensure control over water – common for RC strategy.
Covert actions	Undercover operations aimed at weakening the political, military or hydraulic apparatus of its competitor, or make a pact with those who will.
Coercion-pressure	Coercive resources available include trade embargoes, diplomatic isolation, threat of military action, espionage and propaganda
Active stalling	Manipulation of time by the hydro-hegemon, in order to maintain the situation as it is (status quo)
(II) Utilitarian Compliance producing mechanisms	
Incentives	Incentives for compliance with a hydrohegemon’s preferred state of affairs include trade incentives, diplomatic recognitions, military protection, but also mutually-beneficial ‘shared-interest’ water projects
(III) Normative Compliance producing mechanisms	
Treaties	Signing agreements with co-riparians, as a mean of maintaining the status quo at the hydro-hegemon’s advantage
Securitisation	The speech act that legitimises a state to take exceptional measures over an issue by propelling it into the realm of security
(IV) Hegemonic Compliance producing mechanisms	
Knowledge Construction	The hegemon constructs an image of reality that suits their interests – whether or not the image is based in observable fact. Under an efficiently-run hegemony, such beliefs become unconscious, are held as true, and may ultimately form a ‘sanctioned discourse’
Sanctioning the discourse	The hydro-hegemon veils certain aspects of the conflict (e.g. the inequities) while over-emphasising others (e.g. the merits of technical cooperation) at both the river basin and the international level.

Sources: Zeitoun, 2006a; Zeitoun and Warner, 2006.

5.3 The pre- and colonial periods

Egypt’s hydro-hegemony originates in British colonisation of most of the basin (Williams, 2002: 1192)

5.3.1 The pre-colonial period (1811-1882)

Before its colonisation by Great Britain in 1882, Egypt had already attempted to control the Nile waters, under the banner of Modernisation. In the first half of the nineteenth

century, Muhammad Ali, “the founder of modern Egypt” (Alula, 1999: 1), systematically used the Nile waters through an extensive development of irrigation infrastructures, initiating the modernisation process of the Egyptian state (Cascao, 2006b; Homer-Dixon, 1994). This expansionist policy conducted Egypt outside its territory, in order to achieve land annexations through military force (Cascao, 2006b).

Khedive Ismael attempted the same strategy of water resource control in the second half of the nineteenth century, especially in Ethiopia. (Wondimneh, 1979; Arsano, 2004). He failed to conquer Ethiopian territories, but was capable of increasing Egypt’s control of the Nile Valley by expanding irrigation canals in the whole country (Alula, 1999). Table 6.1 summarises these events and the corresponding strategies, tactics, type of power used, and evaluation of the conflict intensity that characterise them.

Table 5.3 – Key events: the pre-colonial period.

Year	Countries involved	Event	Tactic	Strategy	Type of Power	Conflict Intensity (CI)
1 st half of 19th	All Nile riparians	Muhammad Ali’s systematic use of the Nile for Modernisation	I – Military force	Resource Capture (RC)	Structural (S)	-5
1863-1879	Egypt + Ethiopia	Khedive Ismail’s attempts to control the whole Nile Valley - Incursions in Ethiopia – Land annexation attempts	I – Military force	Failed RC	S	-5

Sources: Alula, 1999; Takele, 2004

During the pre-colonial period, Egypt intensified the conflict to a “violent” form (see figure 3.1) in order to capture water resources (I- military force).

5.3.2 The colonial period (1882-1952): Attaining Egyptian hydro-hegemony

The colonisation of Egypt by the British Empire cemented Egypt’s position as hydro-hegemon. Great Britain indeed secured Egypt’s water allocation through the exercise of its bargaining and ideological powers.

5.3.2.1 – Strategies and tactics in the colonial period

During the colonial period, Great Britain signed a few agreements (see table 5.4) with other colonial powers, on behalf of its colonies (especially Egypt), in order to avoid any upstream hydraulic infrastructure (Containment strategy) (Takele, 2004).

Table 5.4 – Key events: the colonial period

Year	Countries involved	Event	Tactic Type	Strategy	Type of Power	CI
1891	GB (Egypt) + Italy (Ethiopia)	Anglo-Italian Protocol of April 15, 1891 - Precludes hydraulic constructions on the Blue Nile	III – Treaty / Securitisation IV – Sanctioned Discourse / Knowledge Construction	Containment (C)	Bargaining (B) + Ideological (I)	2
1898	GB (Egypt) + France.	Fachoda crisis - Dramatisation of Egypt's vulnerable dependence on the Nile.	I – Coercion-pressure III – Securitisation IV – K construction	C	S + B + I	-2
1902	GB (Egypt) + Ethiopia	Addis-Abeba Agreement – No Ethiopian construction over the Blue Nile – Agreement on dam construction in Aswan	III – Treaty / securitisation IV - SD / K construction	C	I + B	2
1906	GB + France + Italy (for Egypt + Ethiopia)	Nile Tripartite agreement (France, GB and Italy) Treaty of "Non-interference" principle	I – Coercion-pressure II - Incentives III – Treaty / securitisation IV — SD / K construction	C	S + B + I	2
1925	Italy + GB (for Sudan + Egypt)	Exchange of notes - Italy recognises the "prior hydraulic rights" of Egypt and Sudan.	II – incentives III – Treaty / Securitisation IV — SD / K construction	C	S + B + I	2
1929	Egypt + GB (for Sudan)	Egypt (partially indpt) and Britain (on behalf of Sudan) - Nile Water Treaty	III – Treaty / Securitisation IV – SD / K construction	C	B + I	2
1949	Egypt + Uganda	Exchange of notes concerning the Owen falls dam for Nilotic electricity grid	I – Coercion / Pressure II – incentives III – treaty	C	S + B + I	4

Sources: Waterbury, 2002; Takele, 2004

Treaties are a type of normative compliance-producing mechanism (III), and refer to a state's bargaining power. They are structured by the most powerful riparian to reproduce existing inequalities (Waterbury, 2002). At this point in time, Great Britain was the most powerful colonial power in the region. It was capable of "constructing knowledge" (IV) concerning the vulnerability of Egypt with regards to the Nile waters, which is a "securitisation" tactic (III). Indeed, Great Britain (speaking for Egypt) acquired legitimacy over the other riparians thanks to its ability to propel the role of the Nile for Egypt as a national security issue (Buzan et al., 1998, Cascao, 2006a). Securitisation has facilitated politicians' ability to "construct knowledge" around any water-related issue to fit other political interests (Zeitoun and Warner, 2006), in order to attain a form of hegemonic thought-control.

The triggering event of this policy has been the Fachoda incident of 1898 between France and Great Britain concerning their supremacy in the region. It "dramatized Egypt's vulnerable dependence on the Nile, and fixed the attitude of Egyptian policy-makers ever since" (Moorehead, 1960 in Gleick, 2004). All following treaties focused merely on preventing other colonial powers (on behalf of their colony) to reduce the flow of the Nile entering into Egypt (see table 5.4).

This is the case of the Addis-Abeba agreement of 1902 between Great Britain and Italy (on behalf of Egypt and Ethiopia), precluding any construction of hydraulic infrastructure on the Blue Nile, or the Nile Tripartite treaty signed by Great Britain for Egypt and France and Italy for Ethiopia in 1906 (Tesfaye, 2001, Arsano, 2004). The latter helped Great Britain constructing knowledge and sanctioning the discourse concerning the "prior hydraulic rights" of Egypt and Sudan, which has also been the focus of an exchange of notes between Italy and Great Britain in 1925.

Despite this extensive use of bargaining and ideological powers, Great Britain had to show some forms of structural power punctually, in order to ensure the signing of treaties. Indeed, as shown in table 5.4, Great Britain used coercive (I–Coercion/pressure) and utilitarian compliance-producing mechanisms (II). For instance, The 1906 Tripartite Agreement was signed "under duress" by Ethiopia (Waterbury, 2002), whereas Great Britain gave "incentives" to France and Italy to sign the agreement. Great Britain authorised Italy to build a railway connecting Eritrea and Italian Somaliland, and gave France monopoly over the Addis Abeba –Djibouti railway (Takele, 2004). Italy was given the same type of incentives in 1925 (see table 5.4). Again, Egypt used incentives (II) and pressure (I) to ensure Uganda's compliance to the 1949 treaty concerning the construction of the Owens Falls Dam (OFD). On the one hand, Egypt offered hydropower to Uganda, but on the other hand it forced Uganda to sign it despite its inequitable outcomes (for instance, Uganda can use hydropower only if Egypt receives enough water downstream) (Howell, 1994).

5.3.2.2 The 1929 Agreement: Attaining Egyptian Hydro-Hegemony

After so many efforts to secure compliance from other riparians, Egypt (partially independent since 1922) signed the 1929 Agreement with Great Britain (on behalf of Sudan), in order to sanction the discourse officially. Egypt's "historical and natural rights" over the Nile waters were recognised by all riparians. It is the first agreement regarding apportionment of the Nile (Shapland, 1997), however it fails to mention any other upstream riparian. Furthermore, several technological and political measures were taken in order to launch Egyptian new hydraulic projects (Cascao, 2006a). Box 5.1 shows the main features of the agreement.

Box 5.1 –Main features of the 1929 Nile Waters agreement

- 1- Egypt and Sudan utilise 48 and 4 bcm of the Nile flow per year respectively.
- 2- The flow of the Nile during January 20 to July 15(dry season) would be reserve for Egypt.
- 3- Egypt reserves the right to **monitor** the Nile flow in the upstream countries;
- 4- Egypt assumed the right to undertake Nile River related projects without the consent of upper riparian states;
- 5- Egypt assumed the right to **veto** any construction projects that would affect her interests adversely.

Source: Whittington and Guariso (1983: 41)

As induced above, the 1929 Agreement officially sanctions the discourse in the Nile River Basin. It is a turning point for Egypt, which attains its hydro-hegemony, by formally consolidating its control of the Nile flows, and stifling the competition over the latter through securing compliance of upstream riparians.

5.4 The post-colonial and Cold War period: Maintaining Egyptian Hydro-Hegemony

5.4.1 Introduction

Egypt became independent in 1952, right at the beginning of the Cold War, and used all its power available to maintain its hydro-hegemony attained during the colonial period. The culminant event that confirmed this state of affairs was the 1959 Agreement on Full Utilisation of the Nile Waters between Egypt and Sudan. This agreement is the basis of Egypt's quasi-complete control over the Nile waters. In parallel, Egypt played a very important role at the international level as the leader of the

Third World. However, this part seeks to identify and explain the strategies and tactics used by Egypt to maintain its hydro-hegemony, while other issues like the international context of the study will be discussed in the following chapter.

Table 5.5 – Key events: the post-colonial period.

Year	Countries involved	Event	Tactic	Strategy	Type of Power	Conflict Intensity
1956 - 1959	Sudan + Egypt	Tensions after Sudanese independence in 1956	I – Coercion - pressure	C	S	-2
1959	Egypt + Sudan	Agreement on “Full control and utilization of the annual Nile flow”	I - Covert actions - Pressure II - Incentives III – Treaty - Securitisation IV - Knowledge construction- Sanctioned discourse	RC + C + Integration (I)	S	6
Late 50s	Egypt + Ethiopia	Propaganda - Radio broadcasts in Ethiopia against Ethiopian Christians.	I – Covert operations	C	S	-4
1960 - 1964	Egypt + Ethiopia	Somalia – Ethiopia war	I – Covert operations	C	S	-4
1962	Egypt + Ethiopia	Propaganda during the April 1962 conference of the Arab League – Full solidarity and support to the Eritrean Liberation Front	I – Covert operations	C	S	-4
1968	All riparians (Ethiopia observer)	Hydromet	I – covert operations II – Incentives	C	S	3
1977	Egypt, Sudan, Uganda, Zaire, Rwanda, Burundi, Central African Republic	Undugu	I – covert operations II – Incentives	C	S	3

1977 - 1979	Egypt + Somalia	Somalia – Ethiopia war - Ogaden conflict	I – Covert operations I – Coercion - pressure	C	S	-4
1979	Egypt + Ethiopia	Anwar Sadat threat against Ethiopia	I – Coercion - pressure	C	S	-2
1978 – 1983	Egypt + Sudan	Jonglei Canal	-	RC	S	4
1983	Egypt + Sudan	Jonglei Canal construction ceased	I – military power	Failed RC	S	-5
1979 - 1988	Egypt + Sudan + Ethiopia	Droughts - tensions	III - securitisation	C	B	
1990	Egypt + Sudan	Egypt's veto power on Ethiopian projects	III – Securitisation IV – SD	C	B + I	-3

Sources: Waterbury, 2002; El-Fadel *et al.*, 2003; Chesnot, 1993; Cascao, 2004.

5.4.2 1952-1959: A tense hydropolitical period

The Egyptian Revolutionary Command Council, which took power in Egypt in 1952, desired to unite the whole valley on Nile-related issues. However, non-Muslim Ethiopia did not accept this proposition (Chesnot, 1993), and Sudan did not want to engage in negotiation, protesting against the 1929 Agreement (see table 5.5). But the importance of some hydraulic projects for both countries, and the presence of a military regime in Sudan starting from 1958, stimulated more efficient negotiations. On the one hand, Egypt wanted to develop the High Aswan Dam, a gigantic infrastructure that would be located next to the Sudanese border. On the other hand, Sudan projected to construct the Roseires dam to increase its water supply (Shapland, 1997). These complementary projects were the key elements of the negotiations that resulted in the 1959 bilateral Agreement on Full Utilisation of the Nile Waters.

5.4.3 The 1959 Agreement: the cooptation of Sudan

The 1959 Agreement is the central episode of the study, on which Egypt builds all its arguments against the creation of a new regime (Waterbury, 2002), thereby maintaining the status quo. The main features of this agreement are summarised in Box 5.2.

Box 5.2 – Main features of the 1959 Agreement.

- 1- The controversy on the quantity of average annual Nile flow was settled and agreed to be about **84bcm** measured at Aswan High Dam, in Egypt;
- 2- The agreement allowed the **entire average annual flow of the Nile to be shared among the Sudan and Egypt at 18.5 and 55.8bcm**, respectively.
- 3- **Annual water loss** due to evaporation and other factors were agreed to be about **10bcm**. This quantity would be deducted from the Nile yield before share was signed to Egypt and Sudan.
- 4- 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 it be divided equally between them**. If the claim would come from the remaining riparian countries over the Nile water resources, both the Sudan and Egypt shall, together, handle the claims.
- 5- 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, Egypt's, and allocations/shares in equal parts of the Nile volume measured at Aswan.
- 6- The agreement granted Egypt the right to construct the **High Aswan Dam** that can store the entire annual Nile River flow of a year.
- 7- It granted Sudan the right 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**.
- 8- A **permanent joint technical commission** (PJTC) be established to secure the technical operation between them

Source: Adam, 2004

5.4.3.1 Strategies

The Agreement had two major strategic effects on Egypt: first, it removed Sudan's water-threat as long as the latter respects its quota (integration and containment strategies); and second, it gave Egypt the opportunity to build the High Aswan Dam (resource capture strategy). The three strategies available to a hydro-hegemon are included into it.

Containment/integration strategy

First, the containment of Sudan has been ensured by an "integration" strategy. As shown in table 5.2, this strategy occurs when "demands of competing riparians are co-opted through administrative or legal means" (Zeitoun, 2006a: 239). Egypt managed to co-opt Sudan into its hegemonic sphere of control, by conceding it 14.5bcm of water added to the 4bcm agreed in 1929, whereas Egypt only gained 7.5bcm (from 48 in 1929 to 55.5bcm in 1959) (Waterbury, 2002). This "hegemonic gift" from Egypt impedes Sudan from developing unilateral hydraulic structures.

Second, the building of the High Aswan Dam guaranteed the containment of all upstream riparians, in order to be water-independent relatively to them, and to further stifle the competition over the flows (Chesnot, 1993).

Resource Capture Strategy – the High Aswan Dam

The resource capture strategy is the High Aswan Dam: a radical approach taken by Egypt to secure its water sufficiency. Egypt would exercise full control of the water, which flows into the Lake Nasser, although it could not determine the size of this inflow (Shapland, 1997: 63). Lake Nasser is more than 550km long and secures 3 times the annual allocation of Egypt: 168 bcm (Allan, 2001; Warner, 2006b). As a consequence, the High Aswan Dam prevents Egypt to fight for this water in the “jungle of nation-states” (Collins, 1994).

The High Aswan Dam is a resource capture also because it required the annexation of Nubia, which resulted in the displacement of more than 60000 people, and the disappearance of the whole historical region (Chesnot, 1993).

Some see the High Aswan Dam uniquely as the symbol of Egypt’s independence, and of its lack of power since Great Britain left (Collins, 1994; Warner, 2006a), confirming the importance of the colonial period as the origin of Egypt’s hydro-hegemony.

5.4.3.2 Tactics

Several tactics have been used by Egypt to sustain these strategies. They call for all types of power and compliance-producing mechanisms, and are summarised in table 5.6.

Table 5.6 – Non-exhaustive list of tactics used by Egypt to maintain its hydro-hegemony within the 1959 Agreement

Compliance Producing Mechanism	Tactic used	Argument
Structural power		
I – coercive compliance-producing mechanisms	Covert actions	<ul style="list-style-type: none"> The agreement excludes all other riparians, in particular Ethiopia.
	Coercion/Pressure	<ul style="list-style-type: none"> It is argued that Sudan was under pressure of Egypt when it signed the Agreement
II – utilitarian compliance-producing mechanisms	Incentives	<ul style="list-style-type: none"> Agreement on the construction of the Roseires dam (in favour of Sudan) Egypt let more water to Sudan than it can actually use Equal “Benefit-sharing” of any new project.
Bargaining power		
III – normative compliance-producing mechanisms	Treaty	<ul style="list-style-type: none"> Bi-lateral treaty
	Securitisation	<ul style="list-style-type: none"> Promoting the High Aswan Dam as a national security issue
Structural power		
IV – hegemonic compliance-producing mechanisms	Knowledge construction	<ul style="list-style-type: none"> About Egypt’s gigantic water needs About the fact that the average flow is of 84bcm. Indeed, this figure is the average of the 1900-1955 period, and has rarely been experienced since
	Sanctioning the discourse	<ul style="list-style-type: none"> The “knowledge” constructed above is sanctioned by the treaty, but also by Egypt’s acts and sayings (The sanctioned discourse is the ultimate form of knowledge construction)

Sources: Zeitoun and Warner, 2006; Warner, 2006a; GCI, 2000; Waterbury, 2002.

The 1959 Agreement was an attempt to establish the legitimacy of the hydro-hegemony of Egypt in the Nile River Basin, by imposing a set of norms and rules that ensure compliance from upstream riparians. Egypt used all types of compliance-producing mechanisms available to ensure its hydro-hegemony with this treaty (see table 5.5), thereby exercising the three dimensions of power at the same moment, as a message to other riparians that Egypt is by all means the hegemon.

First, Egypt’s structural power is reflected in several incentives (II) to Sudan in order to co-opt the latter, confirming Egypt’s use of an integration strategy. Furthermore, the treaty excludes all other riparians, especially Ethiopia. This is a type of covert action (I).

Also, Waterbury (2002) argues that Sudan was under pressure of Egypt when signing the Agreement.

Then, the bargaining power of Egypt is inherent to the treaty (III), showing the negotiation capabilities of the riparian. Furthermore, the agreement is a way for Egypt to continue the securitisation discourse (III) put forward by Great Britain before, and to sanction it as the exclusive knowledge acceptable in the basin (ideological power). For instance, Egypt constructed knowledge (IV) while establishing the annual flow of the Nile at 84bcm (average figure of the period 1900-1955). Indeed, it only rarely happened again, all riparians respect these figures (Allan, 2001). Finally, irrigation, hydroelectric power, and water supply projects developed under the High Aswan Dam project have become the basis for Egypt to claim historical water rights over and above Ethiopia (Takele, 2004).

5.4.4 1959 – 1989: Increasing cooperation in the basin and weakening Ethiopia

Egyptian actions between the 1960s and the 1980s relate a double-edged hydro-hegemonic trend. Indeed, Egypt ensured a minimum of cooperation with most Nile riparians, in order to further consolidate its control of the flows, while weakening Ethiopia.

5.4.4.1 Weakening Ethiopia

Any action that would endanger the waters of the Blue Nile will be faced with a firm reaction on the part of Egypt, even if that action should lead to war (Anwar Sadat, former President of Egypt)

The long-lasting hydro-political opposition between Egypt and Ethiopia was reinforced by this agreement, which excluded Ethiopia, who did not recognise it. Egypt used several times of its structural power, merely through covert actions (I) in order to weaken Ethiopia's military, economic, and political power resources (see table 5.5). A containment strategy lies behind these actions. Egypt began to provide Ethiopian external and internal enemies with substantial moral and material support (Takele, 2004), for instance to Somali rebels during Somalia's war against Ethiopia between 1960 and 1964 (Tesfaye, 2001; BBC, 2006).

At the same time, Egypt strengthened the conflict between Ethiopia and its Muslim population, especially in Eritrea, through propaganda via radio broadcasts and conferences, and strategic support for the Eritrean Liberation Front (Chesnot, 1993). Again, during the Ogaden conflict, Egypt offered support to Somalia in their quest for

the Ogaden region, in Ethiopia (Daniel, 1999). Sadat even induced that Egypt might send troops to help Somalia (The Washington Star, 1978: in Takele, 2004). The pressure (I) put on Ethiopia by Egypt continued until the 1990s, as expressed in Sadat's 1979 declaration, that "the only matter that could take Egypt to war again is water" (concerning Ethiopia's proposed water development projects).

5.4.4.2 Cooperation in the Nile basin

Apart from Ethiopia, Egypt invested great effort in order to be part of the Hydrometeorological Survey of the Equatorial Catchments (Hydromet) project and its successor the Undugu group, respectively in 1968 and 1977, as means of increasing cooperation between the Nile riparians, however excluding Ethiopia each time (Allan, 2001). These are incentives (II), in order to sustain the containment strategy of Egypt. The Hydromet is merely a technical agreement (Shapland, 1997). Egypt and Sudan immediately proposed to establish a "Nile Basin Planning Commission" for the planning of the waters for storage of additional water for them (Takele, 2004). The Undugu group succeeded to the Hydromet in 1977, and merely had the same purpose.

5.4.4.3 Other events

The only resource capture strategy used by Egypt during the period was the construction of the Jonglei Canal, started in 1978 (Allan, 2001). It should have brought 4bcm to both riparians, through the construction of channels in the south of Sudan, which would reduce the evapotranspiration rate in this arid region. However, South-Sudanese rebels, who claimed that the Canal was only at the advantage of Egypt and North Sudan, have interrupted its construction in 1983. This event had a bad impact on both states' relations, which were already tense due to the civil war raging in Sudan since 1972 (Chesnot, 1993).

Also, there have been recurrent droughts during the 1980s, especially in the Ethiopian highlands. As a consequence, the level of water in the High Aswan Dam nearly attained its minimum level in 1988. Egypt therefore reinforced its securitisation discourse, and relations with other riparians became colder in the 1980s.

5.5 Strategies and tactics – the 1990s: a discourse of cooperation vs. unilateral resource capture project

Yet contentious transnational water politics has followed a discernable pattern in which conflicts have become bounded, routinised, embedded and normalised (Conca, 2006: 34)

5.5.1 Introduction

During the 1990s, Egypt invested much effort in the consolidation of its hydro-hegemony. It used its bargaining and ideological powers to continue sanctioning the discourse in the Nile as a cooperative one, whereas its structural power permitted Egypt to develop gigantic unilateral projects that work against these principles of cooperation.

Table 5.7 – Key events: the 1990s

Year	Countries involved	Event	Tactic	Strategy	Type of Power	Conflict Intensity
1993	All Nile riparians (Ethiopia observer)	Tecconile	I – Active stalling II – Incentives	C	S	4
1993	All Nile riparians, including Ethiopia	Non-binding agreement on cooperation over Nile Waters	I – Active stalling II – Incentives	C	S	4
1994	Egypt	Northern Sinai Agricultural Development Project (NSDAP)	I – pressure III – Securitisation IV – K construction and SD	RC	S + B	-3
1995	Egypt + Sudan + Ethiopia	Assassination attempt on Mubarak in Addis Abeba	I – coercion, military force	-	S	-2
1997	Egypt	Toshka project	I – pressure III – securitisation IV – K construction and SD	RC	S + B	-3
1999	All Nile riparians	NBI	I – Active stalling II – Incentives	I	S	6

Sources: Warner, 2006b; Waterbury, 2002; Cascao, 2004.

5.5.2 A discourse of cooperation

A few events illustrate the discourse of cooperation practiced by Egypt during the 1990s (see table 5.7). They are usually the fruits of Egypt's containment strategy, put into practice by offering incentives to selected riparians (II), in order to gain time through an active stalling tactic (I).

The first one is the modernisation of the UNDUGU into the Technical Cooperation Committee for the Promotion of the Development and Environmental Protection (Tecconile), established in 1993 promoting the creation of infrastructures and new technologies for water resources management at the national, and afterwards the basin levels (Allan, 2001). However, upstream states were unhappy with the unilateral decisions taken by Egypt (Arsano, 2004).

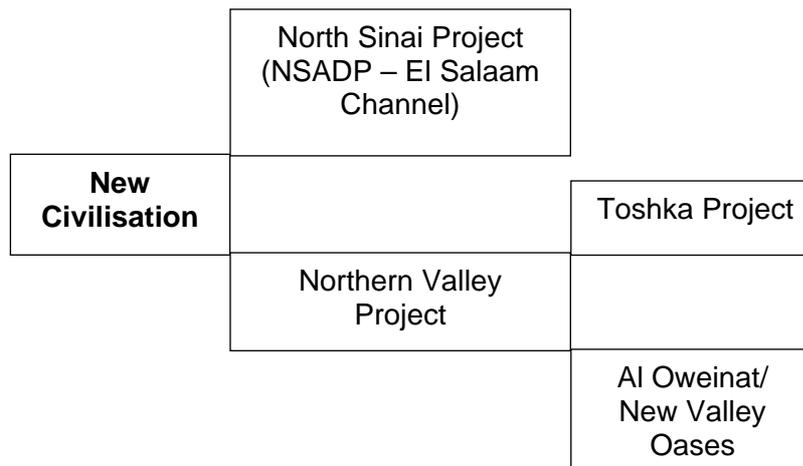
The same year, Egypt signed a "non-binding agreement on cooperation over the Nile waters", including Ethiopia (III). This containment strategy was again enhanced in 1999 with the creation of the Nile Basin Initiative (NBI), which can even be considered as an integration strategy. Indeed, it is a transitional agreement on a potential equitable sharing of the Nile waters, until a permanent legal framework is in place (Takele, 2004). Lonergan and Wolf (2001) argue that tensions have been reduced through the NBI, enhancing regional coordination, as well as international funding and expertise.

However, upstreamers thought the NBI would induce the creation of a new regime with more equitable shares, but Egypt uses it as an active stalling strategy, in order to gain time and maintain the status quo as long as possible (Daoudy, 2005). Indeed, despite the various promises from Egypt, there has not been any tangible action on the ground till the present time (Takele, 2004). This active stalling tactic helps Egypt gain time for the creation of its "New Civilisation" project (NCP) (Warner, 2006b).

5.5.3 Unilateral Resource capture projects

The NCP is summarised in figure 5.2. The idea of a "new civilisation" takes its source in the delocalisation policy adopted by the Egyptian government, in order to relocate some of its population in the deserts (Warner, 2006b). All projects included within the NCP are applications of a large-scale resource capture strategy.

Figure 5.2 – The New Civilisation Project



Source: Warner, 2006b

The “new civilisation” consists of two enormous development projects in the desert. The first one in the North (Northern Sinai Agricultural Development Project, NSADP), designed to relocate 750.000 Egyptians, and the second one in the South of Egypt, the New Valley Project, divided in two phases: the Toshka and the Al-Oweinat projects.

The latter are briefly summarised in Table 5.8, and are good illustrations of Egypt’s inalterable thirst of control over the Nile waters. All of them do enhance the long-lasting securitisation (III) tactic adopted by Egypt.

These enormous resource capture projects reinforce Egypt’s water control in the basin, whereas Egypt argues that there is no conflict over the Nile Waters. They strengthen Egypt’s claim for “prior use”, by adding knowledge to its sanctioned discourse (IV) on its historical rights on Nile Waters (Whittington and Waterbury, 1998). Again, Egypt constructed knowledge (III) thanks to its ability to manipulate its discourse. Indeed, Egypt gave different figures concerning the NCP to international institutions, its population or its riparians (Lonergan and Wolf, 2001). Chesnot (1993) further argues that this project is a way of securing Egypt’s hegemonic position: it is a political project. Hence, through this colossal hydraulic mission, Egypt tries to use of its economic muscle to sustain its political power vis-à-vis the riparians and the international community.

Table 5.8 – Description of Egypt’s unilateral Resource capture Projects in the 1990s.

Project	Description
NSADP	<ul style="list-style-type: none"> • Planned in 1979 (under Sadat) • Should have joined the Nile to Israel through the Sinaï, in the North of Egypt • Restarted under Mubarak, however not to Israel. • In January 1994 the excavation of the second phase of the Salaam Canal commenced to irrigate 400,000 acres of the Sinai from Suez to El Arish, near the Israeli border, to accommodate three million Egyptian settlers at a cost of \$1.4 billion. • Ethiopia protested, and the international community too because the project is an “environmental disaster”.
New Valley	<p>Phase 1 – The Toshka project</p> <ul style="list-style-type: none"> • Launched in 1997 • Situated in the South of Egypt, next to the Lake Nasser • 21 pumping stations to divert around 5 bcm of water from Lake Nasser towards Toshka oases • 240 km of canals projected • US \$1,8 billion • Land reclamation of more than 600 000 hectares of arable land for the growth of several crops (fruit trees, maize) in the first stage. Eventually, this would be increased to more than 1 million hectares. • Again an environmentally unfriendly project. • The planners hope that over seven million persons would move to the “New Valley” by the time it is completed in 2017 • Establishment of agricultural and industrial communities based on agricultural production. • Increased mining of phosphate and iron ores. • Development of transportation infrastructure and tourism facilities. <p>Phase 2 – The Al-Oweinat Project</p> <ul style="list-style-type: none"> • Governorate of Al-Oweinat to be fed by groundwater only • New Valley Canal to be dug north to six oases <p>The ultimate goal of the New Valley project is to convert half of Egypt’s surface into agricultural and industrial areas, in order to create employment in these regions.</p>

Sources: Whittington and Waterbury, 1998; Warner, 2006b, Collins, 2003, Cowper, 2000; Vance Haynes, 1980

5.5.4 Other events

The 1990s were the theatre of a few events, which created tensions between riparians. The main illustration is the assassination attempt against Mubarak, in Addis-Abeba, in 1995. Egyptian and Sudanese troops clashed in the disputed province of Halaib the day after. Egyptian fingers pointed at the Sudanese government, accusing it of sponsoring terrorism. Consequently, Sudan called off the 1959 agreement and the new Sudanese leader, Hassan al-Turabi: declared: “Sudan has full control of the Nile”. Whereupon Egyptian Minister Muhammad Mussa responded: "If Sudan wants to play with water, it is playing with fire” (Warner, 2006b).

5.6 Conclusion

Egypt used all its power in order to maintain and consolidate its hydro-hegemony, developed under the colonial era by Great Britain. Before its colonisation, Egypt attempted resource capture strategies using its structural power, through the employment of military force (I). Then only Great Britain secured compliance from upstream riparians by exercising its bargaining and ideological powers to apply containment strategies, through securitisation of Egyptian waters and the signing of treaties (III). This was facilitated by the ability of Great Britain to offer incentives (II) to other colonial powers. With its greater reflexivity, Great Britain has been capable of constructing knowledge and sanctioning the discourse (IV) about Egypt's "prior use" rights over the Nile waters, therefore legitimising its enormous share. The 1929 Agreement was the key-event in this end, thereby helping Egypt to attain its hydro-hegemony.

Egypt maintained and comforted its hydro-hegemony during the post-colonial period. The key-event, which reinforces this argument, is the 1959 agreement, through which Egypt exercised all dimensions of power. After, Egypt merely focused at weakening the most threatening riparian concerning water issues, Ethiopia, through the exercise of its structural power (I- covert actions) while containing all other riparian by giving them incentives (Hydromet, Tecconile) as means of containing their hydraulic projects (II).

During the 1990s, Egypt consolidated its hydro-hegemony by building a cooperative image, and by initiating the formation of a new regime since the NBI in 1999 (III). On the other hand, Egypt continued its unilateral resource capture projects. It has therefore been capable of inducing cooperation, through joint initiatives and conferences, but also to sanction its unilateral downstream actions and to avoid upstreamers' projects.

In chapter 3, the evaluation of the conflict intensity in the Nile River Basin showed a potential amelioration states water-relations. However, an in-depth analysis of these events spotted the light on the fact that these cooperative schemes are for Egypt a tactic to gain time and contain upstream riparians' hydraulic projects (I). As a consequence, upstreamers may not see any change in the status quo for long. Moreover, other coercive resources and an advantageous international context sustain Egypt's water policy, as developed in the next chapter.

Chapter 6 – Other coercive resources and international context

6.1 Introduction

The study turns now to an analysis of other coercive resources that underpin Egypt's hydro-hegemony. The enforcement of a regime is feasible if coercive resources that refer to a state's structural power back the hegemon's authority (Keohane, 1982). These are used in a specific international context, which usually favours the hegemon, such as the lack of International Water Law. These coercive resources include international support, financial mobilisation, human capital and riparian position (Zeitoun, 2006a). The riparian position of Egypt has already been studied in chapter 4. The international context and global political trends have been very much in favour of Egypt during the last century, which facilitated its access to these coercive resources.

6.2 International support and financial mobilisation

The capacity of Egypt to deal with international support goes hand in hand with its ability to mobilise funds.

6.2.1 Playing with powers

As an ex-colonial country, it is argued that Egypt received even more support, like in 1929 and 1959 when Great Britain favoured Egypt over the Sudan, and both riparians over upstream riparians (Waterbury, 2002; Adam, 2004; Dinar, 1999). Egypt has been a strategic country for the two superpowers during the cold war, as the leader of the third world (Shapland, 1997). In 1955, the World Bank (WB), the USA and Great Britain gave \$200 millions of aid for hydraulic works to Egypt. But tensions between the Soviet Union (SU) and the USA were soon increased by Egypt's capacity to choose its ally depending on its financial interests.

Relations with the west were compromised by Egypt's official recognition of China as a state, and by the nationalisation of the Suez Canal, resulting in a short diplomatic crisis against France and Great Britain. It was won by Egypt, which consequently became the leader of the third world (Dolatyar and Gray, 2000). This reinforced Egypt's global ideological power (Warner, 2006a). The Soviet Union entered the power-game as a

saviour for Egypt, accepting to fund the High Aswan Dam (Chesnot, 1993). As a counter-strategy, The WB asked Sudan to sign an agreement with Egypt to build the Roseires dam, as a mean of diverting Egyptian's interests from soviet ones. The putsch of 1958 in Sudan reaffirmed warm relations between both riparians, and resulted in the 1959 Agreement. In this chaotic international context, Egypt successfully skirted potential entrapment in either of the two superpowers' camps, using their financial assistance as means to reinforce its power at all levels. Therefore, "Egypt enjoyed the support of colonial Britain, later the Soviet Union, and finally, in the period since 1974 that of the United States and the Wold Bank" (Cascao, 2006a). Egypt maintained the status quo for so long because it was one of the main recipients of US (and the WB) political and financial support (CRS, 2001). Banks and donors are however biased, and their actions are steered by the most powerful states, like Egypt. The latter therefore exploited the "mutually-dependent nature of lending institutions and loan recipients" (Cascao, 2006a). As Tony Allan noted during the first hydro-hegemony workshop, 'the World Bank may need Egypt more than Egypt needs the World Bank' (Allan, 2005; Warner, 1992, 2004). Finally, Egypt has recently been capable of mobilising funds from the Food and Agriculture Organisation (FAO) and private Saudi Arabian funds for its controversial Toshka project (Warner, 2006b).

6.2.2 Blocking funds to other riparians

Having powerful friends also helped Egypt to block funds to other riparians, especially Ethiopia, during the last century. First, the internal capacity of these riparians to raise funds has been very weak, due to recurrent political instability or civil war. At the international level, Ethiopia's regular claim for equitable water share was undermined by the absence of support from the west and international organisations, because of Egypt's strategic significance and their vested interest in the Middle East (see above). In 1990, Egypt blocked an African Development Bank loan to Ethiopia, which might have reduced the flow into Egypt. The most recent element confirming this trend has been the WB's Operational Directive 7.50, which is the major obstacle for upstream development of water resource, because it gives veto to downstream states, especially Egypt (Waterbury, 2002; Collins, 2003). "Egypt's de facto veto on World Bank support for upstream projects has been a most effective hegemonic tactic" (Warner, 2006b).

6.3 Human Capital

Human capital refers to the level of access to knowledge, technology, science and education available to a state. Usually, water resources development schemes are very technology-laden.

Due to its structural power, Egypt's Human Development Index is higher than any other riparian's (UNDP, 2005). Furthermore, Egypt has long been and is still well positioned in several bilateral and multilateral agencies and aid institutions (Waterbury, 2002). Representatives of Egypt at the heart of influential international institutions were for instance Boutros Boutros-Ghali (former Secretary-General of the United Nations), Ismail Serageldin (vice-director of the WB) and Egypt's Water Minister Mohamed Abu-Zeid (president of World Water Forum 2000 in the Hague) (Allan, 2005). Finally, Egypt's voice in international water congresses or conferences is much more influential than the ones of other Nile riparians, if they do even have one (Zeitoun and Warner, 2006), facilitating Egypt's veto power on any upstream hydraulic infrastructure.

6.4 The Weakness of International Water Law

Sovereignty is less a territorially defined barrier than a bargaining resource for a politics characterised by complex transnational networks (Keohane, 2003: 155)

For hydro-hegemonies like Egypt, the coercive resource of International Water Law lies in its ineffectiveness (Zeitoun, 2006a). Indeed, the two "master" principles of International Water Law ("appreciable harm" and "equitable use", see table 6.1) are rarely explicitly invoked in international treaties, and the prevailing trend is to protect existing uses and downstream states (Wolf, 1998). In the Nile basin, the legal aspects of the Nile's water management have long been conflictive, especially between Ethiopia and Egypt who claim opposite legal principles.

Table 6.1 – Appreciable Harm and Equitable Use principles of International Water Law

Principle of International Water Law	Definition
Equitable use	Establishment of a regime of use that takes into account the interests of all riparians and seeks to reconcile rival claims in a way that makes everyone better off.
Appreciable (or significant) harm	Protects acquired rights by warning all second-in-time users to avoid any use that might cause harm to those with senior rights.

Source: Waterbury, 2002: 28-31

For several decades, Ethiopia claimed the principle of “absolute territorial sovereignty”, thereby arguing that it can use water as it wants within its territory. Lately, Ethiopia became a defender of the “equitable use” principle, despite Egypt’s unwillingness to share its allocation.

On the other hand, Egypt claimed for its “historical rights” and “prior use” based on the 1959 Agreement, regularly arguing that any infrastructure created upstream would be harmful by reducing the flows that enter its territory, thus embracing the principle of “appreciable harm”. However, there is no legitimate justification under customary International Water Law for the “prior use” claim by Egypt, especially for such an important allocation of water (Phillips, 2006; Huffaker *et al.*, 2000). At the same time, Egypt has been capable of avoiding upstreamers’ claim for “equitable use” in the basin during formal meetings.

Finally, despite recent advancements like the 1997 United Nations Convention on the Non-Navigational Uses of International Watercourses (which invokes the two latter principles), International Water Law is ineffective, and is an important source of power for Egypt. Indeed, if Egypt is confronted to any external pressure asking for another allocation scheme of the Nile flows, it will firstly put forward its sovereignty, the basic principle of International Law (Keohane, 2003).

6.5 Conclusion

Finally, Egypt used all coercive resources on hand to complement the diverse strategies and tactics exposed above. As a result of its hegemonic power, Egypt enjoyed strong and diverse international support in its favour during the last decades, which has helped mobilise funds for its unilateral water resources developments. Furthermore, this was reinforced by the presence of Egyptians at the head of several international water-related or development institutions, and the fact that International Water Law is still embryonic and ineffective yet. As a consequence, Egypt managed to impose what it sees as the most important legal principle: “appreciable harm”, which reinforces Egypt’s “acquired rights” doctrine.

Chapter 7 – Conclusion

[Egypt] has been successful in imposing the status quo for four decades, and it will surely shape any change in the status quo (Waterbury, 2002: 167)

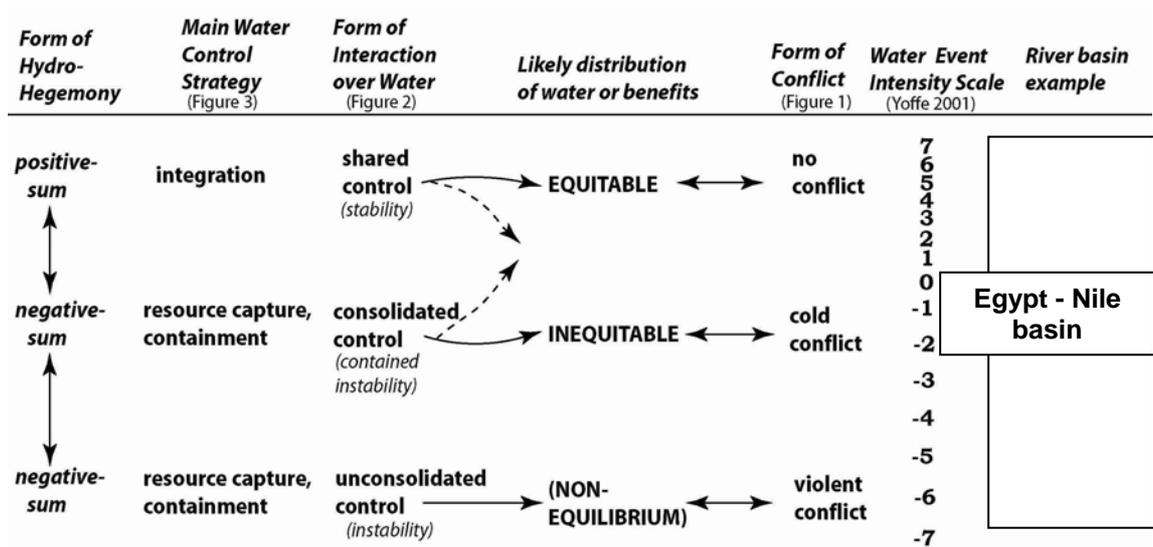
This study showed firstly that the Nile river basin is a pertinent case study for the framework of hydro-hegemony. The three conditions mentioned by Zeitoun and Warner (2006) for the application of a case to the framework are definitely present in the Nile basin. Indeed, there is *considerable power asymmetry* between riparians (chapter 4), with Egypt as a hydro-hegemon. The latter has *consolidated control over the Nile flows*, and *stifles the competition over the resource* through the exercise of its structural, bargaining and ideological powers.

Power was shown to be a pertinent explanatory tool for the hydro-hegemonic situation occurring in the basin. The study actually demonstrates how much power relations between riparians, and especially Egypt's interrelationships with upstreamers, explain the inequalities at the heart of the Nile waters' distribution schemes.

Egypt used all the strategies and tactics on hand, as means to attain, maintain and consolidate its hydro-hegemony, thanks to its overwhelming power over other riparians. The study also demonstrated that Egypt attained its hydro-hegemony under Great Britain's colonial rule. The British empire, more reflexive than Egypt, exercised its bargaining and ideological power as a means to secure Egypt's water allocation. Egypt used its favourable position over other riparians to consolidate this situation a few years after its independence, through the 1959 Bi-lateral Agreement on Full Utilisation of the Nile Waters. Since then, it has been Egypt's basis for using its bargaining and ideological powers in order to secure its water allocation, at the expense of all other riparians, especially Ethiopia. Since the 1990s, an increase of cooperative events occurred in the basin, like the Nile Basin Initiative, inducing hope for change in this hegemonic situation. However, a deeper analysis of Egypt's strategies and tactics during this period showed that this cooperative trend is actually an active stalling tactic used by Egypt, in order to gain time and consolidate its hegemony through the "New Civilisation Project". Despite some optimism from specialists of hydropolitics in the Nile, this argument puts into doubt the possibility for an imminent sharing of the resource towards equitable use from Egypt.

Finally, when referring to the *framework of hydro-hegemony* (see figure 7.1), the *negative-sum form of hydro-hegemony* occurring in the Nile river basin has definitely been sustained by *resource capture* and *containment* water control strategies (chapter 5).

Figure 7.1 – Egypt’s position in the framework of hydro-hegemony



Source: Zeitoun, 2006a

Egypt exercises *consolidated control* over the Nile flows, through an inequitable distribution with other riparians. Thus, the conflict over water is *cold*, and is evaluated between 0 and -2 on the WEIS (chapter 3). At this moment, Egyptian hydro-hegemony is being consolidated through the development of resource capture projects under the “New Civilisation” banner.

Appendices

Appendix 1: The Nile River Basin – database of interactions and events (1945-2004)

	Bilateral	Bilateral	Multilateral
	Egypt/Ethiopia	Egypt/Sudan	Nile Basin
1945	Presentation of the British (colonial power at the time) plan <i>Century Storage Project</i> , enclosing wide goals to develop the Nile water resources, excluding Ethiopia that has not been consulted -3		
1946			
1947			
1948			
1949	Ethiopian representatives visit Egypt to discuss the Nile 1		
1950			
1951			
1952	Nasser takes the power in Egypt and often official invites Emperor Selassie to visit the country, that always declined the invitation -2	Egypt and Sudan sign a pact for irrigation schemes and construction of dams 4	
1953		Egypt discuss with Sudan the plans for the new dam in Aswan 1 Beginning of the transition period of 3 years for Sudanese independence (union with Egypt) 2	
1954		First round of negotiations between Egypt and Sudan about the Nile waters 2 Sudan agrees with Egypt about the need to renegotiate the 1929 Agreement on the Full Utilization of Nile Waters 2 Negotiations between Egypt and Sudan are inconclusive -2	

1955		Sudan denounce Egypt for considering that the Aswan Dam will destroy several arable lands in Sudan -2 Egypt and Sudan sign an agreement to distribute the Nile waters 1 Impasse in the negotiations between Sudan and Egypt -1	
1956	Beginning of the study about the Nile Basin, by United States, proposing 29 projects for the Nile in Ethiopia and Ethiopian govern declare that will use the waters of the Nile in benefit of its population (at this time, Ethiopia have information about the hypothetical agreement between Egypt and Sudan) -2	Progresses in the negotiations between Egypt and Sudan related to the Nile Water Agreements 2 Tensions raised between Egypt and Sudan after the independence of Sudan (that decided not to join Egypt) -1	Suez Crisis provoking instability in part of the Nile Basin region -3
1957	Ethiopia again declares, by official notes to Egyptian and international authorities, that will to proceed to unilateral developments on the Nile, inside its territory -2	Egypt and Sudan agree about the project for the dam in Aswan 4 Egypt and Sudan discuss the flow regulations in the Nile 1 Tensions raised between Sudan and Egypt -2	
1958	Opening of a small military and training camp of the Ethiopian opponents (from Eritrea), in Alexandria, Egypt -4	Sudan is accused to infringe the 1929 Agreement for Full Sharing of Nile waters -2 Sudan rejects the Egyptian idea of diverting the waters of the Nile -2 Military coup-etat in Sudan and establishment of a more open environment for negotiations with the Egyptian government 0	
1959	Ethiopia reacts negatively to the 1959 Agreement for the utilization of Nile waters, signed between Egypt and Sudan, through strong public reserves against been excluded of the Agreements -2	Egypt and Sudan signed the 1959 Agreement for the Full Utilization of Nile Waters (in place until today) 6 Egypt and Sudan agree about the construction of the Aswan Dam in the Egyptian-Sudanese border 3	
1960	Approach between Ethiopia and Israel – Selassie ask for arms and consultants from Israel (seen as a threat by Egypt) -2 Beginning of the construction of the High Aswan Dam, against the will of Ethiopia -3	Sudan and Egypt create the Permanent Joint Technical Committee (referred to the Nile water resources) 4	

1961			
1962	USBRI – Conclusion of the American study about the Blue Nile in Ethiopia, that Egypt always had suspicions -3		Tanzania informs the governments of Egypt and Sudan that does not agree with the imposed Agreement on the Nile River – calls for the Nyerere doctrine -2
1963	Egypt supports the Muslim groups from Addis Ababa and Central Ethiopia (Nasserism), destabilizing Selassie' s power -3	Egypt pays to Sudan the compensations for the floods caused by the construction of Aswan Dam 4	Kenya also invokes the Nyerere Agreement to shows it is against the Agreements in the Nile River waters -2 Inauguration of the Organization of African Unity (OAU), with the headquarters established in Addis Ababa 2
1964			
1965			
1966		Egypt and Sudan have a meeting of Permanent Joint Technical Committee on the Nile 1	Israel attacks Port-Said and freshwater canal in Egypt -6
1967			Creation of Hydromet, an institution designed to collect hydrometeorologic data (scientific data) on the Nile River Basin (in particular the White Nile Branch) 3
1968		Egypt and Sudan, joined by the other riparians from Equatorial countries, provide national enquiries to the Nile flows 3	
1969	Change of visits between Selassie and Nasser, giving an image of personal friendship (Egypt had as main goal to prevent Ethiopia to make use of water resource inside its territory) 0		
1970			
1971	Conclusion and inauguration of the High Aswan Dam (11 years), which Ethiopia always contested - 3		
1972	Construction of the small Fincha Dam, in Ethiopia – enough to Egypt to show its displeasure and feel it as a threat -3		

1973			
1974			
1975	Egypt announces that would take water for the Sinai desert in Israel, that received immediately a lot of critics from the other Nile riparians, namely Sudan and Ethiopia -3	Egypt announces that would take water for the Sinai desert in Israel, that received immediately a lot of critics from the other Nile riparians, namely Sudan and Ethiopia -3	
1976		Signature of agreements between Egypt and Sudan for financing the project called Jonglei Canal, in southern Sudan (Sudd) 4 Internal crisis in Sudan, through a coup-etat and subsequent signature of a mutual defence agreement with Egypt 5	Beginning of Ogaden War, between Somalia and Ethiopia, affecting part of the Nile Basin region and its inter-state relations -3
1977	Ethiopia declare in the United Nations Conference, at Mar de la Plata, that is prepared to use the water resources inside its territory, independently of any legal agreements (affront to Egypt) and makes the presentation of a water resources plans, including irrigation schemes and dams -2 Ethiopia accuses Egypt of diverting water illegally from the Nile to Sinai -2		
1978	Mengistu reinforces its regime, the Derg and starts a campaign of diabolizing against the Arab and Muslim world, Egypt in particular – Ethiopia accuses Egypt of supporting its opponents in Eritrea and Somalia -2 Sadat threatens Ethiopia (and the other Nile riparians) against any action the puts the Nile waters in danger, saying this countries would face serious retaliations -2 During the Ogaden War, that involved Ethiopia and Somalia, Egypt supports Somalia with millions of dollars in armament -4		
1979	Egypt accuses Ethiopia of involving Israel in its water resources projects and Sadat threatens Ethiopia about retaliations if it put in danger		Sadat states several times that would retaliate against any Nile riparian state that would deprive Egypt of its water resources -2

	Egyptian national security -2 Egypt again warns Ethiopia not to put in danger its right to Nile waters, in a declaration to Ethiopian Ambassador in Cairo -2		
1980	At OAU Meeting, in Lagos, Ethiopia denunciate Egypt and its plans to divert the Nile waters to Sinai Peninsula (project of transfer/diversion of the Nile) - 2		
1981	At UN Least Developed Countries Conference, Ethiopia presents the investment plans for 10 years, including 15 irrigation projects (these plans were never put in place, by lack of financing and internal instability) -2 Egypt presents its ambitious Nile Master Plans, compiled in 17 volumes -2		
1982			
1983	Reopen of the conflict in Sudan (in peace since 1972), that affected the future relations between all neighbours -1	Reopen of the conflict in Sudan (in peace since 1972), that affected the future relations between all neighbours -1	Creation of Undugu – 3
1984		Interruption of the construction of Jonglei Canal, after the bomb attack led by the Sudanese rebels, from SPLA -5	
1985		Sudanese official representatives arrive to Egypt for a bilateral negotiation round about Nile water resources 1 Egypt, Sudan and Uganda prepare meetings of its Ministries of Irrigation and Water Resources 2	
1986			
1987		Sudanese Minister of Irrigation denies the reports saying that Sudan wants to cancel the 1959 Water Agreement with Egypt 1	
1988	First phase of Tanas Beles Project, at the North of Ethiopia, which represents again anxiety to Egypt - 1	Bilateral meetings between Egypt and Sudan to debate the end of civil war in Sudan, solidarity in controlling the floods and even Egypt offered to	

	Broutos-Ghali, an Egyptian official, declares that “the next war in our region will be about water, not politics”, in a clear message for Ethiopia -2	contribute to reconstruction efforts 1	
1989		Sudan states the will to cooperate in terms of Nile water resources with the upstream riparian countries, namely Ethiopia and Uganda, confirming that cooperation with Egypt is vital for the definition of its national and common water projects 1 Beginning of fundamentalist Islamic regime in Sudan, which decided to annul all the cooperation agreements with Egypt and started to support the dissidents inside Egypt’s territory -4	
1990	Minister of Irrigation of Egypt expresses the will to cooperate with Ethiopia in relation to the Nile and announces that Egypt and Sudan are prepared to negotiate the Ethiopia needs for water 1 Meeting of Ministries of Energy of the Nile Basin, that proposes to create a unified network for Africa, and President Mubarak makes enthusiastic discourses 1 Egypt and Sudan accuse Ethiopia of allowing the “enemy” Israel to collaborate in the construction of dams, that can threaten their security and the Arab world, and threaten to block the projects -2 A report is published indicating that Egypt blocked temporarily a loan from the Bank of African Development to a project in Ethiopia, which Egypt was afraid that would reduce the flux of Nile downstream -3		Meeting of Ministries of Energy of the Nile Basin, that proposes to create a unified network for Africa, and President Mubarak makes enthusiastic discourses 1
1991	Egyptian Minister of Defence declares that Egypt would use the force to protect the Nile waters in Egypt -2	Sudan decides to support Iraq during the Gulf War, even knowing that would lose the support from the Arab countries, in particular Egypt -3 Egypt threatens Sudan, saying that if Sudan would allow Iraq to use its territory to attack the Aswan dam would suffer severe retaliations -2	Beginning of Gulf War, several instabilities in the Arab world and in the Nile River Basin – general insecurity environment -3
1992			Creation of Tecconile – Technical Committee for the

			Promotion of the Development and Environmental Protection of the Nile Basin (not all the riparian states were involved) 3
1993	Ethiopia and Egypt sign a General Agreement of Cooperation for bilateral cooperation, but the Nile issues are avoided and both just declare not to cause harm and consult in common issues 4 Ethiopia protests against the published reports that inform about the Egyptian diversions on the Nile, as a part of the Northern Sinai Agricultural Project Development -1	Diplomatic incidents between Egypt and Sudan, mainly because of territorial issues (Hal-Ib) and subsequent break of diplomatic relations -3 Sudan protests against the reports published saying that Egypt is preparing itself to divert the Nile, as a part of the Northern Sinai Agricultural Project Development -1 Answering Sudan, the Egyptian Minister of Foreign Affairs says al-Turabi not to play with the threats related to reducing the Egyptian's quote in the Nile waters -3	1 ^a Nile 2002 Conference (in Aswan) – informal mechanism of dialogue between the Nile riparian partners 3 Creation of Nile-COM 3
1994	Second Round of the General Agreements of Cooperation between Ethiopia and Egypt 4	Reports state that Egypt was planning and subsequently cancelled a aerial attack to Cartum , where the Sudanese government was constructing a dam -2	
1995	Assassination attempt of Egyptian President Mubarak, in Addis Ababa, carried by Sudanese terrorists, that embarrasses Ethiopia in the diplomatic field, but Ethiopia immediately apply to United Nations for sanctions to Sudan 2	Cairo accuses again Sudan and al-Turabi of using water as a weapon in disputes with Egypt -1 Sudan states its rights to the Nile waters, affirming that is not pretending to threat Egypt, but on the other hand it considers that is Egypt who is infringing the agreements established (ex: related to Hal-Ib) 0 Sudanese Minister of Interior warns Egypt that every attack from the Egyptian forces to Hal-Ib Triangle would be considered a violation to boundaries agreement and could take Sudan not to accomplish other bilateral agreements, namely those related to the Nile -2 Assassination attempt to Mubarak, in Addis Ababa, by a group of Sudanese extremists – break of diplomatic relations between Egypt and Sudan -5	Suspicion environment created by the assassination attempt to Mubarak in Addis Ababa -1 Establishment of the Nile River Basin Action Plan 1 Nile-COM requires to the World Bank to coordinate the international donors to finance projects in the Basin 1 Presentation of Cooperative Framework Project D3 (embryo of an hypothetical Treaty sharing the Nile waters) 1
1996	Political counsellor of Mubarak reaffirms the	Egypt accuses Sudan of not accomplish the	Egypt states that is prepared to offer technical

	<p>Egyptian quote on the Nile and declares that the construction of dams in Ethiopia is not a worry for Egypt and is even prepared to provide technical assistance for water projects in the other Nile riparian States 1</p> <p>Egypt makes the public presentation of the large scale projects, namely Zayed and Toschka Channels, that provokes immediate reactions against it on Ethiopian side -2</p>	<p>established bilateral agreements and being several times threatening Egypt with the Nile waters and even to send sabotage elements inside Egyptian territory -1</p> <p>Sudan confiscates the education institutions and irrigation schemes belonging to Egypt inside its territory -3</p>	<p>support and expertise to water projects in the other Nile riparians 1</p>
1997	<p>Minister of Foreign Affairs from Egypt denies Ethiopia's requirement on the cancellation of the 1959 Agreement and adverts that there is no crisis or conflict between the countries related to the Nile 0</p> <p>Director of International Politics from Egypt declares the Nile Agreements can just be amended by the States that signed them and reminds that Egypt is prepared to help Ethiopia to benefit from its quote on the Nile 0</p> <p>Egypt begins the construction of the mega-Canal Toschka, even in the presence of insisting critics from the other Nile riparians, particularly Ethiopia -3</p>	<p>Sudanese President al-Bashir states, at the national parliament, his intention to reactivate the diplomatic relations with the neighbour Egypt, after the break of diplomatic relations in 1995 0</p> <p>Sudanese First Vice-President visits Mubarak in Cairo – first step for improvement of bilateral relations (but any concrete decision) 1</p> <p>Sudanese officials “alert” Egypt for American plans to attack Egypt exactly through water projects in southern Nile Basin 0</p> <p>Egypt reaffirms the support to territorial integrity in Sudan and Sudanese government appreciates this support 2</p>	<p>Voting of ILC 1997 (UN) – International Water Law – the Nile riparian states vote in different ways (in favour, against, abstention) -1</p> <p>Beginning of the process of legal and diplomatic dialogue that would originate the Nile Basin Initiative (namely the contacts with World Bank and other partners 2</p>
1998	<p>Minister of Foreign Affairs from Egypt visits Ethiopia and considers that meeting is a success (the 1959 Agreement was not discussed, he said) and that the door is open for cooperation and dialogue 1</p> <p>Minister of Water Resources from Egypt denies the reports on Ethiopian actions regarding the construction of several dams , that would affect Egypt, and reaffirms the will to cooperate with the other Nile riparian states for a better use of the common water resources of the Nile, and for bigger benefits and developments for all countries 1</p> <p>Minister of Water Resources from Egypt declares that Ethiopia can satisfy its needs for water resources without affecting Egypt 0</p>	<p>Egyptian Minister of Water Resources underlines the importance to increase the cooperation between Sudan and Egypt and states the priority to be in the national giant projects to be launched by both countries, to respond to both countries needs (food, industrial and urban) 1</p> <p>Egyptian Minister of Water Resources visits Sudan to discuss the bilateral cooperation and to have the PJTC Meeting 0</p> <p>Egypt states the will for peace and stability in Sudan, to be possible to complete the Jonglei Canal 0</p> <p>Egyptian Minister of Foreign Affairs accuses Sudan of violating the agreement about the return of</p>	<p>Egyptian Minister of Water Resources states the will to cooperate with the other Nile riparians to better use of the common water resources, to achieve more benefits and developments for all riparians 1</p> <p>Creation of Nile- TAC – Technical Advisory Committee of the Nile Basin States 4</p> <p>Egypt invites experts in water resources from the several riparian states to be present in the Arab Conference, in Cairo 0</p>

	<p>Ethiopia presents the projects for constructions of dams in the Nile, that also involve irrigation projects 0</p> <p>Egyptian Minister of Foreign Affairs asks for information about the new projects of Ethiopia and reminds Ethiopia that any project will need the anticipate consult to the other Nile riparians 0</p> <p>Egypt denies all the published reports by Ethiopian independent newspapers, that accuse Egypt of preparing a independent initiative for the resolution of the Ethiopia-Eritrean conflict-1</p> <p>Ethiopian officials denied the reports (from private newspapers) that accuse Egypt of military support to Eritrea 0</p> <p>Egyptian delegation arrives to Addis Ababa to establish agreements on bilateral cooperation and Egypt offers help to find solutions to the Somalia problem 2</p>	<p>Egyptian properties -2</p> <p>Egyptian Minister of Foreign Affairs accuses Sudan of not collaborating in the fight against terrorism and not having real intentions to prosecute the terrorists that tried to kill Mubarak in 1995 -2</p> <p>Egypt denies that Sudanese government is provoking problems related to 1959 Agreement on the Nile waters 0</p> <p>Egyptian Minister of Water Resources assures that all the compensations will be paid to Sudan, in the case of adjustment on the Egyptian properties, when constructing the new projects 1</p> <p>Egyptian Minister of Water Resources confirms that Egypt and Sudan are working together to make it possible to use the water evaporating every day in south Sudan (Egypt states to be waiting for a pacific resolution in Sudan to resume the construction of Jonglei Canal) 0</p> <p>Meeting of the Technical Committee of Egypt and Sudan, both reaffirming strong relations between the two countries (the topics discussed were: flux increase of the Nile, methods to increase the water levels at the dams sites and technical cooperation) 1</p>	
1999	<p>Egypt ignores the Ethiopian newspapers that accuse the Egyptian interference in the Ethiopian internal affairs and prevent any water development at the Ethiopian highlands 1</p> <p>Minister of Economy, Development and Cooperation from Ethiopia denies any dispute with Egypt because of the Nile and states that the bilateral relations are improving and there is enough water in the Nile to satisfy the needs of all countries 1</p> <p>Agreement between Ethiopia, Egypt and Sudan for sustainable development on the Basin and poverty alleviation (more cooperation for irrigation,</p>	<p>Agreement between Ethiopia, Egypt and Sudan for sustainable development on the Basin and poverty alleviation (more cooperation for irrigation, hydroenergy and erosion prevention); preparation of studies to be presented to international donors 4</p> <p>Coup-etat in Sudan and fall of the radical leader al-Turabi – improvement in the bilateral relations with Egypt 0</p> <p>Sudanese Minister of Irrigation confirms that 1959 Agreement for the Nile. Signed by Egypt and Sudan, continues to work out and without time limit</p>	<p>Inauguration of NBI, financed by the World Bank, UNDP, FAO and some other bilateral institutions 6</p> <p>Open of the NBI Secretariat in Uganda 3</p> <p>Important meeting of Nile-COM to debate the cooperation and the equitable use of the Nile waters 1</p> <p>Creation of ENCOM 4</p>

	hydroenergy and erosion prevention); preparation of studies to be presented to international donors 4 Minister of Water Resources from Egypt declares that the Nile waters will not go to any other country out of the Basin 0 Minister of Water Resources from Egypt and a delegation of experts on water resources visit Ethiopia for the first time (the visit included the Nile in the Ethiopian highlands) 2 Ethiopian Prime-Minister is received in Cairo by President Mubarak and both discuss the resolution for the Ethiopian-Eritrean conflict 1	(it was not cancelled, not abolished, not changed) 0 Egyptian Minister of Water Resources states that the water of the Nile will not go for any place out of the Basin 0 Egypt and Sudan discuss cooperation in the oil topic 1	
2000	Mubarak writes Zenawi inviting for talks about the regional developments on the Horn of Africa – both engaged on the peace efforts in Sudan 1	Return of the Egyptian Ambassador to Cartum, after the break of diplomatic relations since 1995 2 Sudanese President suggests a forum for wide dialogue with its neighbours Egypt and Libya 2 Sudanese Minister of Foreign Affairs states that Sudan and Egypt have strong potentialities to common cooperation or even integration 2	ENCOM approves the 2020 Operational Vision of the Eastern Nile Strategic Action Plan 4 Participation of NBI in the II World Water Forum (The Hague) – first public international participation of NBI 2
2001	Minister of Water Resources from Egypt denies the involvement of Israeli experts on the water projects in Ethiopia, alerting that those projects are just in the field of sanitation- reminds the Nile Basin states for consultations previous to any project along the river 0		International Roundtable on the Nile (Germany) 3 7 Projects of Shared Vision Program (SVP) are approved by all the Nile riparian states 4 I Meeting of ICCON – Consortium of Financing – the IDEN was presented (Geneva) 4 Creation of Nile Basin Trust Fund 4 Creation of Nile International Discourse – Platform of NGOs from the Nile River Basin region 0 Egypt states the Nile Basin is out of the Middle East framework of water conflicts and this can be avoided through cooperation inside the Basin, which is already occurring 2
2002	Visit of an Egyptian delegation to Ethiopia to discuss the implementation of cooperative agreements on the Nile 2 Minister of Water Resources from Egypt declares that the water rights to Nile waters are not in	Egypt and Sudan meet to bilateral discussions, about all areas of cooperation 2 Egyptian Minister of Water Resources states that the waters reserved in Lake Nasser are enough to respond to Egyptian and Sudanese water needs 1	Inauguration of the Eastern Nile Technical Regional Office (ENTRO), in Addis Ababa 4 Participation of NBI at the Summit for Sustainable Development in Johannesburg 2 Egyptian Minister of Water Resources states “the

	negotiation between the Nile riparians -1 President Mubarak sends a message to Ethiopian President Girma Giorgius to debate the bilateral relations between the two states 1		Nile quotes are out of negotiation between the Nile riparian states” -1
2003			Meeting of experts in energy from the Nile riparian states 3 Meeting of Ministries of Energy from the Nile riparian states 4 Participation of NBI in the III World Water Forum (Tokyo) 1 Kenya considered the 1929 Agreement on the Nile must be abolished and Egypt consider it an “act of war” -2 Egyptian Minister of Water Resources accuses Kenya of going against international law when refusing the agreement and threats Kenya that can not ask for the sovereignty rights to protect against “any action that Egypt can take” -2
2004			

Source: Cascao, 2004

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