e-cadernos CES

40 | 2023
Poder na paz e na guerra: violências velhas, desafios novos, ou violências novas, desafios velhos?

Water Weaponisation: The Syrian Case

A água enquanto arma: o caso sírio

Margarida Gama

Electronic version
URL: https://journals.openedition.org/eces/8470
DOI: 10.4000/120rj
ISSN: 1647-0737

Publisher
Centro de Estudos Sociais da Universidade de Coimbra

Electronic reference
Margarida Gama, "Water Weaponisation: The Syrian Case", *e-cadernos CES* [Online], 40 | 2023, Online since 15 July 2024, connection on 20 July 2024. URL: http://journals.openedition.org/eces/8470 ; DOI: https://doi.org/10.4000/120rj

MARGARIDA GAMA

WATER WEAPONISATION: THE SYRIAN CASE

Abstract: The start of the twenty-first century has seen the scarcity of water resources being increasingly framed as a weaponised instrument of war and a military objective by multiple actors. This article questions how the weaponisation of water by state actors and non-state actors in a violent conflict can further their hydro-hegemony and power. It is argued that actors in a violent conflict weaponise water to materialise their war objectives in strategic gains and to (re)position themselves as the hydro-hegemons of strategic geographical areas allowing them to enhance their power. To support this argument, this research draws on the Syrian conflict, specifically on the fight in the Barada valley and on the framework of hydro-hegemony.

Keywords: Barada valley, hydro-hegemony, power, Syrian violent conflict, water weaponisation.

A ÁGUA ENQUANTO ARMA: O CASO SÍRIO

Resumo: O início do século XXI aumentou a vulnerabilidade dos recursos hídricos a serem usados enquanto arma como instrumento de guerra e como objetivo militar por múltiplos atores. Este artigo questiona a forma como a utilização da água enquanto arma por atores estatais e não estatais num conflito violento pode promover a sua hidro-hegemonia e o seu poder. Argumenta-se que os atores envolvidos num conflito violento utilizam a água enquanto arma para materializar os seus objetivos de guerra em ganhos estratégicos e para se (re)posicionarem como hidro-hegemonias de áreas geográficas estratégicas que lhes permitem aumentar o seu poder. De maneira a sustentar este argumento, esta investigação baseia-se no conflito sírio, especificamente na luta no vale do Barada e no quadro de análise da hidro-hegemonia.

Palavras-chave: água enquanto arma, conflito violento sírio, hidro-hegemonia, poder, vale do Barada.

INTRODUCTION

Water is a natural resource that ignores the geopolitical borders of states (Wolf, 1999) and, consequently, is paramount to the consolidation of international peace and security (UN, 2018). Due to its importance, several social scientists have dedicated their studies to "the politics of water". For example, whereas Turton (2002: 16) views hydropolitics as "the authoritative allocation of values in society with respect to water", Mollinga (2001: 735) defines it as "the level of inter-state politics regarding the allocation, distribution, control and quality of water resources" and argues that global water politics are emerging. International water resources governance is characterised by a multi-level nature, as it is composed of national, regional, and international dynamics and has traditionally been under the power of the riparian states (Lopes, 2012; Warner, 2008; Warner and Zawahri, 2012). However, several non-state actors (NSAs), e.g. non-governmental organisations, epistemic communities, and armed groups, are capable of influencing water politics and relations and its international governance in both contexts of peace and violent conflict (Warner and Zawahri, 2012).

Since the early 1990s, it has been argued that the twenty-first century will be characterised by "water wars" (Warner, 2012). In 1995, the vice president of the World Bank, Ismail Serageldin, claimed that "Many of the wars in this century were about oil, but wars of the next century will be over water".[1] Although there is no historical evidence of interstate wars resulting from water conflicts (Wolf, 1999; Yoffe and Wolf, 1999; Yoffe *et al*., 2003), water has been identified as an element that can trigger and/or exacerbate violent conflicts, albeit intrastate ones (Gleick, 2014; King, 2015). In the same decade, academics began to investigate the emerging and alarming trend of exploiting water as a tool or weapon in international and non-international armed conflicts, particularly in the Middle East (Gleick, 2019a). Water weaponisation not only aggravates wars by contributing to the unfolding of violent confrontations between the actors at play (SFG, 2014), but also deteriorates water politics and relations, and impacts the international governance of water.

Despite this fledgling tendency, there is a vast history of water weaponisation in wars by various parties in conflict (von Lossow, 2016). Indeed, water weaponisation is a strategy reminiscent of the earliest agricultural societies (Daoudy, 2020b: 1347). According to King and Burnell (2017: 69), "the earliest historical records of water weaponization are among the ancient Kingdoms of Mesopotamia", with the first

[1] See Barbara Crossette (1995), "Severe Water Crisis Ahead for Poorest Nations in Next 2 Decades", *The New York Times*, August 10. Accessed on 18.10.2022, at https://www.nytimes.com/1995/08/10/world/severe-water-crisis-ahead-for-poorest-nations-in-next-2-decades.html.

historically known dispute in which water was weaponised taking place in 2500 B.C., when King Urlama of Lagash cut off the water supply to Umma (Pacific Institute, 2022).

Gleick (2019a: 5) advances that water weaponisation occurs when "water resources, or water systems themselves, are used as a tool or weapon in a violent conflict". The contamination of water with the intention to poison the population, the deliberate cut to water supplies, and the purposeful provoking of floods are a few examples of this phenomenon (*ibidem*). Water weaponisation exposes the intricate relationship between armed conflict and water since wars damage and destroy water installations and make it difficult for the population to access potable water (Tignino, 2016). The escalation in attacks on water resources and facilities during violent conflicts not only impacts the security and everyday lives of individuals but also contributes to the degradation of water bodies and of overall environmental life. In the 1970s, international humanitarian law (IHL) created a set of norms based on the regulation of hostilities and on the use, management, and protection of water, with the purpose of limiting the impact of armed conflicts on water supplies (Tignino, 2016). Since then, water resources and infrastructure protection have been tackled through the prism of IHL (*ibidem*), which views water weaponisation as a war crime through international treaties such as the Rome Statute of the International Criminal Court in 1998, the 1977 Additional Protocols to the Geneva Conventions of 1949, and the Cairo Declaration in 1990 (Gleick, 2019b). For example, article 14 of the Geneva Conventions' Additional Protocol II states that "it is […] prohibited to attack, destroy, remove or render useless […] objects indispensable to the survival of the civilian population, such as […] drinking water installations and supplies and irrigation works" (ICRC, 1977: 6). Despite the international legal and institutional restrictions on water weaponisation, they have been ineffective in preventing the increased use of this strategy during wars (Gleick, 2019b).

This article questions how the weaponisation of water by state actors and non-state actors in a violent conflict can further their hydro-hegemony and power. It argues that hydro-hegemonic configurations and power asymmetries at a national river level during intrastate armed conflicts are (re)shaped by water weaponisation. This discussion is illustrated by the case study of the Syrian war, specifically the fight in the Barada river valley (2012-2017). The monopolisation and weaponisation of water resources are strategies recurrently employed by the multiple warring parties in this contemporary and violent conflict, specifically the Syrian government and NSAs, such as the Free Syrian Army (FSA) and the Islamic Front, supported by various international actors including the United States of America (USA), Qatar, and Turkey (Mazlum, 2017: 8). Although there are various instances of water weaponisation throughout the Syrian conflict (Gleick, 2019a; Hydro Review, 2018; Krzymowski, 2019; Mazlum, 2017; Rudaw, 2018; von

Lossow, 2016), the case of the fight in the Barada valley is of significant relevance as it portrays violent confrontations between government forces and NSAs, resorting to water weaponisation as a means to further their war objectives. It also demonstrates the power relations at the level of a national river among the hegemon and the non-hegemons and how their asymmetries shape their strategies and military actions. It is argued that different actors in a violent conflict weaponise water to materialise their military, political, and economic goals in strategic gains, and to (re)position themselves as the hydro-hegemons of strategic geographical areas – like a river basin that allows them to enhance their geographical, material, bargaining, and ideational powers.

This analysis draws on the framework of hydro-hegemony (FHH) by analysing water weaponisation from its perspective, which has never been applied in intrastate contexts. However, the territorial fragmentation of Syria helps to better explain the importance of the incidents recorded, where the water was weaponised by belligerent parties, thus allowing us to overcome the state-centric nature of this framework.

The next section is dedicated to the conceptual framework, followed by an analysis of the case study. The first part reviews the literature on the Syrian civil war, and the second part presents an empirical analysis regarding the fight in the Barada valley. The last section provides a conclusion interconnecting the conceptual framework and the empirical analysis, showing, on the one hand, how violent conflicts stimulate water weaponisation and how actors use this strategy in wars to enhance their hydro-hegemony and power. The case study renders visible the relevance of the FHH to the analysis of intrastate water dynamics since, just like international water bodies, national watercourses are also subjected to hydro-hegemonic and power shifts that enable or constrain an actor's war strategies during violent conflicts. The study results from a qualitative analysis of official documents, reports, newspaper articles, scientific articles, and monographs.

1. HYDRO-HEGEMONY FRAMEWORK

The hydropolitical literature has been dominated by the myth of "water wars" (Zeitoun and Mirumachi, 2008). Even though Wolf's research (Wolf, 1999; Yoffe and Wolf, 1999) has demonstrated that interstate cooperation over shared water resources occurs more frequently than interstate competition, the absence of "water wars" does not automatically lead to "water peace" (Warner, 2012). Consequently, Zeitoun and Warner (2006) introduced the FHH with the purpose of analysing how control over water resources among neighbouring states at the river basin level is obtained through power-related tactics and strategies. By enhancing the importance of power, the FHH

goes beyond traditional analyses of hydropolitical relations in transboundary river basins (Cascão, 2008).

This framework is embedded in the concept of hegemony (Zeitoun and Warner, 2006). For Zeitoun and Warner (*ibidem*: 438), "hegemony can be considered as leadership buttressed by authority. In contrast, dominance is defined as leadership buttressed by coercion". Therefore, hegemony cannot be maintained through repression. Rather, it requires a combination of coercion and consent, and hegemonic power must acknowledge the non-hegemon(s) in order to obtain and maintain this consensus (Warner, 2008). As such, there is an underlying attempt to comprehend how powerful actors preserve and strengthen their leadership positions without resorting to repressive means (Zeitoun and Warner, 2006: 438).

As for hydro-hegemony, it is identified as the "[h]egemony at the river basin level, achieved through water resource control strategies such as resource capture, integration and containment" (*ibidem*: 435). This definition admits the fact that states constitute the sole focus of the framework's notion of hegemony, as they are the ones to experience the positive or negative outcomes of hegemony, and transboundary conflicts are understood at the interstate level (Selby, 2007; Zeitoun and Warner, 2006). Cascão and Zeitoun (2010) note that this description of hydro-hegemony exposes that the hydro-hegemon can use its advantage in a myriad of ways to guarantee that the status quo operates to its benefit and that it is responsible for the control of transboundary flows. Thus, it follows that the degree of control over water resources that each riparian achieves is influenced by the power relations between basin states (Zeitoun and Warner, 2006: 436). While upstream countries consolidate their power through water, downstream riparians exploit their power to secure water resources (Warner *apud* Lopes, 2012: 256). Hydro-hegemony encompasses three key pillars: the riparian position (upstream or downstream), power (economic, political, and military), and resource exploitation potential (technological capacity) (Zeitoun and Warner, 2006: 451). These factors allow the measurement of the degree of hydro-hegemony obtained by riparians, and specifically, the third pillar is critical for these actors since it is responsible for the preservation of their position, enabling the exploitation of the power asymmetries between them (Lopes, 2012: 256).

In scenarios characterised by highly asymmetrical power relations, the distribution of water resources is affected by the hydro-hegemon's strategy (Selby, 2007). Whereas the hydro-hegemon can assume a leadership role that benefits the allocation of water to all its consumers, in other instances it may pursue a unilateral control of water, resulting in severe negative repercussions for non-hegemonic riparians and their populations (Selby, 2007; Zeitoun and Warner, 2006). Hence, the hydro-hegemon can adopt a

positive form of hydro-hegemonic leadership, e.g. the implementation of practices of management and regulation, or a negative form of dominant hydro-hegemony by fostering structural inequalities and power asymmetries, inducing water scarcity and volatile hydro-relations among the most fragile riparians (Zeitoun and Warner, 2006).

In interstate and intrastate conflicts, water can be incorporated into the strategies of different parties to further their military, political, and economic objectives. For example, in intrastate violent conflicts, such as the Syrian war, NSAs and government forces weaponise water by attacking and capturing water facilities and by cutting off water supplies (King, 2015; von Lossow, 2016). At the national level, water weaponisation during a violent conflict can be understood as a negative form of dominant hydro-hegemony since whoever controls the primary watercourses manipulates the access to and availability of water towards the other actors.

The framework's state-centric and realist worldview (Lopes, 2012) poses theoretical and empirical limitations on the analysis of the relations between power and water (Selby, 2007) as it fails to identify important actors other than states (Warner *et al*., 2017). Accordingly, "'[b]lackboxing' the state 'takes preferences for granted' and negates the way 'domestic elites' are enmeshed in transnational networks to realize their ambitions" (*ibidem*: 4).

1.1. HYDRO-POWER

There is no universal definition of power due to its ubiquitous nature. Nonetheless, power is a multifaceted concept, as it is associated with different interpretations, perspectives, and epistemologies, representing numerous concepts and ideas from the social sciences (Menga, 2016). The interactions between riparian states over shared water resources are shaped by the balance of power (Zeitoun and Warner, 2006: 450). Power asymmetries partially establish "who gets what, when, where and why" (Laswell *apud* Cascão and Zeitoun, 2010: 28). Water crosses static political boundaries, overlapping the regional, subnational and national levels to a global level, making it extremely challenging to align several interests and national conjunctures amidst riparians and, likewise, to satisfy multiple demands in a subnational dimension (Cascão and Zeitoun, 2010: 28-30). Cascão and Zeitoun argue that it is harder to reconcile global and regional transboundary interests than national ones due to the inexistence of efficient transnational political tools (*ibidem*: 30). Nevertheless, harmonising various political aspirations proves to be particularly difficult in cases of territorial and political fragmentation brought on by violent intrastate conflicts, such as the Syrian war. Therefore, it is unfitting to assume that domestic politics are more peaceful and orderly than international politics (Selby, 2007).

Despite its easily recognisable expressions, i.e. violence, intimidation, and coercion, power can be exercised via counter-intuitive means (Zeitoun and Warner, 2006: 442). Cascão and Zeitoun (2010) revised the hydro-hegemony's pillars advanced by Zeitoun and Warner (2006), affirming that geography, material power, bargaining power, and ideational power serve to assess hydro-hegemonic settings (Cascão and Zeitoun, 2010, 30-32). By examining the transboundary water contexts of the MENA region, Cascão and Zeitoun (2010) discovered that "overt" manifestations of power, i.e. material and geographical, were less instrumentalised by riparians than "covert" manifestations of power, i.e. bargaining and ideational powers (*ibidem*). The distinction between overt and covert powers falls under the traditional categorisation of hard and soft power. Hard power refers to the use of force and to the capacity to coerce (Nye, 2004: 256; Zeitoun *et al*., 2011), whereas soft power corresponds to the use of persuasion intrinsically linked to "the ability to get what you want through attraction rather than coercion or payments" (Nye, 2004: 256). As advanced by Menga (2016: 405), bargaining and ideational powers (covert power) are considered examples of soft power according to Nye's definition since both use persuasion as their main vehicle to acquire power. On the other hand, geography and material power (overt power) belong to the sphere of hard power, as they are viewed as expressions of power that are visible and concrete and that promote a certain actor to have power over another, influencing the latter to do something that it would not otherwise do (Dahl, 1957: 202-203). Another important contribution to the conceptualisation of power is Lukes' theoretical framework rooted in three dimensions of power (Lukes, 1974), with each level being deeper, more complex, and more concealed compared to the others (Zeitoun and Warner, 2006: 442). Identical to Dahl's definition of power, the first dimension corresponds to the hard or overt power and refers to the material capability of actor A to force actor B to act against his wish (Lukes, 1974: 12-13). Inspired by Bachrach and Baratz's "second face of power" (1962), Lukes advances the second dimension as covert power, defined as the ability to set political agendas as well as to erect obstacles to prevent the debate of particular issues (Lukes, 1974: 20; Menga, 2016: 403; Zeitoun and Warner, 2006: 442). More hidden than the rest, the third dimension is ideological since it pertains to the capability to shape the preferences and perceptions of others and, consequently, views power through domination (Lukes, 1974: 24). These three dimensions of power are crucial in hydropolitics as they represent, respectively, the material, the bargaining, and the ideational powers (Menga, 2016: 410).

The riparians' geographical position constitutes one of the most prominent types of overt power since it is related to the fortuitous geographical advantage that upstream countries have to dam or divert a river's flow concerning a downstream riparian (Cascão and Zeitoun, 2010: 31). Due to its immutable and consistent nature, a riparian's position

is broadly described by Zeitoun and Allan (2008: 7) as having the quality of hard or structural power. Additionally, material power is composed of a riparian's position, its size, economic force, military might, and technological capacity, as well as the level of international, political and financial support (Cascão and Zeitoun, 2010: 31; Menga, 2016). A riparian's geography can considerably influence its material power and its ability to exploit hydric resources (Menga, 2016: 411).

With regards to covert power, bargaining power derives from an actor's capacity to define a political agenda by dictating the "rules of the game", i.e. the ability to influence the terms of negotiations and agreements, confining the counterpart(s) to a limited set of alternatives (Bachrach and Baratz, 1962; Lukes *apud* Cascão and Zeitoun, 2010: 31-32; Menga, 2016). The capacity of a riparian to impose and legitimise certain narratives and ideas is represented by ideational power. Knowledge structures, sanctioned discourses (see Hajer, 1997), and the imposition of ideologies and storylines can all be used to wield ideational power (Cascão and Zeitoun, 2010: 32; Menga, 2016: 412). Menga (2016: 412) names this dimension as discursive power. When merged with the bargaining and ideational powers, the material power disparities can have an impact on water control (Cascão and Zeitoun, 2010: 31). Therefore, power is relational, as all its dimensions interrelate with one another (Cascão, 2008).

Notwithstanding its capacity to determine the hegemonic settings of an international river basin, the hydro-hegemon does not exclusively define the outcomes of hydropolitical relations (*ibidem*). Weaker riparian states are held accountable for the hydropolitical scenario as they develop counter-hegemonic strategies (Zeitoun and Allan, 2008: 10) to resist, contest, and challenge the legitimacy of the hegemonic status quo (Cascão, 2008: 17). Counter-hegemony refers to the partial or total breaking of consent by the non-hegemonic actors through the deconstruction of previously established common sense and the conception of an alternative counter-hegemonic strategy (*ibidem*: 16-17). Consequently, power relations and hegemonic configurations are not permanent as they suffer transformations, promoting a change in the demarcated status quo (Cascão, 2008: 17; Cascão and Zeitoun, 2010: 30).

2. WATER WEAPONISATION

Water presents a dual character, as it can be a vehicle of peace and cooperation or a source of destruction and violence (Daoudy, 2020b; Gleick, 2006). Water can be a political instrument, a material source of power, a weapon in wartime, and a method of brutality for NSAs and states (Daoudy, 2020b: 1349). The start of the twenty-first century enhanced the vulnerability of water resources and systems to being weaponised as an instrument of war and as a military objective by states and NSAs, prompting social

scientists to investigate this emerging and alarming trend – particularly in the Middle East (SFG, 2014; Daoudy, 2020b). Overall, actors in an armed conflict may seize valuable water supplies, systems, and infrastructures in order to achieve their political and economic goals, obtain territorial control, and undermine the military and/or economic strategies of opposing parties (Mazlum, 2017).

The concept of water weaponisation derives from the concept of environmental terrorism (King, 2023). The latter corresponds to "the unlawful use of force against in situ environmental resources so as to deprive populations of their benefit(s) and/or destroy other property" (Chalecki, 2002: 48). In conformity with this definition, the core aims of this type of terrorism are to target natural resources, injure individuals, and deny them their right to environmental benefit(s). Chalecki (2002) further divides environmental terrorism into two categories: resource-as-tool and resource-as-target, with water included in both. Gleick (2006) emphasises that the targeting of natural resources is driven by political, social, and economic objectives. Water weaponisation is also classified in the context of "hydro-terrorism" to emphasise how violent NSAs destabilise governments by exploiting water as a weapon, target, leverage instrument, nation-building strategy, and impetus for violent retaliation (Cole, 2021: 3; Veilleux and Dinar, 2021). Figure I compares the different definitions of water weaponisation advanced by Gleick (2019a), Daoudy (2020b), and King (2015).

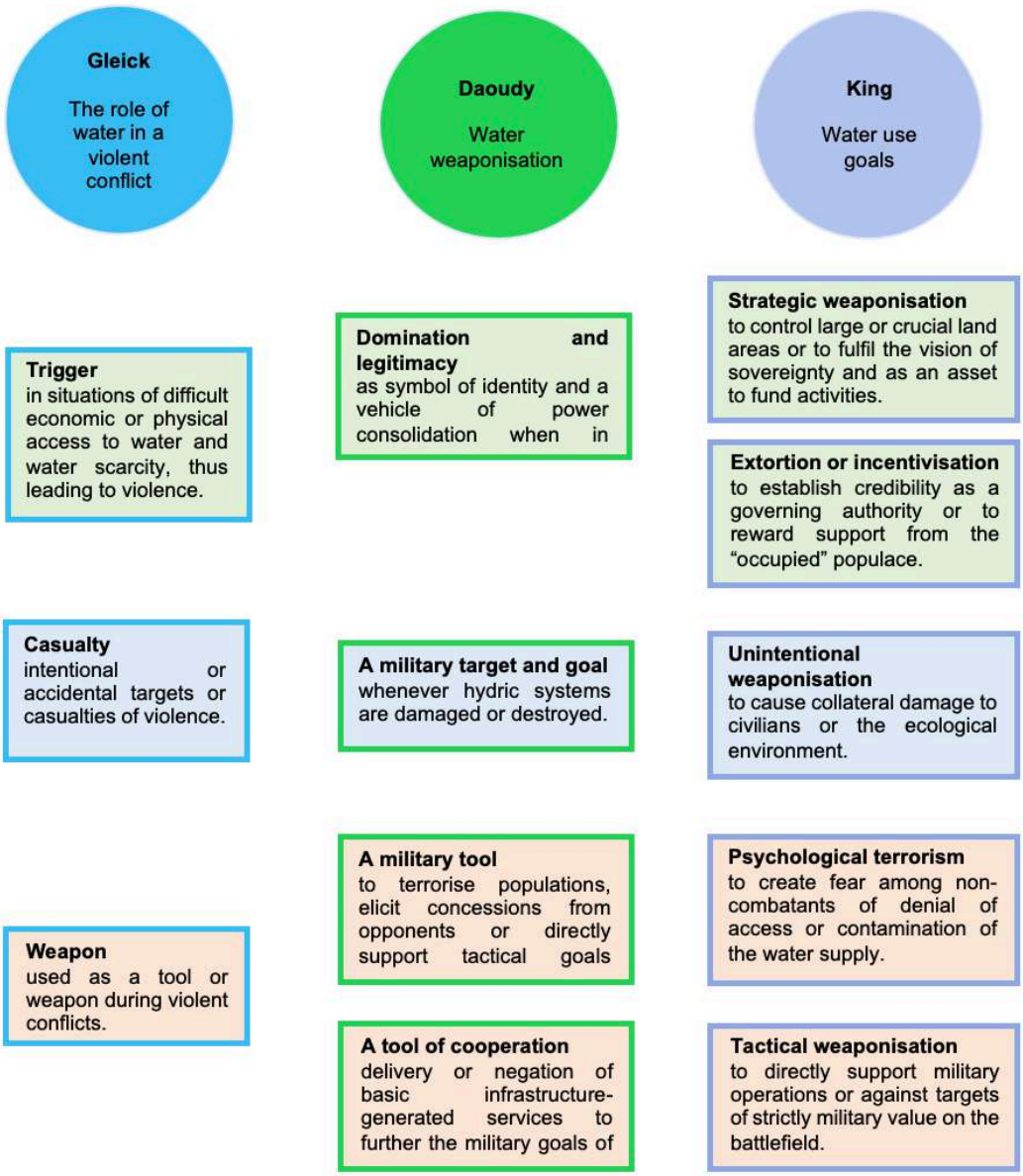

FIGURE I – Typologies of water weaponisation

Source: Elaborated by the author based on Gleick (2019a), Daoudy (2020b), and King (2015).

As shown in Figure I, Gleick (2019a) offers a generalised comprehension of water-related violence by dividing it into three groups: trigger, casualty, and weapon. Water could be a trigger or a root cause of conflict when "economic or physical access to water, or scarcity of water, triggers violence" (*ibidem*: 5). As a casualty, "water resources, or water systems, are intentional or incidental casualties or targets of violence" (*ibidem*), implying that the attacked object (water) may be a target or a victim of collateral damage. Lastly, water weaponisation refers to situations where water resources or systems are used as a tool or weapon during violent conflicts (*ibidem*), e.g. the capture of the Afrin Dam in Syria by Turkish forces in 2018 (Krzymowski, 2019: 323-324). For the purpose of this research, Gleick's definition is considered too limited

since it only encompasses scenarios in which water is the weapon and the goals are exclusively military, excluding other crucial causes for this phenomenon, e.g. psychological and extortion.

In comparison to Gleick's conceptualisation, King's categorisation takes into account "the perpetrator's intended use of the water weapon for political or military advantage" (King, 2015: 156). As presented in Figure I, the scope of the concept is broadened to include the strategic, tactical, and unintentional types of water weaponisation and the use of water as an instrument of psychological terrorism and of extortion or incentivisation (King, 2015).

Strategic weaponisation refers to "the use of water to virtually or actually control large or important land areas or facilities to fulfil the vision of sovereignty, and […] as an asset to fund activities", inter alia, weapons acquisition and administration (*ibidem*: 156). This is evident in the case of the Islamic State (IS), as it systematically applies strategic weaponisation – e.g. in 2015 by seizing the Iraqi Tharthar Dam on the Tigris River (Alwan, 2015; King, 2015). The second category, tactical weaponisation, is "the use of water as a weapon on the battlefield in direct or immediate support of military operations or against targets of strictly military value", and it is generally employed on a small and local scale (King, 2015: 157) – e.g. in August 2015, Syrian rebel groups cut off water from al-Fijah spring (Krzymowski, 2019: 324). The tactical weaponisation category presents a definition of water weaponisation most similar to Gleick's conceptualisation.

As an instrument of psychological terror, the water weapon seeks to instil "fear among non-combatants of denial of access to or contamination of the water supply" (King, 2015: 158), e.g. the deliberate contamination of potable water in the Balad district in Iraq in December 2014 by the IS (UNSC, 2017). As a tool of extortion or incentivisation, the water weapon is manipulated "to establish credibility as a governing authority or to reward support from the 'occupied' populace" – e.g. in June 2014, IS cut off water to Christian minority villages in Mosul, Iraq (King, 2015: 158). Upon the restoration of Mosul's water supply, IS offered water discounts to the Sunni residents who returned to the city following IS initial capture (*ibidem*). As for the unintentional weaponisation, it occurs when the "use of water weapon causes collateral damage to civilians or the ecological environment" (*ibidem*) – e.g. a coalition led by the USA in 2014 initiated multiple air strikes against the IS in Iraq, inadvertently flooding areas surrounding east Fallujah and forcing the displacement of its residents (Krzymowski, 2019: 325). In his wide-ranging analysis of water weaponisation, King (2015) concludes that these categories can overlap as they are not mutually exclusive and demonstrates the myriad uses of the water weapon (Cole, 2021).

Alternatively, Daoudy's (2020b) research provides an innovative interpretation of water weaponisation by combining King's (2015) and Gleick's (2019a) approaches (Figure I) and focusing her analysis on the control over hydric resources and infrastructures, as well as the historical dynamics behind it. Hence, the term is divided into: domination and legitimacy; attack and seizure of important infrastructures (military target and goal); cutting off water, intentional flooding, and defensive fortification (military instrument); and delivery or negation of basic infrastructure-generated services (tool of cooperation) (Daoudy, 2020b: 1351). This division emphasises the fact that water is both an offensive and defensive weapon and that all these strategies resort to violence for strategic gains (Daoudy, 2020b).

Pursuant to this author's research (*ibidem*), water is used as a weapon of domination and legitimacy by both state and NSAs, as they use it as a symbol of identity and a vehicle of power consolidation when in contact with the population. As a military target, water is weaponised whenever hydric systems are damaged or destroyed (Daoudy, 2020b: 1351). Water can also be used as a military tool when "[a] state or substate actor […] use water assets already in their control or after capture to terrorize populations, elicit concessions from opponents or directly support tactical goals in the course of a military action" (*ibidem*). Likewise, water may be weaponised as a tool of cooperation in order to further the military aims of a particular party.

Daoudy's conceptualisation of the water weapon serves as the basis for this research. Not only does it verify the dual nature of water, as it proves that water cooperation coexists with pervasive water-related violence, but it also analyses the power dynamics and shifts between state actors and competing NSAs (King, 2023; Cole, 2021). Furthermore, this definition dialogues with the theoretical assumptions of the FHH, thus being more aligned with the purposes of this research. Nevertheless, the research carried out on water weaponisation still presents an underlining problem with the concept, which is connected to the complexity of evaluating the extent of deliberate intent in the act (SFG, 2014).

3. The Syrian Conflict

Since the middle of the twentieth century, there has been an emerging new paradigm of organised violence – the so-called "new wars", the fruit of the contemporary globalised world (Kaldor, 2012). Whereas traditional wars have been fought primarily between states, the "new wars" reverse this conventional warfare mode by being armed conflicts that occur within states and that involve a panoply of actors, including NSAs, and have the distinctive capacity to impact international politics by endangering international and regional peace and security (Pérez, 2015). The Syrian war arises in this context, as it is

characterised as an intrastate conflict with the participation of state forces and various NSAs, and with transnational consequences that undermine international and regional peace and security. Correspondingly, this violent conflict culminated in a large-scale humanitarian catastrophe, with Syrians becoming the world's biggest refugee community (Baczko *et al*., 2017: 157) and Syria being the target of the largest humanitarian operation conducted by the United Nations (UN) (Vignal, 2017: 825). The Syrian war's damaging impacts concomitantly disturb the country itself, the Middle East, and the international system (Carpenter, 2013).

On March 14, 2011, a group of schoolchildren painted a series of graffiti in the city of Daraa with the purpose of denouncing the antidemocratic and corrupt government of Bashar al-Assad (Pérez, 2015). As a consequence, police arrested and tortured these youths, which ultimately led, on March 18 of the same year, to massive protests in Daraa (Daoudy, 2020a; Erlich, 2014). These events opened the opportunity for numerous social demonstrations and protests in the name of dignity, freedom, social and economic justice, and political reform throughout Syria (Daoudy, 2020a; Pérez, 2015). In order to contain these protests, the regime attacked ruthlessly not only the peaceful protesters but also anyone suspected of taking part in the demonstrations (Erlich, 2014). Hence, what started as peaceful demonstrations rapidly turned into a violent conflict between government forces and opposition groups supported by the military intervention of foreign powers (Daoudy, 2020a). The national uprising quickly transformed into a regional proxy conflict and an international conflict immersed in the revolutionary wave of the Arab Spring. Throughout the civil war, various actors with specific security agendas have been battling each other and striving for influence (Ali, 2015; Uludag, 2015). Overall, the ruling coalition led by Bashar al-Assad, the IS, the Islamic Front, the FSA, and the Kurdish People's Protection Units (YPG) are the key actors to understand the dynamics of the conflict (Figure II).

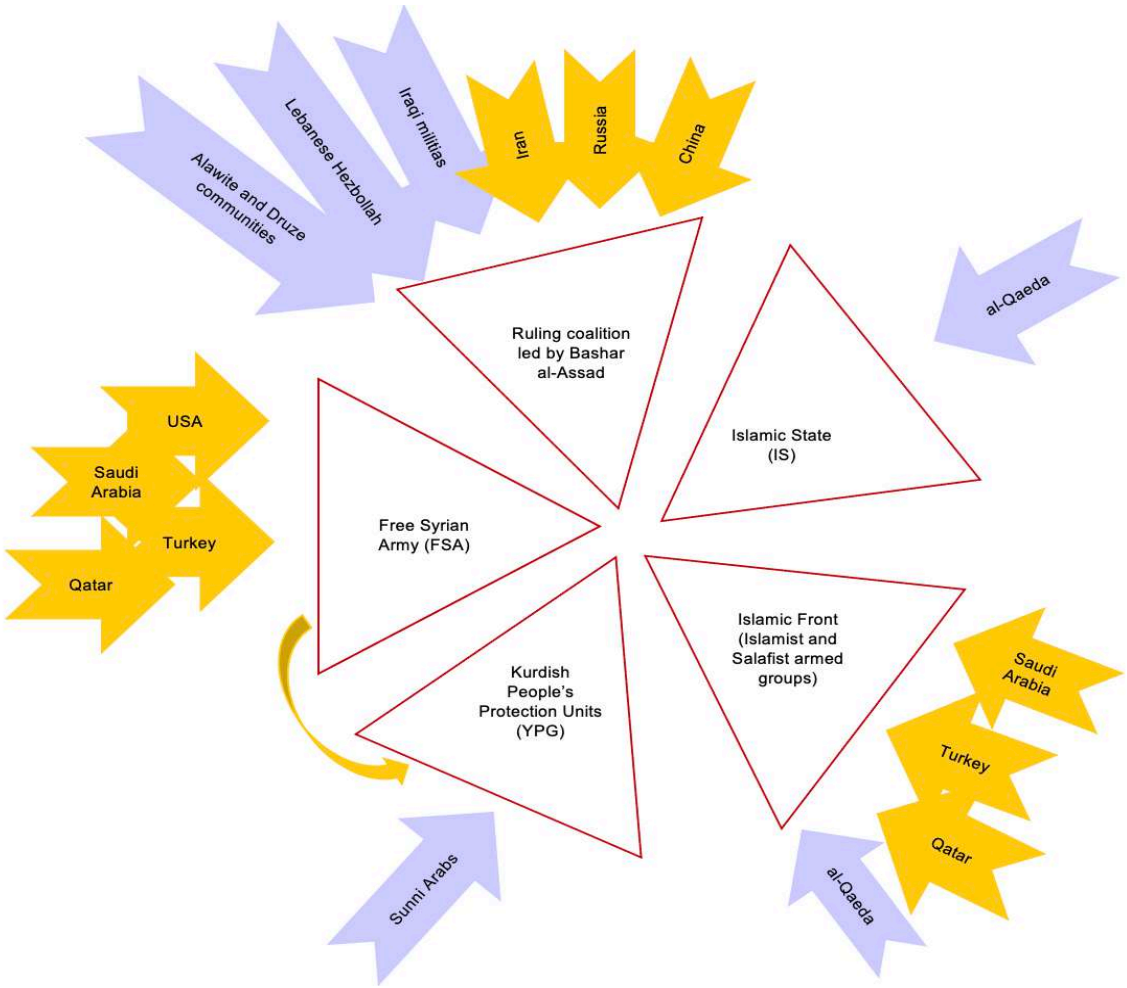

FIGURE II – Actors in the Syrian conflict and their international supporters

Source: Elaborated by the author based on Uludag (2015).

Bashar al-Assad's government is supported by the Alawite and Druze communities, as well as the Lebanese Hezbollah, Iraqi militias, Iran, Russia, and China (Hinnebusch and Zintl, 2015; Uludag, 2015; Vignal, 2017). In contrast, the IS is a jihadist group formed in Iraq in 2007, is immersed in Sharia (Islamic law), and has connections to al-Qaeda (Erlich, 2014). This NSA proclaims the existence of an Islamic caliphate from Aleppo, Syria, to Diyala, Iraq, and considers itself the single authentic revolutionary group in Syria (Erlich, 2014; Pérez, 2015; Uludag, 2015).

Supported by Qatar, Turkey, and Saudi Arabia, the Islamic Front is an association made up of Islamist and Salafist armed groups (Uludag, 2015; Pérez, 2015). The Jabhat al-Nusra (al-Qaeda affiliate) and Islamic groups such as Ahrar al Sham, Jaysh al Islam, Jund al Aqsa, and Ansar al Sham compose this front (Uludag, 2015: 5). Regarding the FSA, this organisation is composed of defectors from al-Assad's army, is backed by the USA, Saudi Arabia, Turkey, and Qatar (Erlich, 2014), and aspires to create an Arab-Islamic democratic state (Pérez, 2015). On the other hand, the YPG is assisted by

some factions from the FSA and Sunni Arabs in northern Syria, and ultimately seeks to build self-rule in the regions under Kurdish control (Uludag, 2015: 5).

There is a continuing battle for domination among the anti-Assad opposition factions, as jihadist groups, for example, the Jabhat Fateh al-Sham and the IS saw Syria's sectarianising and militarising bloody war as an opportunity to reclaim power lost during the Arab Spring's non-violent democratic transitions and to foster their political aim to establish the Islamic caliphates (Alkaff and Yussof, 2016: 8; Hinnebusch and Zintl, 2015: 305). Therefore, the frequent formation of new coalitions supported by foreign powers with geopolitical and strategic interests – and their disintegration as a result of infighting and failures – explain the chaos and disunity among the anti-Assad opposition forces (Alkaff and Yussof, 2016: 9).

The Syrian war is an internal conflict resulting from the domestic causes and conjuncture that steered the onset of the uprising, but it rapidly internationalised with the escalation to the regional and international arenas due to the involvement of state actors and NSAs responsible for operating and manoeuvring the war outside Syria (Pérez, 2015). This war engulfed neighbouring countries as it destabilised Lebanon's politics and jeopardised its security, intensified the Iraqi civil war, and created a refugee crisis that spread to countries like Turkey, Lebanon, Jordan, and Iraq (Baczko *et al*., 2017). The ongoing Syrian conflict continues to have dramatic impacts on international and regional security and peace.

4. The Fight in the Barada River Valley

After March 2011, the Syrian civil war rapidly turned into one of the bloodiest violent conflicts of the twenty-first century, where the different actors at play weaponised water in order to advance their war objectives (Mazlum, 2017). The case of the fight in the Barada river valley (2012-2017), also known as Wadi Barada, depicts this reality of violent confrontations between the government of Syria and NSAs using water as a weapon. As showcased in Figure III, there were four major events in which water was weaponised by both actors during the fight in Wadi Barada.

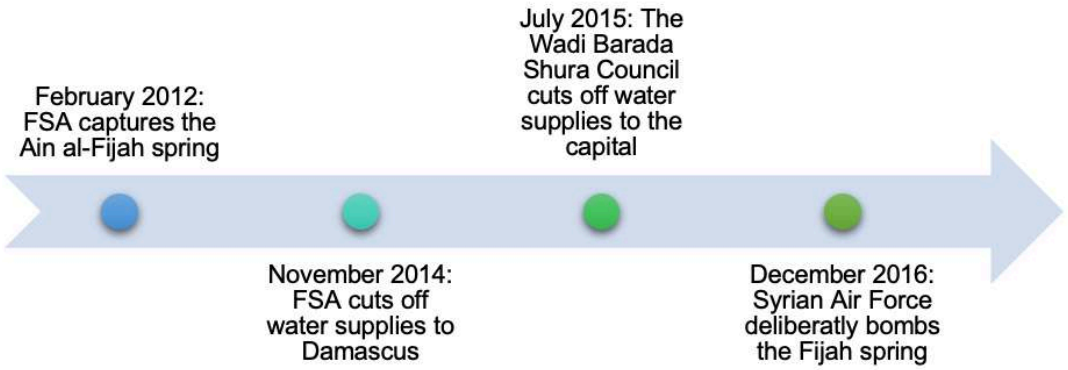

FIGURE III – Water weaponisation during the violent conflict in the Barada valley

Source: Elaborated by the author based on HRC (2017), Reznick (2016), and Syria Direct (2013).

Wadi Barada is a river valley located in the Anti-Lebanon Mountains near the Syrian-Lebanese border northwest of Damascus, composed of 13 villages, and home to the Barada river that reaches the Syrian capital (Syria Direct, 2013; Raba'a and de Châtel, 2014). This valley is famous for its natural spring, al-Fijah (Figure IV), which supplies 70% of Damascus' water (al-Zarier and Schuster, 2017; HRC, 2017; Syria Direct, 2013). The Barada river and the al-Fijah spring are part of the Barada Awaj basin. Accordingly, this basin suffers from water scarcity due to factors such as rapid population growth and the 2006-2010 drought that led to a significant decrease in the amount of renewable aquifers being filled (Arraf, 2019). Water scarcity stimulates the capture and control of rivers, lakes, or any other watercourse (water weaponisation) during violent conflicts, since the water's strategic importance increases and can be wielded as an instrument of control and domination of populations as life only subsists near water and, thus, civilians are forced to move and settle where it exists.

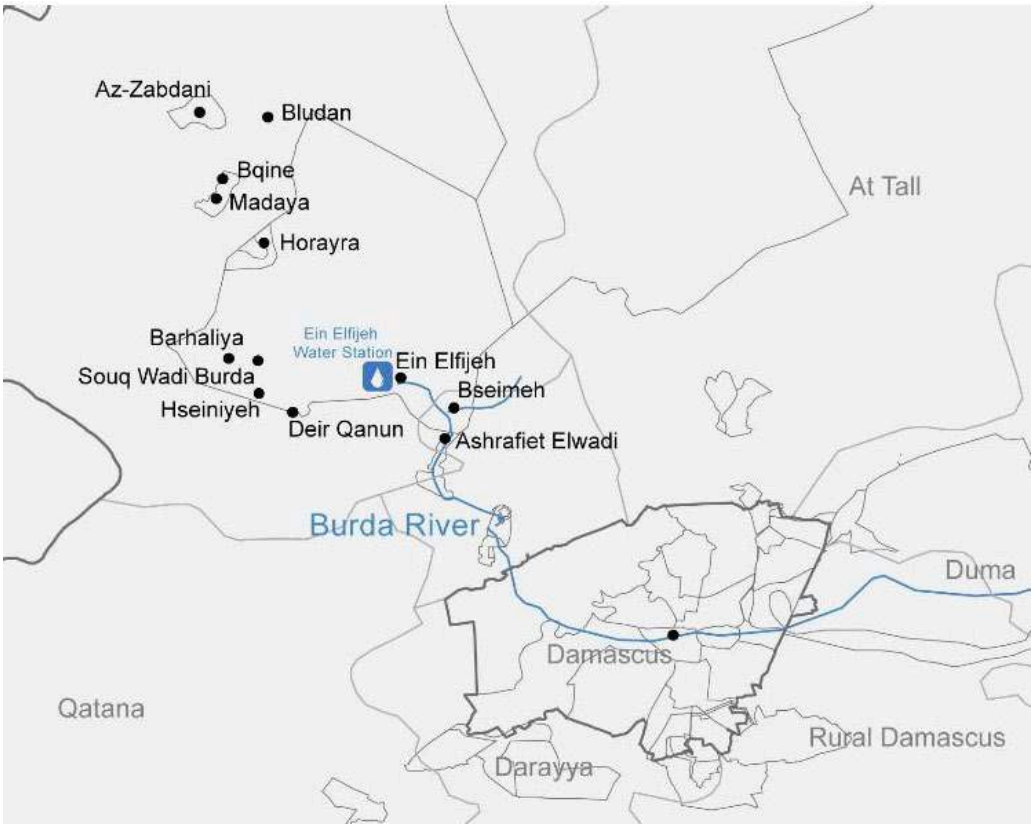

FIGURE IV – Location of the al-Fijah spring

Source: OCHA (2017).

Wadi Barada is strategically and militarily important not only because it provides water to the capital but also due to its location on the road that connects Damascus to the Lebanese border, which is of major importance to the government and to its ally, the Lebanese Hezbollah (Gonano, 2017; Sadaki, 2017). Since the start of the war, Wadi Barada has frequently been the arena of devastating fights between the Syrian army and rebel groups (Raba'a and de Châtel, 2014).

In February 2012, the rebel forces, including the FSA, Jabhat Fateh al-Sham, and Jaysh al Islam, captured and gained control over Wadi Barada until January 2017 (Gonano, 2017; OCHA, 2017; Sadaki, 2017). The FSA forces seized the al-Fijah spring in February 2012 (which was a military target, and their goal was the use of water as a weapon) (Daoudy, 2020b; Syria Direct, 2013). Correspondingly, the rebel control of the valley and its vital water resources, i.e. the Barada river and the al-Fijah spring, meant that these groups were the upstream actors and the hydro-hegemons of this region during that period (Figure IV), as they had the ability to control the water flows to the capital. As a result, their material power was strengthened by their geographical position and military and technological capability, which were boosted by the management of the water station. Their position enhanced their geographical power by enabling them to exploit the hydric resources of this area. With the capture of the al-Fijah spring, the FSA

was able to further its bargaining power since it could decide to contain the water supplies flowing to Damascus and to other areas dependent on them, dictating the "rules of the game" between the government and the opposition as it could influence the terms of agreements and negotiations with Bashar's forces and, thus, constrain the regime's action to a limited set of alternatives.

In November 2014, the FSA cut off the water supplies to Damascus for three days as a strategy to ward off government forces from this region (Reznick, 2016). By using water as a military tool in order to support their tactical goals in the course of this military action, the FSA reduced the capital's water supply by 90% (*ibidem*). This demonstrates how the unilateral control of water and the application of a negative form of dominant hydro-hegemony by the hydro-hegemon tend to create severe negative repercussions for their non-hegemonic counterparts, in this case the government (Zeitoun and Warner, 2006). For the government, this reality translated into a decrease in its overt and covert powers (Figure V) that could only be reversed with counter-hegemonic alternative strategies. The inhabitants of Damascus were subjected to water shortages that lasted for two weeks and water rationing, as well as psychological terror as people lived under the rebel threat to bomb the al-Fijah spring (Reznick, 2016). The act of terrorising the population is simultaneously an objective and a consequence of the use of the water weapon as a military tool. This event of water weaponisation demonstrates a dual situation: if Bashar's regime sought to take control of the Barada area, the capital would see its water supply cut off again; alternatively, if the rebels damaged or destroyed the spring, they would lose their "entitlement" to domination and legitimacy among the controlled population, and consequently, their ideational power would be weakened. The control of areas with vital water resources is a dangerous and mortal strategy since whoever controls them – in this case the Barada river and the al-Fijah spring – holds the power to decide who has access to drinking water, putting at risk the lives of millions of people. Moreover, whoever controls the al-Fijah spring controls the amount of water flowing into the Barada river.

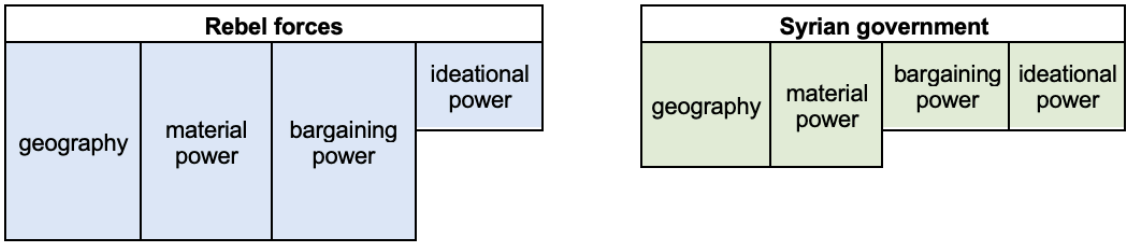

FIGURE V – Hydro-hegemonic configurations in the Wadi Barada valley (February 2012 - December 2016)

Source: Elaborated by the author.

In July 2016, the regime started an offensive to reclaim Wadi Barada (Gonano, 2017). The regime's operation sought to capture and control the spring in order to deprive the opposition of their "water card" (Iqtissad, 2016). As a response to this progress, Jabhat Fateh al-Sham (previously known as al-Nusra Front) executed 12 Syrian Arab Army soldiers (Reuters, 2016a). Since November 2013, the majority of the surrounding area around the mountainous valley was under government control (HRC, 2017). The regime controlled all the accesses to Barada, which meant that its bargaining power was superior and could compensate for the fragilities in the other dimensions of power as it could control the entrance of food, humanitarian aid, and other goods and could use this bargaining chip in its favour (a counter-hegemonic alternative strategy).[2] Consequently, the rebel forces "returned control of Damascus' water supply to the people of Wadi Barada, who have used it to pressure the regime to alleviate the siege over the city and allow food and other goods to enter" (Iqtissad, 2016). This reality demonstrates what the FHH advances: that power relations and hegemonic configurations suffer transformations, promoting the change of the status quo (Cascão, 2008; Cascão and Zeitoun, 2010).

After this failed attempt, the regime reinforced its offensive efforts in December 2016 (Gonano, 2017). Supported by Russian air power, Iran-backed militias, Hezbollah, and Shia militias, on December 22 the regime began a series of violent attacks inside and in the surrounding areas of the valley (Al Jazeera, 2017; HRC, 2017; Reuters, 2016b). As stated by Bashar al-Assad, "The terrorists occupy the main source of water of Damascus [the al-Fijah] […] and the role of the Syrian army is to liberate that area in order to prevent those terrorists from using that water in order to suffocate the capital" (al-Zarier and Schuster, 2017). Therefore, the regime's forces focused their military action on regaining control of the al-Fijah spring. In conformity with a Human Rights Council report (HRC, 2017), the al-Fijah spring was deliberately and continually bombed by the Syrian army on December 23 (water is weaponised as a military target and goal with the objective of damaging this spring). Hence, more than five million people living in both government-controlled and opposition-held areas were denied daily access to potable water for longer than a month (Miles, 2017). As shown in Figure VI, the regime's military advance created an impasse between both parties in conflict since Bashar's government increased its overt and covert power and shifted the hydro-hegemonic configurations in this valley.

[2] Since 2014, the UN has been unable to provide Wadi Barada with humanitarian aid, namely multi-sectoral assistance. The UN has repeatedly requested access to the valley; for instance, on November 9, 2016, an authorised UN interagency convoy had to turn around after being prevented by the regime's forces from accessing Wadi Barada at a checkpoint, and later in January 2017, another access request was again denied (OCHA, 2017).

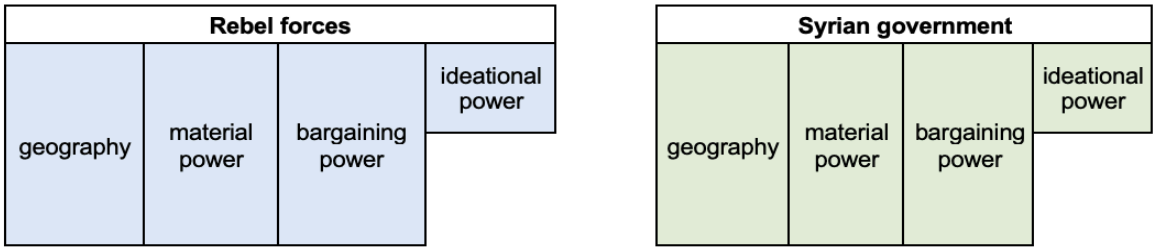

FIGURE VI – Hydro-hegemonic configurations in the Wadi Barada valley (December 2016 – January 2017)

Source: Elaborated by the author.

As a result of this impasse, on January 28, 2017, the government and the NSAs reached an agreement that stipulated the permission for expert teams to access the spring site to repair the water station and the regime's drop-off access restrictions in return for the evacuation of rebel forces (OCHA, 2017). Since late January 2017 until the present moment, the Syrian regime controls Wadi Barada (The Carter Center, n.d.). This shift in power shows how volatile hydro-hegemonic settings at the national level are, especially in the context of a violent conflict where the employment of military strategies advances the actors' objectives. In comparison to the international level, hydro-hegemonic settings at the domestic level during a violent conflict are much more prone to change, as it is not possible to change the geographical position of states. As for the actors in a war, their geographical position and borders constantly change since they capture and lose territories and the water resources of these areas. Whereas the NSAs controlled for half a decade the most important spring in Damascus' region and, consequently, the flow of the Barada River, now the power asymmetries were reversed, as Bashar's forces not only captured this area but also controlled its water resources and the management of the water supply to Damascus. The government re-established its hydro-hegemony and upstream position prior to the rebels' control in 2012, since, regarding the overt dimensions of power, the regime was now in a geographical position that benefited its material and geographical powers. Furthermore, the conquering of a territory is accompanied by the control of its population, which signifies that Bashar's government could impose certain narratives, ideas, and ideologies (ideational power).

The main types of water weaponisation used in the river valley (Figure III) were, according to Daoudy's (2020b) definition, the use of the water weapon as a military target and goal (the attack and seizure of crucial facilities) and as a military tool (the cutting off of water supplies).

CONCLUSION

Water permeates the everyday lives of individuals, states, and the international system. This natural resource is a critical component of human security, of a state's agricultural, political, social, cultural, and economic progress, and of international peace and security. Water can promote peace or violence in both intrastate and interstate contexts (Daoudy, 2020b; Gleick, 2006). Historically, in the Middle East, particularly in Syria, water has been intricately associated with the emergence and decline of civilizations that have sought to control water supplies from the pre-ancient period to the present day (Daoudy, 2020a). During violent conflicts, water-related violence can present multiple facets, i.e. targeting water infrastructures and systems, clashes over access to water, control of hydric systems, and water weaponisation (Gleick, 2014). Nevertheless, the international water law applied to violent conflicts prohibits the use of water resources as an instrument of violence during wars since it compromises the well-being of individuals and of the environment (Tignino, 2016).

Still, soon after the beginning of the civil war in Syria, the regime and NSAs resorted to using water resources as weapons of war to further their war objectives (Mazlum, 2017). The struggle in the Barada river valley (2012-2017) portrays a series of instances of water weaponisation during the violent conflict in Syria in which water resources and facilities, i.e. the al-Fijah water station, were weaponised as military targets and goals and as military tools so as to advance the political, military, and economic objectives of the rebel forces and of al-Assad's regime. In general, therefore, it seems that intrastate armed conflicts stimulate the effective weaponisation of water since the capture and control of water infrastructures and resources are a powerful tool for gaining and sustaining territory; for acquiring bargaining power; and, hence, for providing leverage to the actors controlling it; to harm the opposition forces by destroying their water facilities, poisoning them, and/or cutting off water supplies (King, 2015; Mazlum, 2017; SFG, 2014). Furthermore, the analysis of this fight demonstrates that the Syrian regime and the rebel groups employed water weaponisation, e.g. capture and control of the al-Fijah spring, as a strategy to establish themselves as the hydro-hegemons of the Barada river valley, since the use of the water weapon enhances the overt and covert powers, thus shaping the hydro-hegemonic and power configurations in the valley. As such, during intrastate armed conflicts, water weaponisation may be used by actors as a means to further their hydro-hegemonic and power aspirations. This article argues that on the one hand, different actors in a violent conflict weaponise water to materialise their military, political, and economic goals in strategic gains and, on the other hand, to (re)position themselves as the hydro-hegemons of strategic geographical areas like a river basin that allows them to enhance their geographical, material, bargaining, and ideational powers.

Since the agreement between the government of Syria and NSAs reached in late January 2017, the Barada river valley has been, until the present moment, under government control (The Carter Center, n.d.), with no records of water being used as a weapon in this region. However, other areas in Syria continue to suffer from the consequences of incidents of inhumane water weaponisation. In 2019, a water station located in Basida responsible for the water supply of 80,000 people suffered severe damages because of the continuous airstrikes (OCHA, 2019: 2). More recently, in 2022, Russia attacked via airstrikes a water station near Idlib, causing its destruction, and in the same year, Turkey bombed the Al-Hishah water station in Raqqa governorate (Pacific Institute, 2022). The ongoing violence towards water resources and infrastructure in Syria throughout the war is a wake-up call to the urgency of studying how the dynamics of violent conflicts and their repercussions impact water and, eventually, how these effects on water affect the well-being of individuals and the environment.

This research showed the relevance of the FHH to analyse intrastate water dynamics since a state's water bodies are, like international watercourses, subjected to hydro-hegemonic power shifts and dynamics, particularly during violent conflicts as all parties seek to maximise their power in order to face their opponents and support their objectives. Water enhances the power capacity and hydro-hegemony of those actors who control water resources and facilities, such as dams, natural springs, and water networks.

Edited by Alina Timóteo

MARGARIDA GAMA

PhD Student at Faculdade de Economia, Universidade de Coimbra/Centro de Estudos Sociais, Universidade de Coimbra
Av. Dr. Dias da Silva 165, 3004-512 Coimbra, Portugal
Contact: margaridagama@ces.uc.pt
ORCID: https://orcid.org/0009-0004-8658-1711

Received on 10.10.2023

Accepted for publication on 18.01.2024

REFERENCES

Al Jazeera (2017), "Syria Rebels Freeze Negotiations, Saying Truce Violated". Accessed on 20.06.2023, at https://www.aljazeera.com/news/2017/1/3/syria-rebels-freeze-negotiations-saying-truce-violated.

Ali, Ali Abdul Kadir (2015), "The Security Gap in Syria: Individual and Collective Security in 'Rebel-Held' Territories", *Stability: International Journal of Security & Development*, 4(1), 1-20. https://doi.org/10.5334/sta.gd

Alkaff, Syed; Yussof, Nurulhuda (2016), "An Overview of the Syrian Conflict", *Terrorist Trends and Analyses*, 8(8), 8-11.

Alwan, Aziz (2015, April 26), "Islamic State Seizes Dam, Kills Iraqi General and more than 100 Soldiers". Accessed on 02.03.2023, at https://www.smh.com.au/world/islamic-state-seizes-dam-kills-iraqi-general-and-more-than-100-soldiers-20150426-1mtcdg.html.

al-Zarier, Bahira; Schuster, Justin (2017), "Assassination of Lead Negotiator Derails Damascus Water Talks, Battles Resume". Accessed on 20.06.2023, at https://syriadirect.org/assassination-of-lead-negotiator-derails-damascus-water-talks-battles-resume/#.WHuuZNw5vPA.twitter.

Arraf, Firas (2019), "Causes of Decreasing Water Balances in the Barada Awaj (Damascus) Drainage Basin until the Uprising in Syria", *Open Journal of Modern Hydrology*, 9(4), 143-160. https://doi.org/10.4236/ojmh.2019.94008

Bachrach, Peter; Baratz, Morton (1962), "Two Faces of Power", *American Political Science Review*, 56(4), 947-952. https://doi.org/10.2307/1952796

Baczko, Adam; Dorronsoro, Gilles; Quesnay, Arthur (2017), *Civil War in Syria: Mobilization and Competing Social Orders*. Cambridge: Cambridge University Press.

Carpenter, Ted Galen (2013), "Tangled Web: The Syrian Civil War and Its Implications", *Mediterranean Quarterly*, 24(1), 1-11. https://doi.org/10.1215/10474552-2018988

Cascão, Ana (2008), "Ethiopia-Challenges to Egyptian Hegemony in the Nile Basin", *Water Policy*, 10(S2), 13-28. https://doi.org/10.2166/wp.2008.206

Cascão, Ana; Zeitoun, Mark (2010), "Power, Hegemony and Critical Hydropolitics", *in* Anton Earle; Anders Jägerskog; Joakim Ojendal (eds.), *Transboundary Water Management: Principles and Practice.* London: Routledge, 27-42 [1st ed.].

Chalecki, Elizabeth L. (2002), "A New Vigilance: Identifying and Reducing the Risks of Environmental Terrorism", *Global Environmental Politics*, 2(1), 46-64. https://doi.org/10.1162/152638002317261463

Cole, Annika (2021), "Weakening of the Nation-State by Climate Change: Water Weaponization by ISIL", *The Dartmouth Undergraduate Journal of Politics*, 1(3), 135-157.

Dahl, Robert (1957), "The Concept of Power", *Behavioral Science*, 2(3), 201-215. https://doi.org/10.1002/bs.3830020303

Daoudy, Marwa (2020a), *The Origins of the Syrian Conflict: Climate Change and Human Security*. Cambridge: Cambridge University Press.

Daoudy, Marwa (2020b), "Water Weaponization in the Syrian Conflict: Strategies of Domination and Cooperation", *International Affairs*, 96(5), 1347-1366. https://doi.org/10.1093/ia/iiaa131

Erlich, Reese (2014), *Inside Syria: The Backstory of Their Civil War and What the World Can Expect*. Amherst: Prometheus Books.

Gleick, Peter (2006), "Water and Terrorism", *Water Policy*, 8(6), 481-503. https://doi.org/10.2166/wp.2006.035

Gleick, Peter (2014), "Water, Drought, Climate Change, and Conflict in Syria", *Weather, Climate, and Society*, 6(3), 331-340. https://doi.org/10.1175/WCAS-D-13-00059.1

Gleick, Peter (2019a), "Water as a Weapon and Casualty of Armed Conflict: A Review of Recent Water-Related Violence in Iraq, Syria, and Yemen", *Wiley Interdisciplinary Reviews: Water*, 6(4), e1351. https://doi.org/10.1002/wat2.1351

Gleick, Peter (2019b), "Water as a Weapon and Casualty of Conflict: Freshwater and International Humanitarian Law", *Water Resources Management*, 33(5), 1737-1751. https://doi.org/10.1007/s11269-019-02212-z

Gonano, Sebastian (2017), "A Summary of the Fighting in the Barada River Valley", *International Review*, November 14. Accessed on 20.06.2023, at https://international-review.org/summary-fighting-barada-river-valley/.

Hajer, Maarten (1997), *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Oxford University Press.

Hinnebusch, Raymond; Zintl, Tina (2015), "The Syrian Uprising and Bashar al-Asad's First Decade in Power", *in* Raymond Hinnebusch; Tina Zintl (eds.), *Syria from Reform to Revolt. Volume 1: Political Economy and International Relations*. Syracuse: Syracuse University Press, 285-310.

HRC – Human Rights Council (2017), "Human Rights Abuses and International Humanitarian Law Violations in the Syrian Arab Republic, 21 July 2016- 28 February 2017", *Human Rights Council*. Accessed on 20.06.2023, at https://www.ohchr.org/en/hr-bodies/hrc/iici-syria/documentation.

Hydro Review (2018), "Access to Afrin Dam cut off by fighting in northwestern Syria", *Hydro Review*, March 14. Accessed on 18.06.2023, at https://www.hydroreview.com/world-regions/asiaoceania/access-to-afrin-dam-cut-off-by-fighting-in-northwestern-syria/#gref.

ICRC – International Committee of the Red Cross (1977), *Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II)*. No. 1125. Geneva: United Nations.

Iqtissad (2016), "Wadi Barada: Last Chapter of the Damascus Water War", *The Syrian Observer*, August 4. Accessed on 17.06.2023, at https://syrianobserver.com/features/25825/wadi_barada_last_chapter_the_damascus_water_war.html.

Kaldor, Mary (2012), *New & Old Wars: Organised Violence in a Global Era*. Cambridge: Polity Press.

King, Marcus (2015), "The Weaponization of Water in Syria and Iraq", *Washington Quarterly*, 38(4), 153-169. https://doi.org/10.1080/0163660X.2015.1125835

King, Marcus (2023), *Weaponizing Water: Water Stress and Islamic Extremist Violence in Africa and the Middle East*. Boulder: Lynne Rienner Publishers.

King, Marcus; Burnell, Julia (2017), "The Weaponization of Water in a Changing Climate", *in* Caitlin E. Werrell; Francesco Femia (eds.), *Epicenters of Climate and Security: The New Geostrategic Landscape of the Anthropocene*. Washington, D.C.: Center for Climate and Security, 67-73. Accessed on 19.10.2022, at https://climateandsecurity.org/wp-content/uploads/2017/06/8_water-weaponization.pdf.

Krzymowski, Adam (2019), "Water as a Weapon of War in the Tigris-Euphrates Basin", *Przeglad Strategiczny*, 2019(12), 319-334. https://doi.org/10.14746/ps.2019.1.20

Lopes, Paula (2012), "Governing Iberian Rivers: From Bilateral Management to Common Basin Governance?", *International Environmental Agreements: Politics, Law and Economics*, 12(3), 251-268. https://doi.org/10.1007/s10784-012-9175-0

Lukes, Steven (1974), *Power: A Radical View*. London: MacMillan Press.

Mazlum, Ibrahim (2017), "ISIS as an Actor Controlling Water Resources in Syria and Iraq", *in* Özden Oktav; Emel Dal; Ali Kurşun (eds.), *Violent Non-State Actors and the Syrian Civil War: The ISIS and YPG Cases*. Cham: Springer International Publishing, 109-125. https://doi.org/10.1007/978-3-319-67528-2_6

Menga, Filippo (2016), "Reconceptualizing Hegemony: The Circle of Hydro-Hegemony", *Water Policy*, 18(2), 401-418. https://doi.org/10.2166/wp.2015.063

Miles, Tom (2017), "Syria Committed War Crime by Bombing Damascus Water Supply: UN", *Reuters*, March 14. Accessed on 18.06.2023, at https://www.reuters.com/article/us-mideast-crisis-syria-water-idUSKBN16L0W5.

Mollinga, Peter (2001), "Water and Politics: Levels, Rational Choice and South Indian Canal Irrigation", *Futures*, 33(8-9), 733-752. https://doi.org/10.1016/S0016-3287(01)00016-7

Nye, Joseph (2004), "Soft Power and American Foreign Policy", *Political Science Quarterly*, 119(2), 255-270. https://doi.org/10.2307/20202345

OCHA – Office for the Coordination of Humanitarian Affairs (2017), *Syrian Arab Republic: Wadi Barada Flash Update No. 2*. Accessed on 20.06.2023, at https://reliefweb.int/report/syrian-arab-republic/syrian-arab-republic-wadi-barada-flash-update-no-2-30-january-2017-enar.

OCHA – Office for the Coordination of Humanitarian Affairs (2019), *Syrian Arab Republic: Recent Developments in Northwestern Syria Situation Report No. 7 – as of 12 July 2019*. Accessed on 22.01.2024, at https://reliefweb.int/report/syrian-arab-republic/syrian-arab-republic-recent-developments-northwestern-syria-situation-0.

Pacific Institute (2022), "Water Conflict Chronology". Accessed on 19.10.2022, at https://www.worldwater.org/conflict/map/.

Pérez, Ruth (2015), "La reconfiguración de los conflictos armados en las relaciones internacionales: la internacionalización del conflicto en Siria", *Revista Mexicana de*

Ciencias Politicas y Sociales, 60(224), 187-219. https://doi.org/10.1016/S0185-1918(15)30008-8

Raba'a, Mohammad; de Châtel, Francesca (2014), "Waterless Wadi Barada: Manufacturing Scarcity in a Syrian River Valley", *Middle East Report*, 271. Accessed on 20.06.2023, at https://merip.org/2014/07/waterless-wadi-barada/.

Reuters (2016a), "Nusra Front Executes Captive Pro-Syrian Government Soldiers: Video", *Reuters*, July 21. Accessed on 20.06.2023, at https://www.reuters.com/article/us-mideast-crisis-syria-nusra-idUSKCN1002MY?il=0.

Reuters (2016b), "Damascus Water Supply Cut After Rebels Pollute It: Authority", *Reuters*, December 23. Accessed on 20.06.2023, at https://www.reuters.com/article/us-mideast-crisis-syria-water-idUSKBN14C20Q?il=0.

Reznick, Alisa (2016), "Weaponizing Syria's Water", *Boston Review*, January 4. Accessed on 17.06.2023, at https://www.bostonreview.net/articles/syria-water-alisa-reznick/.

Rudaw (2018), "Turkey takes Afrin dam, nears city: media reports", *Rudaw*, March 9. Accessed on 18.06.2023, at https://www.rudaw.net/english/middleeast/syria/090320181?fbclid=IwAR2ribxDQO973GKy5ZHW_YNCeh02TAL2yLztpiS3JAxKV4q1ShqrktGhVSo.

Sadaki, Youssef (2017), "The Water War in Damascus", *Atlantic Council*, January 9. Accessed on 20.06.2023, at https://www.atlanticcouncil.org/blogs/syriasource/the-water-war-in-damascus/.

Selby, Jan (2007), "Beyond Hydro-Hegemony: Gramsci, the National, and the Trans-National", *Occasional Paper No. 94 SOAS/KCL*.

SFG – Strategic Foresight Group (2014), *Water and Violence: Crisis of Survival in the Middle East*. Mumbai: Strategic Foresight Group.

Syria Direct (2013), "Wadi Barada Uses Water Spring to Keep Regime Invasion at Bay", *Syria Direct*, November 20. Accessed on 20.06.2023, at https://syriadirect.org/wadi-barada-uses-water-spring-to-keep-regime-invasion-at-bay/.

The Carter Center (n.d.), "Exploring Historical Control in Syria". Accessed on 21.06.2023, at https://www.cartercenter.org/news/multimedia/map/exploring-historical-control-in-syria.html.

Tignino, Mara (2016), "Water During and After Armed Conflicts", *Brill Research Perspectives in International Water Law*, 1(4), 1-111. https://doi.org/10.1163/23529369-12340004

Turton, Anthony (2002), "Hydropolitics: The Concept and Its Limitations", *in* Anthony Turton; Roland Henwood (eds.), *Hydropolitics in the Developing World: A Southern African Perspective*. Pretoria: African Water Issues Research Unit (AWIRU), 13-19.

Uludag, Mekki (2015), "Syrian Civil War: Important Players and Key Implications – A Factsheet", *Counter Terrorist Trends and Analyses*, 7(7), 4-10.

UN – United Nations (2018), "Deputy Secretary-General's Remarks at the High-Level Panel on Water Diplomacy [as prepared for delivery]", *United Nations*, August 27. Accessed on

25.06.2023, at https://www.un.org/sg/en/content/dsg/statement/2018-08-27/deputy-secretary-generals-remarks-high-level-panel-water-diplomacy.

UNSC – United Nations Security Council (2017), "Physical protection of critical infrastructure against terrorist attacks". Accessed on 02.03.2023, at https://www.un.org/securitycouncil/ctc/sites/www.un.org.securitycouncil.ctc/files/cted-trends-report-march-2017-final.pdf.

Veilleux, Jennifer; Dinar, Shlomi (2021), "A Global Analysis of Water-Related Terrorism, 1970-2016", *Terrorism and Political Violence*, 33(6), 1191-1216. https://doi.org/10.1080/09546553.2019.1599863

Vignal, Leïla (2017), "The Changing Borders and Borderlands of Syria in a Time of Conflict", *International Affairs*, 93(4), 809-827. https://doi.org/10.1093/ia/iix113

von Lossow, Tobias (2016), "The Rebirth of Water as a Weapon: IS in Syria and Iraq", *International Spectator*, 51(3), 82-99. https://doi.org/10.1080/03932729.2016.1213063

Warner, Jeroen (2008), "Contested Hydrohegemony: Hydraulic Control and Security in Turkey", *Water Alternatives*, 1(2), 271-288.

Warner, Jeroen (2012), "Three Lenses on Water War, Peace and Hegemonic Struggle on the Nile", *International Journal of Sustainable Society*, 4(1/2), 173-193. https://doi.org/10.1504/IJSSOC.2012.044672

Warner, Jeroen; Mirumachi, Naho; Farnum, Rebecca L.; Grandi, Mattia; Menga, Filippo; Zeitoun, Mark (2017), "Transboundary 'Hydro-hegemony': 10 Years Later", *WIREs Water*, 4(6), e1242. https://doi.org/10.1002/wat2.1242

Warner, Jeroen; Zawahri, Neda (2012), "Hegemony and asymmetry: Multiple-chessboard games on transboundary rivers", *International Environmental Agreements: Politics, Law and Economics*, 12(3), 215-229. https://doi.org/10.1007/s10784-012-9177-y

Wolf, Aaron (1999), "'Water Wars' and Water Reality: Conflict and Cooperation Along International Waterways", *in* Stephen C. Lonergan (ed.), *Environmental Change, Adaptation, and Security*. Dordrecht: Springer, 251-265.

Yoffe, Shira; Wolf, Aaron (1999), "Water, Conflict and Cooperation: Geographical Perspectives", *Cambridge Review of International Affairs*, 12(2), 197-213. https://doi.org/10.1080/09557579908400256

Yoffe, Shira; Wolf, Aaron T.; Giordano, Mark (2003), "Conflict and Cooperation over International Freshwater Resources: Indicators of Basins at Risk", *Journal of the American Water Resources Association*, 39(5), 1109-1126. https://doi.org/10.1111/j.1752-1688.2003.tb03696.x

Zeitoun, Mark; Allan, Tony (2008), "Applying Hegemony and Power Theory to Transboundary Water Analysis", *Water Policy*, 10(S2), 3-12. https://doi.org/10.2166/wp.2008.203

Zeitoun, Mark; Mirumachi, Naho (2008), "Transboundary Water Interaction I: Reconsidering Conflict and Cooperation", *International Environmental Agreements: Politics, Law and Economics*, 8(4), 297-316. https://doi.org/10.1007/s10784-008-9083-5

Zeitoun, Mark; Mirumachi, Naho; Warner, Jeroen (2011), "Transboundary Water Interaction II: The Influence of 'Soft' Power", *International Environmental Agreements: Politics, Law and Economics*, 11(2), 159-178. https://doi.org/10.1007/s10784-010-9134-6

Zeitoun, Mark; Warner, Jeroen (2006), "Hydro-Hegemony – A Framework for Analysis of Trans-boundary Water Conflicts", *Water Policy*, 8(5), 435-460. https://doi.org/10.2166/wp.2006.054