

Contexts Matter: A Hydropolitical Analysis of Blue Nile and Yarmouk River Basins

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Abstract

Transboundary surface water is of strategic importance in the Arab world as it accounts for over two thirds of the renewable water in the region. Despite most shared waters have their source outside the Arab countries, no basin-wide agreements exist over the use, allocation and management of the main transboundary rivers in the region: the Nile, the Jordan, and the Tigris and Euphrates. This paper investigates the intra-basin hydro-political relations in the dynamic contexts of Yarmouk and Blue Nile rivers. In both cases, the lack of a shared vision on the management of transboundary waters has resulted in unilateral initiatives rather than comprehensive and agreed legal frameworks. Adopting a broader problem-shed approach rather than a narrow watershed one, this paper captures the interests and reasons of such dynamic contexts, and analyses how recent changes impact on the transboundary water management of shared basins. In particular, the relevance of including power analysis into the assessment of water-related negotiations will shed light over competing interests and political asymmetries, which ultimately affect the processes of water allocation and use. The insights provided by evidence-based assumptions over the dynamic and often conflictive process of water governance formation in the two cases considered will disclose alternative perspectives to the (mainstream) analyses of water management, in the attempt to situate specific hydro-political dynamics in the regional evolving contexts of the

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cases selected. The intra-basin interactions that emerge from the analysis will uncover some of the neglected issues in the literature over transboundary water management, while contributing at the same time to the search for solutions to the current water disputes in the two case studies.

Keywords

hydropolitics, transboundary water interactions, Nile River Basin, Yarmouk River, power asymmetries.

1 Introduction

Transboundary water resources account for more than two third of the overall water availability in the Arab region (UN-ESCWA 2013). Due to the prevalence of shared surface and groundwater resources with respect to purely internal waters, the dependency ratio of Middle East and North African (MENA) countries on external water resources represents one of the major challenges they must face at present and in the near future. At the same time, this also results in a potential opportunity for interstate cooperation, since the very survival of one riparian state is perceived as dependent upon the behaviour of the others. Due to the sensitivity of the topic (water scarcity is projected to sharply increase across the region), water challenges in the MENA region have mostly been assessed in terms of technical problems that require immediate solutions from hydrologists, hydraulic engineers and water experts. While this approach has contributed to raise awareness over the technical aspects of water management, it has in turn failed to recognise the political aspects that forge policies of water allocation, distribution, and utilisation. In short, the hydropolitical features of transboundary water management in the MENA region have been made silent for long.

In order to overcome this theoretical pit-fall, this paper aims at applying perspectives of International Relations (IR) theories to environmental issues for the study of transboundary water management in the MENA region. Without limiting its analytical focus on the water sector only, an IR approach is able to identify the main drivers of the broader context that shape hydropolitical relationships in dynamic and troubled areas. Through the expansion of the Framework of Hydro-Hegemony (FHH), the present work explores the role of power asymmetries in two empirical cases: the Nile and the Yarmouk basins. In so doing, it aims at contributing to the critical hydropolitical literature emphasising the role of the broader context in the analysis of power dynamics in transboundary contexts.

2 Power and Hydropolitics in the Literature

Water conflicts and water wars make often the headlines of newspaper and media when water politics is discussed (Fergusson 2015; Rousseau 2015, Specter 2015). While in the 1990s some scholars asserted the causal relation between water challenges and war potential (Gleick 1993; Homer-Dixon, 1994), more recently other scholars maintain that water scarcity could in fact foster dialogue, regional cooperation, and peace (Wolf et al. 2003; Allan 2002).¹ Accordingly, the literature on Transboundary Water management (TWM) is enriched by a heterogeneous range of theoretical approaches, which testify the multi-disciplinary nature of the topic. The authors believe that power analysis could contribute to shade light upon the dynamics of water politics formation, whose processes emerge from the broader context in which they are embedded. Therefore, the focus of this paper is on the features of Hydropolitics and the role of power in shaping processes and outcomes of hydropolitical transboundary relations (Cascão 2009; Zeitoun and Warner 2006; Zeitoun, and Mirumachi, 2008).

Refusing the dichotomy that has persisted for years in the academia between “water war” and “water peace” paradigms, this paper emphasizes the co-existence of both conflictive and cooperative relationships in the complex management of transboundary water resources. Following previous works developed, among others, by Zeitoun and Mirumachi (2008) and Cascão (2008), the authors assume that conflict and cooperation are not pre-defined stages of a progressive continuum from “bad” to “good” relationships, but they rather overlap and merge in different ways and grades of intensity. The outcomes of this dynamic process are not a-priori given, but heavily depend upon the specific features of the broader context in which water-related phenomena, relevant actors and political interplays are created and developed.

The theoretical underpinnings of the present analysis are adapted from the Framework of Hydro-Hegemony (FHH), developed by Zeitoun and Warner in 2006. The FHH is grounded on the analysis of three distinct “pillars” of hydropolitical features, namely the riparian position, the power of the actors involved, and

¹ According to Allan, political economy policies and the import of virtual water, which is the amount of water needed to produce goods and services, are one of the reasons for which countries are not going to wars over water (Allan, 2002).

the exploitation potential. For the purposes of the present work, the analysis on the case studies will mainly focus on the pillar of power in order to account for the role that different dimensions of power holds in shaping the control and utilisation of transboundary watercourses.

The multi-dimensional feature of power is manifested in the FHH through the adaptation of Lukes' conception of three dimensions of power into the FHH as material, bargaining, and ideational power.² Material power includes features of hard power, such as military might and economic development. Bargaining power comprises the skills, strategies, and tactics, deployed in order to influence negotiations and set the priorities of the political agenda. Ideational power is mostly exerted through performative aspects of soft power towards consent-inducing mechanisms (i.e. shaping perceptions, influencing perspectives, sanctioning discourses, securitising relevant issues) (Lukes 1974; Scott 2001; Zeitoun and Warner 2006). Through specific combinations of hard and soft power, one riparian state may succeed in exerting its supremacy over the others and attain a role of regional predominance. Zeitoun and Warner (2006) argue that when the use of power directly or indirectly affects the control, distribution and/or utilisation of transboundary water resources according to one state's interests, a hydro-hegemonic regime is in place. The hydro-hegemon will aspire at preserving the favourable status quo, while the non-hegemons will either consent to the hegemonic rule or contest the existing regime. Compliance from the non-hegemonic riparian countries can be induced by the hydro-hegemon through different strategies: building upon Lustick's (2002) categorisation, Zeitoun and Warner (2006) identify four types of compliance-producing mechanisms, namely coercive (use or threat of use of force), utilitarian (provision of benefits), normative (the legitimisation of the hegemon) and hegemonic (the institutionalisation of the hegemon's paradigms, principles, ideas, values, discourses, knowledge). Given the inherent dynamism of political processes, Cascão (2008) theorized three mechanisms of counter-strategies that the non-hegemons may recur to in order to challenge the status quo and de-legitimise the hegemon: when not consenting, the non-hegemons can resort to coercive acts (i.e. planning military interventions), leverage mechanisms (i.e. recurring to alternative funding) or liberating strategies (i.e. formulating alternative discourses).

Securing water resources is arguably among the priorities of national governments, in particular in water scarcity prone areas such as the MENA region. When scarcity of water merges with the transboundary nature of its availability, the risks of water crises increase, due to both the diverging interests and needs of the par-

2 Lukes' three dimensions of power: overt, covert, and structural power

ties involved and the asymmetric balance in their power dimensions. Focusing on power relations in transboundary basins enables the analysis over political dynamics that affect negotiations over water. At the same time, it helps understanding processes of consolidation of hydro-hegemony, and attempts of resistance and counter-hegemony. In this way, not only the core features of hydropolitics will be unveiled, but also, and most importantly perhaps, such analytical approach will explain how and why changes occur.

In the following sections, an empirical analysis of forms of power interactions in two case studies, the Nile and Yarmouk river basins, will explore the dynamics of change in the established status quo. Both case studies present features of hydro-hegemonic regimes, and in both basins recent political developments have had a substantial impact over the established configurations of hydro-hegemony. The assessment over the core features of hydro-hegemonic and counter-hegemonic strategies implied by relevant actors will contribute to the empirical analysis of the dynamic evolution of hydropolitics in the targeted case studies. At the same time it will contribute to the theoretical advancement of the literature on TWM by providing evidence for the pertinence of including power analysis into assessments over international water politics.

3 The Nile River Basin: Challenges and Opportunities for Integrated Water Management

The Nile River represents the main source for hydroelectric production and irrigation of agricultural lands in most of the 11 countries it flows across. Although generally considered as a whole, the area it covers can be subdivided into two basins, for purposes of both hydrological and socio-political analysis: the Eastern Nile Basin, which includes Egypt, Ethiopia, Eritrea, Sudan and South Sudan, and the Equatorial Nile Basin, which is shared by Uganda, Kenya, Tanzania, Burundi, Rwanda and the Democratic Republic of Congo. The two sub-basins are differentiated in terms of climate variability, precipitation, geographic conformation and, most importantly, with regard to the water contribution to the Nile river water system and dependency ratio over the Nile in respect to other water resources.

While the White Nile, flowing from the Lake Victoria northwards, only contributes up to a 14% of the overall Nile waters due to high levels of evapo-transpiration (in particular when it reaches the Sudanese swamps), the Blue Nile, which arises from the Lake Tana in Ethiopia and merges the White Nile in Khartoum, accounts for about 86% of the Nile volume (Swain, 2011).

The hydrology of the river partially explains the geopolitics of water within the basin, since the riparian state that contributes the most to the Nile (Ethiopia) barely utilises its waters, while Egypt (which has no tributaries of the Nile) is the country that has historically relied more on the flows of the river, developing hydraulic infrastructures and exerting a dominant role in the region in order to secure the maximum control over the Nile waters upstream (Waterbury, 2010). At the same time, the dependency on the Nile water resources is extremely different between the Equatorial and the Eastern sub-basins: for example, whereas in Egypt the dependency ratio on external water resources is about 97%, in Uganda is just around 40%.³ Ethiopia, with its 0% dependency ratio upon external water resources, can entirely rely upon internal resources for its water requirements. Moreover, the availability of water resources other than the Blue Nile provides Ethiopia with a physical advantage over other riparian states (i.e. downstream Sudan and Egypt): for example, Egypt not only lacks sufficient internal renewable resources, but 100% of the external resources it relies on comes fully from the Nile waters (Yohannes, 1999).

It thus follows that the Egyptians posit a significant value on the river, being the country prone to water scarcity due to the limited domestic water potential and in a disadvantaged position in geographical terms being the further downstream state along the flows of the Nile. Moreover, the economic wealth of the country relies greatly on its waters for both industrial and agricultural production, and major efforts by policy makers have historically been addressed towards the exploitation of its water potential (i.e. the High Aswan Dam or the Toshka/New Valley Project). Finally, the apprehension for potential threats that could negatively affect the amount of water downstream has resulted in several attempts to extend its control over the Nile upstream, both through military actions (i.e. the expeditions in northern Sudan in 1958) and diplomatic hostile initiatives (i.e. the 1959 Nile Agreement with Sudan or the boycott of the Nile Basin Initiative since 2010) (Arsano and Tamrat 2005; Tvedt 2010).

3 FAO, "Aquastat Main Country Database", retrieved from www.fao.org/nr/water/aquastat/main/index.stm

3.1 Cooperation and Unilateralism in the Nile: a History of Stiff Confrontation

The announcement of the construction of the Great Ethiopian Renaissance Dam (GERD) in 2011 was perceived by the majority of mass media worldwide as the potential peak in the history of hostile relationships among the Nile riparian states. In particular, the widely shared perception was that this unilateral move by an upstream country would have pushed downstream Egypt to recur to military options in order to preserve its historically acquired control over the Nile waters (Brown 2011; Evans 2011). Tensions among the riparian states were already at high level due to the negotiations over the Cooperative Framework Agreement (CFA), which resulted in Egypt boycotting the Nile Basin Initiative (NBI) since 2010, and in 6 upstream states signing the contested treaty over the management of the Nile waters (Ibrahim 2011).

The negotiation process over the CFA started within the framework of the temporary NBI, established in 1999, and it should have conducted to the entry into force of the first basin-wide agreement over the utilisation of the Nile waters, and to the institutionalisation of the Nile Basin Commission (NBC), an intergovernmental River Basin Organization with full responsibility on the management of the river's flows (Arsano and Tamrat 2005). To date, neither the CFA nor the NBC have seen substantial progresses. In fact, despite declarations of intentions and minor cooperative engagements (such as joint programmes for exchanging data and capacity building), the recent history of the hydropolitics of the Nile has witnessed the perpetuation of unilateral actions, both downstream and upstream. On the one hand, Egypt has succeeded in obstructing the cooperation process towards the integration of institutions and water management among the riparian states; on the other hand, Ethiopia has deliberately developed hydraulic megaprojects on the tributaries of the Nile neither consulting nor sharing detailed impact assessments with the downstream states (Swain 2011).

These developments have contributed to the escalation of tensions between upstream and downstream states, in particular with regard to Ethio-Egyptian relationships: the Egyptians' stress over the potential water crises induced by the construction of the GERD, and the Ethiopians' determination not to consider any variation to the original project, have fomented a worldwide anxiety of incumbent water wars over the Nile. What former UN Secretary General Boutros-Ghali foresaw in 1991 in his famous quote "the next war will be fought over water", seemed to many analysts to be close to become a reality in the Nile basin, where the likelihood of an incumbent water war gradually became a pivotal topic in hydropolitical analyses on the Nile.

Despite the recent escalation of tensions, the causes of present water disputes over the control of the Nile are rooted in a long history of hostile relationships among the riparian states. The focus on water issues should not distract the analysts from the comprehension of the broader context in which the specific features of the hydropolitics of the Nile have emerged. The water sector is not a septic dimension, nor is it completely separated from the patterns of socio-political dynamics that shape the politics of the Region: rather it is constitutive of, and in turn shaped by, the ever evolving process of interstate relationships.

During the colonial rush for the scramble of Africa, the British Empire succeeded in extending its dominance over Egypt, Sudan, Kenya, Tanzania and Uganda: Britain was thus able not only to control vast territories rich in natural resources and of relevant geopolitical significance, but also to extend its power from the source to the delta of the Nile. The only country left out from the imperial plan of controlling the entirety course of the Nile was Ethiopia, whose aspirations over the utilisation of the Nile were however under strict control through bi- and multi-lateral agreements among colonial powers, notably Britain and Italy: from the 1891 Anglo-Italian Protocol to the 1929 Anglo-Egyptian Nile Waters Agreement, Britain has constantly attempted to secure the indirect control over the Blue Nile excluding at the same time the Ethiopian emperors from any negotiation (Yohannes 1999). This resulted in progressive escalation of tensions between Ethiopia and its neighbours, whose aggressive politics of resource capture was denying Ethiopia the right of full utilisation of its internal water resources. The newly independent Egypt inherited from the British Empire the vision of an effective, even if indirect, control over the river, and in 1959 signed an agreement with Sudan for the allocation of the entire volume of the Nile flows (Tvedt 2010): since the other riparian states were excluded from the negotiations, the potential for a cooperation process toward the integrated management of the Nile water resources was at that time an unlikely outcome of regional interstate relationships.

The hydropolitics of the Nile of the last decades of the 20th Century has seen the consolidation of the predominant role of Egypt in the basin, and the incapacity of the other riparian states to counteract the expansion of the downstream state in the region. An advanced military sector, high levels of sustained growth, a geopolitical strategic role recognised by both superpowers during the Cold War, political stability and extensive programmes of poverty reduction in parallel with privileged access to foreign aid and investments, are among the factors that contributed to the development of the Egyptian economy and the consolidation of its regional power (Ibrahim 2011). By contrast, all the other riparian states experienced in the same period high levels of underdevelopment, social and political instability, civil wars and market crises, which hindered the very survival of the state and impeded a strategic planning for socio-political improvements and increases in economic

performances. These elements in turn provided Egypt with powerful means to take advantage of the contextual dynamics of the region in order to translate its regional predominance into hydro-hegemonic power over the Nile countries: its superiority in material power (i.e. in the military and economic capacity), bargaining leadership (i.e. the ability to secure control over the Nile through a bi-lateral treaty), and ideational knowledge (i.e. the ability to attract international support to its claim over “acquired historical rights” of utilisation of the Nile waters), has allowed Egypt to enter into the 21st Century as the Hydro-Hegemon of the Nile basin (Casção 2008).

3.2 A Dynamic Context of Changing Power Relationships

The ever-evolving nature of socio-political processes, both at global, regional and domestic level, does affect power relationships, ideological perspectives and interstate negotiations. The same is true with regard to hydropolitical dynamics. Across the river Nile, challenges to the status quo established by the historical hydro-hegemonic role of the Egyptian have emerged from the progressive changes in the broader regional context, the practices of interstate negotiations and domestic evolutions within each riparian state. Whereas the past Century has witnessed the consolidation of the role of Egypt in the control of the Nile waters, the beginning of the 21st Century has seen a more proactive role of the upstream riparian countries in counteracting the established hegemony of the Egyptians.

In the last two decades, significant improvements in the three dimensions of power by the other riparian countries and the concomitant loss of power by Egypt, have contributed to counterbalance past power asymmetries in favour of the upstream states. In particular, the role of Ethiopia in advancing counter-hegemonic strategies has gradually changed the hydropolitical setting in the basin (Swain, 2011). Not only Ethiopia has experienced a period of relative political and social stability since 1994, a sustained economic growth and an increase in its regional leadership, but also it has explicitly manifested its discontent for the presumed asymmetries in the control and utilisation of the Nile waters (Arsano and Tamrat 2005). Its leading role in the negotiation process within the NBI, its diplomatic efforts in tightening the alliances with the other riparian states, its enhanced role in the dynamics of regional integration through trade, its ability in justifying its narratives over the Nile management, and its increased capacity in hydraulic developments, are all factors that have determined a shift in the power relationship within the Nile basin.

The potential for supplanting the old regime of Egyptian hydro-hegemonic control with a new era of cooperation and integrated management of the Nile water resources is high, and the institutionalisation of spaces of negotiations (such as the NBI, the Tripartite Committee between Sudan, Egypt, Ethiopia, the 1997 UN Watercourse Convention) represents a promising step-forward in the long history of stiff confrontation that has characterised the hydropolitics of the Nile. However, unilateralism still represents an option for the riparian states (ie. the construction of the GERD, the 5-years boycott of the NBI by Egypt), and processes of confidence-building need to be encouraged in order to overcome the still existing hostile behaviour among the parties. Whether future developments will lead Ethiopia to supplant Egypt as Hydro-hegemon of the basin, or if a new regime of effective cooperation will be established, or if “water wars” will result from these changing trends in power relations, remains an unanswered question.

4 Shaping Contexts in the Yarmouk Basin

The most important surface water resource in Jordan and biggest tributary of the Jordan River is the Yarmouk River, which is shared among Jordan, Syria, and Israel. It has four tributaries in Syria and one in Jordan (Haddadin 2010: 12). Before bending in the Lower Jordan River, the Yarmouk flows along the northwest Jordanian border with Syria, between Jordan and the Occupied Golan Heights, and then between Jordan and Israel. Nevertheless, there is no basin wide agreement, only bilateral agreements between Jordan and Syria (1987) and between Jordan and Israel (1994).

This section examines five key moments in the relations between Jordan and Syria on the Yarmouk River. This paper argues that it is necessary to consider the broader context to understand the reasons that led Jordan and Syria to sign the 1953 and 1987 bilateral agreements, and why they are not fully implemented. If this paper considered only the bilateral dynamics on water, it would fail to understand why change happened or did not happen. Instead, considering the broader context, would allow the authors to capture the interests and reasons why change occurred or failed to occur.

4.1 Cooperative and Conflictual Relations over the Yarmouk: Five Key Moments

The first case considered is about the plans for the development of the water resources of the Yarmouk basin in the late 1940s. After 1948, year of the creation of Israel, the Jordanian government had to ensure jobs and food security to its growing population, due to the influx of Palestinian refugees. The Jordanian government had to maintain social stability, and water was essential for this as it was strategic to ensure food security and employment in the agricultural sector (Haddadin 2010: 31). This new socio-economic-political context pushed the Jordanian government towards policies to increase the water resources in the country, by investing on supply side solutions and towards the development of water resources. This resulted in identifying Maqarin as a location for storing water from the Yarmouk, instead of Lake Tiberias, as the latter became part of Israel in 1948.⁴ However, this plan was conflicting with the Israeli interests, as the Israeli government would have preferred the storage to be in Lake Tiberias. In addition, the Israeli government had competing plans for the development of the basin, which did not include transboundary cooperation but rather unilateral actions for the development of water resources from this basin. This resulted in the US withdrawing their economic support to the Jordanian project (Haddadin 2010: 31). Therefore, it emerges that it is necessary to consider the broader context to understand why change happens or does not happen. As examined, in this case the context includes: the Palestinian refugees in Jordan and the necessity to maintain stability; the geopolitical background of the Cold War; and the Israeli and Arab competing plans for the development of the basin. The FHH provides the tools to understand why it did not happen. In fact, it highlights that Jordan at that time was not a hydro-hegemon country, and therefore could not proceed with the project: this is mainly due to power asymmetries. Israel, having hard, bargaining, and ideational power, was and continues to remain a hydro-hegemon country compared to Jordan (Zeitoun 2008: 145-147).

The second case considered is the decision to reach an agreement over the Yarmouk between the Jordanian and Syrian governments in 1953. The Jordanian urgency to develop water resources drove the country to conclude and sign a bilateral agreement with the Syrian government in 1953 in order to increase the water resources for agricultural purposes in Jordan. Therefore, in this agreement the Jordanian interest of increasing the water resources in the country is central. In fact, the agreement focused on the construction of a dam near Maqarin with a

4 The storage capacity of the Maqarin dam suggested by the Johnston Plan is 175 MCM, while the 1953 Syrian-Jordanian agreement envisioned a dam at Maqarin with a storage capacity estimated at 300 MCM.

capacity of 300 MCM (today's Wahda or Unity dam), whose main role was to provide water for irrigation in the Jordanian northern governorates and for the Jordan Valley. The agreement also envisioned a power generating station at Adasiya for generation of hydropower, where the electricity produced at Adasiya was to be allocated on a 75%-25% basis between Syria and Jordan (UN-ESCWA 2013: 210-211; Haddadin 2009: 421; Hof 1998: 84). The political context played a relevant role also in framing the details of the treaty. In fact, the priority for the Jordanian government was water in order to maintain stability, providing food security and employment for its growing population. The urgency of providing more water drove the Jordanian government towards policies and actions to increase the water resources in the country, in primis by reaching this agreement with the Syrian government. Instead, for the Syrian government, the priority was energy, which at that time was more important than water. The FHH provides the tools to better understand the meaning of this agreement. Jordan at that time was a non-hydro-hegemon riparian country, and therefore it tried to increase its share of control on the Yarmouk basin through direct negotiations with the Syrian government, which instead had material, ideational, and bargaining power.

The third case considered is the Johnston Plan in the early 1950s. In the early 1950s, the US Ambassador Eric Johnston developed the Jordan Valley Unified Water Plan scheme for the allocation of the Jordan Basin – including the Yarmouk Basin – known as Johnston Plan. The plan was negotiated and defined by the US Ambassador between 1953 and 1955. The plan provided quotas on water allocation among the riparian countries, amounts for out of basin water transfers, use of the Lake Tiberias as a storage area, and international monitoring and supervision (Jägerskog, 2003). While the Johnston Plan was accepted on a technical level by the League of Arab States and by all technical water committees of all riparian countries, the plan was rejected on a political level by the Arab League. In fact, accepting the plan would have resulted in the Arab League implicitly recognising the state of Israel (Jägerskog 2003; Haddadin 2009: 422; UN-ESCWA 2013: 211). Nevertheless, water negotiators are still using the Johnston Plan as a 'good' technical plan (Jägerskog 2003). From this third case, it emerges again the necessity of considering the broader context: only a problem-shed approach can explain the failure of the Johnston plan, as a watershed perspective would not have captured it. A problem-shed approach would capture the political broader context, useful in explaining the reasons behind the political failure of the Johnston Plan.

The fourth case considered is the relations over the Yarmouk River between the Jordanian and Syrian governments between the 1950s and 1980s. In the three decades after the 1953 agreement, Syria built almost 30 dams on the river's tributaries, without Jordanian approval or consent. After the Israeli occupation of the West Bank in 1967, as suggested by the Jordanian former minister of Water and

Irrigation Munther Haddadin, the dams were aimed at decreasing the flow of the Yarmouk River into Israeli control (Haddadin 2011: 185). However, the geopolitical situation contributed to further deteriorating the Jordanian-Syrian relations. In fact, in the 1980s during the first Gulf War, while the Syrian government supported Iran, the Jordanian government supported Iraq. In addition, "water was not on top of the Jordanian priority list, water was a topic that was given to the engineers. The Jordanian foreign policies' priorities towards Syria were: trade, the peace process, and political" (interview 1, Jordanian ambassador)⁵. A former Jordanian minister of water and irrigation confirmed that for Jordan it was very problematic and difficult to stop the Syrian violations. This was due to the political alliances and objectives of the two governments, which were strongly different: Syria was upstream and Jordan downstream; Jordan had a population of 5 million people while Syria had 25 million people; the transit trade through Syria for the benefit of Jordan was strategic for the Jordanian government. Jordanian foreign politics was not driven by water, but rather by the consideration of several sectors, and therefore did not and could not do much about the violations of the 1953 agreement (interview 2)⁶.

The fifth case considered is the 1987 agreement and its implementation. In 1987, the two countries decided to renegotiate the 1953 agreement. The good relations between the Jordanian and Syrian governments between 1985 and 1991 contributed to this decision. The new agreement envisioned: a smaller dam, known as Wahda or Unity Dam, and a reservoir at Maqarin; an inter-governmental dispute resolution approach, not subjected to third-parties arbitration as in 1953, which worked at Syrian advantage as Syria is the upstream country; and accepted the 26 Syrian dams on the river and its tributaries and Jordan right to store Yarmouk resources only after the filling of all Syrian dams (UN-ESCWA 2013: 211; Hof 1998: 87). Overall, it results that the 1987 agreement is favourable to Syria: firstly because it accepted and formalised the 26 dams built by Syria without Jordanian consent; secondly, because the new mechanism for dispute resolutions is advantaging Syria; and thirdly, because the main priority of Jordan, which was a big dam at Maqarin, is smaller than what the Jordanian government has been pushing for since 1953. The details of the agreement at Jordanian disadvantage can be explained by two factors. First, because of the waves of refugees into Jordan, the Jordanian water scarcity discourse and perceived urgency played an important role in driving towards policies and actions to increase the water resources in the country, in order to maintain and ensure food and water security, meaning socio-economic stability and employment. This discourse and perceived urgency pushed

5 Interview 1 done in Amman, Jordan, on the 22th of October 2014, by Hussam Hussein

6 Interview 2 done in Amman, Jordan, on the 1st of December 2014, by Hussam Hussein

the Jordanian government to try to increase at any cost the water resources in the country, even by signing and renegotiating agreements at their disadvantage. Second, Syria was still the hydro-hegemon in the basin when compared to Jordan. Syria is geographically the upstream country; Syria had hard power in terms of military, economic, and size of the population when compared to Jordan. Syria had bargaining power, as well as ideational power in terms of narratives and media outreach in the Arab world compared to Jordan. Therefore, Jordan, which is the non-hydro-hegemon country in the basin, resulted to renegotiate the 1953 agreement aiming at making the most of it in terms of increasing the availability of water resources in Jordan, accepting a reduced size of the Maqarin dam when signing the 1987 agreement.

However, after the 1987 agreement Syria increased the exploitation of the Yarmouk and built new dams, further decreasing the flow of the river (Kubursi et al. 2011: 8). The Wahda Dam became operational only in 2006,⁷ and it never reached its full capacity of 110 MCM. In fact, its maximum storage was reached in 2009/2010 at 20 MCM (UN-ESCWA 2013: 211). The Joint Water Committee established with the 1987 agreement discussed the issue of the decreased level of the flow, but as summarised by Moussa Jamani, former Jordanian minister of water and irrigation, "the solution to Yarmouk Basin water sharing is not technical, it is political" (Namrouqa 2012). The Syrian approach to the 1987 bilateral agreement remained very similar to the approach towards the 1953. This is also due to the fact that the power relations between the two countries did not change considerably, and therefore Syria remained the hydro-hegemon and Jordan the non-hydro-hegemon. Therefore, power asymmetries between the two countries are the key explanation for the bilateral relations over water between the two countries.

4.2 Current Dynamic Context of Changing Power Relationships

Since the political instability in Syria, "the violations over the Yarmouk River and Wihdeh Dam, which currently holds 20MCM of water, didn't increase due to the unstable conditions in Syria, but violations to Jordan's water share remain," Jamani said (Namrouqa 2012). Even if currently an increase in the flow to the Wahda dam was registered, Jordanian officials noted that this was due to a decrease in farming activities in Syria due to the unstable conditions and power cuts, which negatively impacted the pumping stations in the Syrian dams, and not to a Syrian political will to respect the 1987 agreement. The current political situation in Syria is and will most probably shape the power relations between the two countries in the next years. For this reason, the analysis of the bilateral relations

7 It became fully completed in 2009 (ESCWA, 2013: 211)

over the Yarmouk will need to be further explored in the next years, and reassessed in light of the recent political events.

This section, considering five different key moments in the relations between the Jordanian and Syrian governments on the Yarmouk River, has emphasised the necessity of considering the broader context to analyse transboundary water relations. Considering the broader context is necessary for understanding why the agreements were reached and also, to some extent, why they were not respected. The FHH resulted to be a useful framework to inform the analysis and to understand why Jordan, which is the non-hydro-hegemon country both in relation to Syria during 1953 and 1987, and to Israel during the Johnston Plan, had to change its plans and accept the Syrian violations of the 1953, formalise them in the 1987 agreement, and in practice also accept the continuous violations of the 1987 treaty.

5 Analysis of Outcomes

In the hydropolitical history of the Nile and Yarmouk basins, Egypt and Syria have emerged as regional hydro-hegemons, respectively. While Syria has successfully exploited its geographical advantage over Jordan, Egypt “has achieved a substantial degree of hydraulic, legal and political control over the Nile waters” (Cascão 2008) balancing its geographical disadvantage with the supremacy attained in the three dimensions of power. Through a combination of hydro-hegemonic mechanisms (coercive, utilitarian, normative and hegemonic), Egypt and Syria promoted their strategies of water resource capture, relative containment of intra-basin contestation and integration of regional processes into its national-driven hydropolitical rule.

In terms of material power, Egypt has resorted to coercive (i.e. the 1958 military expedition against newly independent Sudan in the Halayeb Triangle; the threat of use of force against the building of the GERD) and utilitarian mechanisms (i.e. economic privileges to Sudan) due to its regional economic supremacy. In a similar vein, Syria developed its hydraulic mission, building 26 dams without the explicit consent of downstream Jordan. Moreover, both hydro-hegemons have promoted bargaining strategies with the aim of setting the priorities of the regional agendas: while Syria has exerted its power mainly through normative mechanisms (the 1953 and 1987 agreements with Jordan), Egypt has also advanced hegemonic

tactics (the 2010-2015 boycott of NBI initiatives),⁸ besides normative ones (i.e. the 1959 Nile waters agreement with Sudan). Finally, Egypt has also exploited its relative advantage in the dimension of ideational power, through hegemonic mechanisms of sanctioning discourses (i.e. the legitimacy of “prior” acquired rights over the utilisation of the Nile waters) and silencing alternative principles (i.e. the upstream claims against the 1959 agreement in favour of new allocation quotas of the Nile flows).

Nevertheless, the hydro-hegemonic status quo consolidated by the hegemon's rule has been contested by the other riparian states, especially in the last two decades. In the Nile basin, Ethiopia has led the upstream block towards counter-hegemonic strategies, which have gradually eroded Egypt's regional supremacy and facilitated the reconfiguration of intra-basin power asymmetries. The relative power of Ethiopia has increased in all the three dimensions of power. In the last 15-20 years, macroeconomic reforms and socio-political stability have promoted a long-lasting sustained economic growth, which in turn has facilitated the development of ambitious plans of water infrastructures development (material power). In terms of influence over the regional agenda, Ethiopia has led the process within the CFA negotiations and promoted the establishment of a Tripartite Committee with Sudan and Egypt on the GERD (bargaining power). Finally, in terms of ideational power, Ethiopia has strongly contested the principle of prior acquired rights over the Nile and the legitimacy of the 1959 Nile agreements through the formulation of alternative discourses (the “equitable and reasonable use” principle) and knowledge (the benefit-sharing perspective of the integrated management of the basin).

In the Yarmouk basin, Jordan has reputedly contested the Syrian hydro-hegemonic status quo consolidated by the rule and violations of the bilateral treaties. However, the Jordanian government has never been in a position to take any action against the Syrian violations and hydro-hegemonic position due to power asymmetries. Instead, the contestation from the Jordanian side was always discursive: governmental declarations and official protests. However, the Jordanian declarations against the Syrian approach of not respecting the bilateral treaty of the Yarmouk has never resulted in any change in the power asymmetries or in any increase of the water flow of the river to the Jordanian side. Nevertheless, only the current political situation in Syria is resulting in a change of power asymmetries in the basin, and could allow Jordan to change the situation on the ground.

8 See Egypt attends the Nile Basin meeting after 5-year absence (2015)

6 Conclusions

This paper argues that water resources management in the MENA region have been seen as a sphere of engineers, and treated as a technical issue rather than considering the political aspects behind and within it. In order to account for the complex interactions that water embeds, in this paper we advocate for the necessity of adopting an interdisciplinary approach. This is particularly needed given the transboundary nature of most of the water resources in the MENA region. This work builds on the critical hydro-politics literature, which argues about the likelihood of the co-existence of conflict and cooperation over shared water resources, and the relevance of including analyses of (often asymmetrical) power dynamics beyond the water sector itself. To do so, it has first presented the framework of hydro-hegemony as a way to include analyses of power dynamics. Then, it analysed the Ethiopian-Egyptian relations on the Blue Nile and the Jordanian-Syrian relations on the Yarmouk, with a particular focus on the broader context. In this way, we aimed at interpreting why change occurs by considerations of the broader socio-political context rather than a narrower watershed approach.

This paper aims at opening the box of purely technical water engineering by broadening the perspective, looking beyond the water sector. It therefore adopts an analytical attitude toward the search for complexities, nuances, grey areas, observing interactions in the “water governance”. The examples from the case studies illustrated in this work provide the readers with empirical grounds for testing some of the hypotheses advanced in Zeitoun and Warner’s Framework of Hydro-Hegemony. Given the current evolving regional political context, this work only aims to provide analytical insights to be further developed for future empirical researches.

Bibliography

- Al-Taani, A.A. (2013): Seasonal variations in water quality of Al-Wehda Dam north of Jordan and water suitability for irrigation in summer. *Arabian Journal of Geosciences* 6(4): 1131-1140
- Allan, J.A. (2002): *The Middle East water question: Hydropolitics and the global economy*. London: I.B. Tauris

- Arsano, Y.; Tamrat, I. (2005): Ethiopia and the Eastern Nile Basin. *Aquatic Sciences* 67(1): 15-27
- Brown, L. R. (2011, June 1): When the Nile runs dry. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Cascão, A. (2008): Ethiopia – Challenges to Egyptian hegemony in the Nile Basin. *Water Policy* 10(S2): 13-28
- (2009): Changing power relations in the Nile river basin: Unilateralism vs. cooperation? *Water Alternatives* 2(2): 245-268
- Egypt attends the Nile Basin meeting after 5-year absence (2015, February 22). *Sudan Tribune*. Retrieved from <http://www.sudantribune.com>
- Evans, J. (2011, December 7): The big challenge for a new Egypt: water. *The Guardian*. Retrieved from <http://www.theguardian.com>
- FAO (Food and Agriculture Organization of the United Nations)(2015): Aquastat Main Country Database. <http://www.fao.org/nr/water/aquastat/main/index.stm> (retrieved September 24, 2015)
- Fergusson, J. (2015, April 24): The world will soon be at war over water. *Newsweek*. Retrieved from <http://www.newsweek.com>
- Gleick, P. (1993): Water and Conflict: Fresh Water Resources and International Security. *International Security* 18 (1): 79 – 112
- Haddadin, M.J. (2009): Cooperation and lack thereof on management of the Yarmouk River. *Water International* 34(4): 420-431
- (2010): *Water Resources in Jordan: Evolving Policies for Development, the Environment, and Conflict Resolution*. London: Routledge
- (2011): Water: triggering cooperation between former enemies. *Water International* 36(2): 178-189
- Hof, F.C. (1998): Dividing the Yarmouk's waters: Jordan's treaties with Syria and Israel. *Water Policy* 1(1): 81-94
- Homer-Dixon, T.F. (1994): Environmental scarcities and violent conflict: evidence from cases. *International security* 19(1): 5-40
- Ibrahim, A.M. (2011): The Nile Basin Cooperative Framework Agreement: The Beginning of the End of Egyptian Hydro-Political Hegemony. *Mo. Env'tl. L. & Pol'y Rev* 18(2): 284-308
- Jägerskog, A. (2003): *Why states cooperate over shared water: The water negotiations in the Jordan River Basin*. Linköping: Department of Water and Environmental Studies
- Kubursi et al. (2011): *Water scarcity in Jordan: Economic instruments, issues and options*. Economic Research Forum Working Paper Series 599
- Lukes, S. (1974): *Power: A radical view*. London: Macmillan
- Lustick, I.S. (2002): Hegemony and the riddle of nationalism: the dialectics of nationalism and religion in the Middle East. *Logos* 1(3): 18-44

- Namrouqa, H. (2012, April 28): Yarmouk water sharing violations require political solution. *Jordan Times*. Retrieved from <http://www.jordantimes.com>
- Rousseau, R. (2015, April 12): The growing potential for water wars. *International Policy Digest*. Retrieved from <http://www.internationalpolicydigest.org>
- Scott, J. (2001): *Power*. Cambridge: Blackwell
- Specter, M. (2015, February 24): A thirsty, violent world. *The New Yorker*. Retrieved from <http://www.newyorker.com>
- Swain, A. (2011): Challenges for water sharing in the Nile basin: changing geo-politics and changing climate. *Hydrological Sciences Journal* 56(4): 687-702
- Tvedt, T. (ed.) (2010): *The River Nile in the post-colonial age: Conflict and cooperation in the Nile Basin countries*. London: I. B. Tauris
- UN-ESCWA (2013): *Inventory of Shared Water Resources in Western Asia*. Beirut: BGR
- Waterbury, J. (2010): Between Unilateralism and Comprehensive Accords : Modest Steps toward Cooperation in International River Basins. *International Journal of Water Resources Development* 13: 279–290
- Wolf, A.T.; Yoffe, S.B.; Giordano, M. (2003): International waters: Identifying basins at risk. *Water policy* 5: 29-60
- Yohannes, A. (1999): *The Hydropolitics of the Nile*. Retrieved from <http://www.ethiopians.com/abay/nilepolitics.html>
- Zeitoun, M. (2008): *Power and water in the Middle East: the hidden politics of the Palestinian-Israeli water conflict*. London: I.B. Tauris
- Zeitoun, M.; Mirumachi, N. (2008): Transboundary water interaction I: Reconsidering conflict and cooperation. *International Environmental Agreements: Politics, Law and Economics* 8: 297-316
- Zeitoun, M.; Warner, J. (2006): Hydro-hegemony: a framework for analysis of trans-boundary water conflicts. *Water policy* 8: 435-460