

Spring 2017

# Twisting the Tap: Water Scarcity and Conflict in the Euphrates-Tigris River Basin

Samantha Glass  
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**Twisting the Tap:  
Water Scarcity and Conflict in the Euphrates-Tigris River Basin**

Samantha Taylor Glass  
Spring 2017

SIT Study Abroad: International Studies and Multilateral Diplomacy  
Dr. Heikki S. Mattila  
Dr. Gyula Csurgai

Yale University  
Global Affairs

## ABSTRACT

Is water a target or an instrument of violence? Is it an amplifier of conflict or a means for cooperation, a source of growth or a force of destruction? The purpose of this report is to determine how threats of water shortage and the lack of a trans-boundary management plan has prompted states in the Euphrates-Tigris River Basin to leverage the shared resource as a political weapon to preserve national interests and ascertain regional authority. The scope of this report examines the domestic policies, economic objectives, and foreign-policy interests that compose Turkey, Syria, and Iraq's national stakes in the trans-boundary watercourse. Paying specific attention to Turkey's Southeastern Anatolia Development Project (GAP) this paper investigates the geopolitical strategies stakeholders employ by using water as a source of material bargaining power and regional authority. The design of this report incorporates mixed methodological practices assessing quantitative scientific and economic data in conjunction with qualitative research of government statements, academic reviews and reports issued by non-governmental organizations. To develop a thorough analysis of the multifaceted interests of state and non-state actors in the Basin region this report includes four interviews with experts in the field of international water and environmental law, specialists in the Euphrates-Tigris region, a civic water engineer and post conflict advisor, and an export risk insurance agency involved in Turkey's dam construction.

## ACKNOWLEDGEMENT

I would like to express my gratitude to Bernhard Müller, Mark Zeitoun, Amanda Kron, Evaristo De Pinho Oliveira, and Mara Tignino for their willingness to share both their precious insight and time during the process of interviewing. I would also like to thank Gyula Csurgai, Heikki Mattila, and Aline Dunant for their guidance and engagement throughout the research process of this report.

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## INTRODUCTION

The Euphrates and Tigris rivers have historically been a source of tension between Turkey and its co-riparian states of Iraq and Syria. Originating in the eastern Anatolian highlands of Turkey and descending into the arid Syrian valleys and Iraqi plateaus, the Euphrates-Tigris (ET) River Basin is characterized by climatic and topographic variability, asymmetrical power politics, and protracted civil conflict. Despite the fact that an equitable and sustainable trans-boundary water management plan (TBM) would prove beneficial to all riparian states, inter- and intrastate competition over allocation has thwarted all negotiation attempts. Uncoordinated and lacking transparent data sharing, the riparians continue to pursue unilateral hydro-development projects even in light of three decades of continuously shrinking flow rates from both the Euphrates and Tigris.<sup>1</sup> Beyond the next decade water scarcity in the Middle East will become more acute. This observation has driven the three riparians to securitize their distinctive water rights, which has led many academics and regional experts to speculate as to whether or not water insecurity will prompt military conflict or cooperation.

Owing to water's unequivocal role in survival, it cannot be isolated from broader geographic, political, cultural and economic issues. The purpose of this report is to determine how threats of water shortage and the lack of a TBM has prompted states to leverage the shared resource as a political weapon to preserve national interests and ascertain regional authority. The scope of this report examines the domestic policies, economic objectives, and foreign-policy interests that compose Turkey, Syria, and Iraq's national stakes in the trans-boundary watercourse. Paying specific attention to Turkey's Southeastern Anatolia Development Project (GAP) this paper reveals Turkey's geostrategic manipulation of its domestic security and material bargaining power over the lower riparians regardless of international criticism.

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<sup>1</sup> Tobias von Lossow, "The Multiple Crisis: Perspectives on Water Scarcity in the Euphrates and Tigris Basin," *Orient*, German Journal for Politics, Economics and Culture of the Middle East, 58, no.1 (2017): 70.

The first section of this paper reviews relevant literature and three elements of international watercourse law that have impeded the creation of a TBM. The subsequent section sets forth a historical analysis of the factors driving the politicization of water and the chronology of failed trilateral negotiations. The fourth section displays the asymmetrical power dynamics shaping the current water insecurity that distinguishes upper and lower riparian states. Specific focus is directed towards the geostrategic implications of Turkey's water infrastructure project in Southeast Anatolia and the increased role of international and non-state actors. This report concludes by proposing that the only way to move beyond the stalemate of trilateral water negotiations and prevent regional conflict is through changing the way in which water allocation is perceived from a zero-sum game to an opportunity to share resource benefits.

#### RESEARCH METHODOLOGY

The design of this report incorporated mixed methodological practices assessing quantitative scientific and economic data in conjunction with qualitative research techniques. Water utilization cannot be isolated from other economic activities; therefore, my qualitative findings begin with a general inventory of Turkey, Iraq and Syria's inflow and discharge rates from various gaging stations along with meteorological statistics on evaporation rates, river length, salinization rates and records in climate variability gathered by the Food and Agriculture Organization of the United Nations (FAO). The second phase of quantitative research addressed the interaction between land activities and water usage. This involved examining each nation's statistics on percentage of total arable land, urban population density, dam and reservoir capacity, and magnitude of irrigation potential. Although these statistics varied depending on the source, the reliability of data in government issued reports was checked against information from the FAO's Land and Water Division. Finally, the economic data as it relates to the legitimacy of the riparians' individual water demands proved to be the most challenging and variable set of

statistics to gather. Water engineer and expert in water governance in conflict and post-conflict zones, Mark Zeitoun, accounted for the difficulty of this task explaining, “States can create both a need and a scarcity.”<sup>2</sup> By over estimating the scale, benefits and costs of projects states can increase their claim on the shared water resource. Costs of hydro-infrastructural project planned or completed, current hydroelectric generation, irrigation efficiency regarding evaporation losses and conveyance losses, leaching water projects, and foreign investment data compose only a portion of the criteria necessary for calculating each nation’s economic viability for its planned projects. This report found Turkey’s data to be the most transparent, while experts assert that Syria and Iraq are unlikely to issue accurate utilization data due to the fact that their inefficient and neglected hydro-infrastructure would delegitimize the scale of their demands to the ET water resources.<sup>3</sup>

The qualitative collection for this study sought to explore the motivations for hydro-development and the geopolitical strategies different stakeholders employ to use water as a source of cooperation or conflict. Government statements and media outlets, along with reports conducted by the World Bank, export credit agencies (ECAs), and non-governmental organizations (NGOs) provided a fairly holistic image of the kaleidoscope of narratives surrounding the hydro-politics of the ET Basin. To best contextualize these narratives and develop a thorough analysis of the stakes of state and non-state actors in the ET region, this report heavily depended upon interviews and direct correspondence with experts in international water and humanitarian law, environmental legal advisors, specialists in the ET region, water engineers, and export risk insurance agencies involved in Turkey’s dam projects. The interviews followed a strict protocol ensuring confidentiality, informed consent and understanding of the potential impact of the report on the participants.

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<sup>2</sup>Mark Zietoun, Phone Interview, April 12, 2017.

<sup>3</sup>Adele J. Kirschner and Katrin Tiroch, “The Waters of the Euphrates and Tigris: An International Law Perspective,” *Max Planck Yearbook of United Nations Law Online* 16, no. 1 (2012): 385.



The variety of this quantitative and qualitative data collection not only illustrates how Basin actors view their circumstances, but also how they each respectively wish to be internationally and domestically perceived. Investigating the mechanisms of historic and contemporary manipulation of the ET water resource demonstrates the range of material and immaterial geopolitical motivations impeding the establishment of a Basin-wide cooperation plan.

## LITERATURE REVIEW

Greater insight into the motives impelling Turkey, Iraq and Syria to pursue large-scale hydro-infrastructural projects was found in literature by Molle, Mollinga, and Wester (2009), who conceptualize why states embrace the “hydraulic mission.”<sup>4</sup> This body of work outlines the dual elements of infrastructure development as a means to an end (state welfare: flood protection, food and energy production, water security), and an end in itself (symbol of state and regional power, rent-seeking).<sup>5</sup> The concepts of this dichotomy reoccur throughout the paper underpinning the framework of the riparians’ interactions in in the ET Basin.

A more thorough understanding as to why these interactions have not led to a trilateral water management agreement is identified by experts (MacQuarrie 2004, Kirschner and Tiroch 2012, Kibaroglu and Scheumann 2013, Chazournes and Tignino 2015, Lossow 2017) in three points of reoccurring contention: whether the Euphrates and Tigris should be treated as two separate rivers or one integrated systems; whether they constitute international or trans-boundary rivers; and whether international law prioritizes equitable and reasonable water utilization over the obligation not to cause harm. Despite the overwhelming bulk of analysis on the legal contentions impeding a TBM, there exists limited research on the dynamics of stakeholders

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<sup>4</sup> François Molle, Peter P. Mollinga, and Philippus Wester, “Hydraulic Bureaucracies and the Hydraulic Mission: Flows of Water, Flows of Power,” *Water Alternatives* 2, no. 3 (2009): 328.

<sup>5</sup> Molle, Mollinga, and Wester, “Hydraulic Bureaucracies and the Hydraulic Mission: Flows of Water, Flows of Power,” 328.

beyond the inter-state level. This report attempts to breach this gap by examining how internal and external stakeholders including NGOs, foreign investors, and insurgency groups are interacting and influencing riparian relations and states' ability to protect interests while preserving or projecting a national image.

In order to understand this analysis and how it builds off of existing academic research, readers must have a basic understanding of international water law. The following section elucidates the components of international water law relevant to the three disputes identified by existing literature. Readers must keep in mind that international water law is meant to outline general norms states should respect while leaving room for nations to coordinate regulations that best fit their region.<sup>6</sup>

## INTERNATIONAL WATER LAW

### DISPUTE 1: One Integrated Water System vs. Two Separate Water Systems

Since the first trilateral discussions in the 1970s Turkey has taken a contradictory stance against Iraq and Syria by insisting upon the integration of the two rivers' management systems. Syria and Iraq regard the Euphrates and Tigris as two separate entities arguing that the rivers are clearly divided by hydrological boundaries and flow separately for a majority of their lengths.<sup>7</sup>

Turkey's position coincides with international water law that two rivers form a single unit if their watercourses are interconnected and share the same terminus.<sup>8</sup> When examining the geography of the Euphrates and Tigris, the two rivers merge at Shatt-al-Arab, are interconnected by a series of man-made canals in Iraq, and share a common end point in the Persian Gulf. The reasons driving Syria and Iraq's protests stem from their fear that if a trilateral agreement is arranged with the rivers as one integrated system, the lower riparian states will not be able to demand a

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<sup>6</sup> Kirschner and Tiroch, "The Waters of the Euphrates and Tigris: An International Law Perspective," 351.

<sup>7</sup> Ibid., 376.

<sup>8</sup> Mara Tignino, Personal Communication, April 6, 2017.

larger portion of the Euphrates water flow which is geographically more opportune for development projects than the Tigris.<sup>9</sup> Although international law supports a single basin approach, it is not compulsory for the nations to follow it. Leaving the issue to negotiation, Turkey's stance has greater legitimacy. With all three nations seeking to maximize their quota claims Syria and Iraq are at a geographical disadvantage and wish to avoid a policy that would further the asymmetry of power among the riparian states.

#### DISPUTE 2: International Rivers vs. Trans-boundary Rivers

Regarding the use of terminology, Turkey takes an opposing position to Syria and Iraq asserting that the Euphrates and Tigris rivers are *trans-boundary* rather than *international* rivers. Directly tied to Turkey's claim is the Harmon Doctrine, the principle that a state has "absolute territorial sovereignty" without limitation - thus implying complete use and control of fluvial water within its national boundaries. In 1992, Turkish Prime Minister Süleyman Demirel expounded on Turkey's perspective à propos Syria and Iraq: "This is a matter of sovereignty. This is our land. We have the right to do anything we like. The water resources are Turkey's. The oil resources are [Syria and Iraq's]. We do not say we share their oil resources. They cannot say they share our water resources." This assertion is further upheld by Turkey's interpretation that international rivers must constitute a boundary between two or more states.<sup>10</sup> Owing to the fact that the Tigris and Euphrates traverses borders rather than form them, Turkey considers the rivers trans-boundary, which justifies its complete jurisdiction over the resource. Simply put, *international* rivers are shared while *trans-boundary* rivers are utilized "equitably and reasonably."

Among most scholars the terms *international* and *trans-boundary* are used interchangeably. Under the Law of Non-Navigational Uses of International Watercourses, rivers

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<sup>9</sup>Kirschner and Tiroch, "The Waters of the Euphrates and Tigris: An International Law Perspective," 376.

<sup>10</sup>Patrick MacQuarrie, "Water Security in the Middle East: Growing Conflict Over Development in the Euphrates-Tigris Basin," (Trinity College, 2003): 65.

that form the boundary between states (continuous), and those that cross frontier lines (successive), are both considered international. Although Turkey's tenacious defense of terminology is not reflected in international water law the underlying problem is the range of rights the co-riparians have in relation to each other.

### DISPUTE 3: Equitable and Reasonable Utilization vs. The Obligation Not To Cause Harm

International law provides minimal guidance in determining the scope of equitable water utilization among co-riparian states. In 1970 the United Nations General Assembly asked the International Law Association (ILA) to codify laws on international watercourses. Part of this process dealt with the Helsinki Rules outlining the principles of "reasonable and equitable utilization" of international water among riparian states.<sup>11</sup> The Helsinki Rules do not make a separate reference to the obligation not to cause harm; however, there is a portion of text that reflects the principle *sic utere tuo ut alienum non laedas* – "one must so use his own as not to do injury to another."<sup>12</sup> Lower riparian states tend to hierarchize the 'no harm condition' on account of it protection of their national water security from activities undertaken by upstream states. On the other hand, upper riparians prioritize the 'equitable usage rule' because it gives them greater autonomy over the implementation and management of watercourse projects. The ILA clarified that the obligation to refrain from causing harm to other riparian states is a subsidiary section of the principle of equitable and reasonable usage.<sup>13</sup> Despite the ILA's ruling in favor of Turkey's interpretation, the country still refused to sign the 1997 Convention agreement because it did not reflect Turkey's distinction between international and trans-boundary watercourses.<sup>14</sup>

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<sup>11</sup>"The Helsinki Rules on the Uses of the Waters of International Rivers," Report of the Committee on the Uses of the Waters of International Rivers (Helsinki: International Law Association, 1966): 12, [http://www.internationalwaterlaw.org/documents/intldocs/helsinki\\_rules.html](http://www.internationalwaterlaw.org/documents/intldocs/helsinki_rules.html)

<sup>12</sup>"The Helsinki Rules on the Uses of the Waters of International Rivers," 12.

<sup>13</sup>Tignino, Interview.

<sup>14</sup>Ibid.

## BIOPHYSICAL OVERVIEW OF THE EUPHRATES TIGRIS RIVER BASIN

This section gives a brief overview of the geographic details and water flow statistics of the Euphrates and Tigris Rivers.

### The Euphrates River

Formed by the Murat and Karasu tributaries north of Erzurum, the Euphrates River flows 455 km through Turkey before entering Syria at the town of Trablus.<sup>15</sup> In Syria, three principal tributaries, the Sajur, Balikh, and Khabur, broaden the river as it flows 675 km through arid valleys before crossing into Iraq near the territory of Qusaybah.<sup>16</sup> Periodically breaking into a series of branching rivers and man-made canals in Iraq's Hammar Marshes, the Euphrates waters merges with the Tigris in Qurna to form the Shatt-al-Arab, which discharges 193 km downstream into the Persian Gulf.<sup>17</sup> The statistical breakdown of the 2,700 km long Euphrates River shows that the majority of the river lies in Turkey (28%), Syria (17%), and Iraq (40%) while the portions in Saudi Arabia and Jordan dry up during the summer.<sup>18</sup> Additionally, with a mean annual water discharge of approximately 32 billion m<sup>3</sup>, Turkey contributes roughly 89%, with Syria providing 11% and the remaining riparian states contributing negligible amounts.<sup>19</sup>

### The Tigris River

Approximately 1,900 km long, the Tigris River flows 400 km through Turkey to the city of Cizre on the border with Syria where it continues for 32 km until entering Iraq at Faysh Khabur to extend for another 1,418 km.<sup>20</sup> On average, the river discharges 52 billion m<sup>3</sup> of water per year; 51% provided by Turkey, 39% from Iraq, and 10% from Iran.<sup>21</sup> Despite Iran's contribution to the net water volume, the inopportune climatic and geographic conditions prevent

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<sup>15</sup> Arnon Medzini and Aaron T. Wolf, "The Euphrates River Watershed: Integration, Coordination, or Separation?," in *The Multi-Governance of Water: Four Case Studies*, SUNY Series in Global Politics (Albany, NY: State University of New York Press, 2006):103.

<sup>16</sup> Ibid 104

<sup>17</sup> Ibid 104.

<sup>18</sup> "Euphrates-Tigris Basin," AQUASTAT, 2009.

<sup>19</sup> "Euphrates-Tigris Basin."

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

large-scale hydraulic projects, thus excluding Iran from the trilateral riparian dynamics of Turkey, Syria and Iraq.<sup>22</sup>

## HISTORY OF RIPARIAN INTERACTIONS

This section attempts to formulate a holistic understanding of the development and management of the Euphrates-Tigris watershed by describing several historic trends that explain the lack of a TBM for the ET water resource. The first observation addresses the long pattern of development that characterizes *exotic* rivers, or rivers that traverse arid regions before entering the sea. Flood plains and lower riparian regions are almost always the first settled areas to be developed for energy and agricultural exploitation.<sup>23</sup> The historical disparity in early hydro-infrastructure between Ethiopia and Egypt is similarly reflected between Turkey and Iraq. A common explanation of this phenomenon states that irrigated agriculture originally functioned on a local level; yet, technological advancements and the augmentation of nationalism in the 20<sup>th</sup> century redirected agricultural production towards the global market.<sup>24</sup> Heightened demands for cash crops and increased population density in the lower riparian plains placed greater stress on the need for timely and reliable access to water.<sup>25</sup> Taking into consideration the impact of yearly and seasonal risks of droughts and floods on agriculture and urban centers, lower riparian states are typically the first to establish infrastructure to anticipate periods of high and low discharge. With these systems already in place, lower riparian states adapt their dams to generate hydropower for their rapidly expanding population.

When applying this trend to the ET Basin, it is without doubt that erratic shifts in water volume have historically sculpted national identity and domestic law most notably in Syria and

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<sup>22</sup>Ibid.

<sup>23</sup>John F. Kolars, "Problems of International River Management: The Case of Euphrates," *International Waters of the Middle East - From Euphrates, Tigris to Nile*, 1994, 47.

<sup>24</sup>Kolars, "Problems of International River Management: The Case of Euphrates," 47.

<sup>25</sup>Kolars, 48.

Iraq. Comparable to Egypt's legendary efforts to harness the Nile floods, the roots of Iraqi hydrology stem from the narrative of the Genesis flood that submerged the city of Ur for 150 days, and the Code of King Hammurabi that contained approximately 300 clauses addressing irrigation.<sup>26</sup> In fact, the world's first documented 'water war' occurred around 4.500 years ago between the city-states of Lagash and Umma (current-day Iraq) over Tigris irrigation canals.<sup>27</sup> This historical outlook still shapes the mentality of contemporary water policy for riparian states continue to prioritize domestic needs based on socioeconomic development regardless of external ramifications. Consequently, the trend of domestic relations taking precedence to foreign relations has made the institutionalization of water cooperation an asymmetrical trans-boundary issue.

This pursuit of unilateralist hydro-development within the context of growing globalization has resulted in a track record of incomplete or inefficient projects and a lack of credible data sharing. This path engenders inter-state misunderstandings. The nexus linking economic, technological and political development has brought the three riparian states into greater contact with each other. Inter-state water disputes in the ET basin materialized in the 1960s with Turkey and Syria attempting to close the gap in hydro-development with Iraq. Initially presented as national plans to regulate flows during drought and flood periods, economic ambitions and technological growth stimulated the countries to include hydropower generation and irrigation projects.<sup>28</sup> Due to sudden spikes in water demands and the lack of coordination between national development projects, the arena for water disputes manifested at the political level among senior heads of state. Direct oversight from Assad of Syria, Hussein of Iraq, and

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<sup>26</sup> Medzini and Wolf, "The Euphrates River Watershed: Integration, Coordination, or Separation?", 108.

<sup>27</sup> Joshua Hammer, "Is a Lack of Water to Blame for the Conflict in Syria?," *Smithsonian Magazine*, 2013, <http://www.smithsonianmag.com/innovation/is-a-lack-of-water-to-blame-for-the-conflict-in-syria-72513729/>.

<sup>28</sup> Aysegül Kibaroglu and Waltina Scheumann, "Evolution of Transboundary Politics in the Euphrates-Tigris River System: New Perspectives and Political Challenges," *Global Governance* 19 (2013): 279.

Demirel and Özal of Turkey show that water governance has typically been isolated to high politics involving claims and counterclaims that disregards legal concerns.<sup>29</sup>

### Failed Attempts at a Tripartite Agreement

The first official tripartite talk over the ET basin watercourse didn't occur until 1964 due to Turkey's commenced construction of the Keban Dam.<sup>30</sup> When dealing with the filling of Syria's Tabqa Dam and Iraq's Haditha Dam, the negotiation of basin governance rules proved fruitless as political competition narrowed the scope of discussion solely to water quotas.<sup>31</sup> Exacerbating the difference between upstream and downstream conditions, these series of meetings dealt with water sharing as a zero-sum negotiation. Of the Euphrates River, Syria demanded 13 billion m<sup>3</sup>, Iraq 14 billion m<sup>3</sup>, and Turkey 18 billion m<sup>3</sup>.<sup>32</sup> In total, these demands far exceeded the river's annual capacity. Foreshadowing subsequent years of trilateral stalemates, this failed deliberation involving high geopolitical stake highlights the ineffectiveness of limiting the cadre of negotiators to the "hydrocracies" – incumbent leaders and their chief civil engineers.<sup>33</sup> Each country attempted to use their maximum claims to increase respective bargaining power as a political lever.<sup>34</sup> In other words, senior heads of state were attempting to use water allocations as a means to influence non-riparian political issues among the three nations.

Political rivalries of the Cold War shaped the framework through which the first trilateral negotiations were conducted. Turkey's membership in NATO along with its pro-Israeli ideals and the Soviet Union's heavy investments in the Ba'athist governments of Syria and Iraq altered the power dynamics and political willingness to harmonize the development of the ET basin.

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<sup>29</sup> MacQuarrie, "Water Security in the Middle East: Growing Conflict Over Development in the Euphrates-Tigris Basin," 61.

<sup>30</sup> Ibid.

<sup>31</sup> Aysegül Kibaroglu, "Euphrates-Tigris River Basin: Water Management as Conflict Prevention," *Orient*, German Journal for Politics, Economics and Culture of the Middle East, 58, no. 1 (2017): 22.

<sup>32</sup> Kirschner and Tiroch, 346.

<sup>33</sup> Mölle, Mollinga, and Wester, 328.

<sup>34</sup> Kirschner and Tiroch, 346.



Throughout the trilateral meetings of the Joint Technical Committee (JTC) that was launching in the early 1970s, discussions maintained a limited scope centered on setting equitable water quotas rather than equitable benefits from water usage. Meant to address the changing irrigation and water needs affected by the filling of Turkey's Keban Dam and Syria's Tabqa Dam, no TBM or allocation agreement was achieved.<sup>35</sup> A major source of friction occurred over Turkey's frustration at Iraq's excessive water requirement calculation for 18 billion m<sup>3</sup>.<sup>36</sup>

From 1974-5 the riparian states were brought to the brink of war with both dams filling within a year of each other, inadequate transparency of hydrological data, and a regional drought.<sup>37</sup> Referred to as the 'Arab Cold War,' rival Ba'athist regimes in Baghdad and Damascus vied to lead the pan-Arab Middle East rather than subsume their sovereignty to a larger United Arab Republic.<sup>38</sup> This political competition manifested itself through the issue of sharing the ET basin resource. Tensions between upper and lower riparian states surfaced when Syria progressively reduced the flow of the Euphrates to Iraq from 15.3 billion m<sup>3</sup> to 9.4 billion m<sup>3</sup>.<sup>39</sup> In front of the Arab League, Iraq accused Syria of retaining the Euphrates water based on political incentives that subsequently induced the ruination of 70% of Iraq's winter crop and the livelihoods of 3 million Iraqi farmers.<sup>40</sup> With both countries moving troops to their common border and Iraq threatening to bomb the Tabqa Dam, Syria attempted to shift the blame by condemning Turkey as the perpetrator for the decreased Euphrates flow.<sup>41</sup> War was only averted by a joint Soviet-Saudi mediation advising Syria to annually release an additional 0.2 billion m<sup>3</sup> from the Tabqa Dam contingent on stable water flow from Turkey.<sup>42</sup> Not only did the JTC fail

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<sup>35</sup>Kibaroglu and Scheumann, "Evolution of Transboundary Politics in the Euphrates-Tigris River System: New Perspectives and Political Challenges," 285.

<sup>36</sup>MacQuarrie, 62.

<sup>37</sup>Kibaroglu, "Euphrates-Tigris River Basin: Water Management as Conflict Prevention," 18.

<sup>38</sup>Barry Rubins, ed., *The Middle East: A Guide to Politics, Economics, Society and Culture*, vol. 1-2, 2 vols. (New York, NY: Routledge, 2015): 28.

<sup>39</sup>MacQuarrie, 49.

<sup>40</sup>Ibid.

<sup>41</sup>"Syrian Arab Republic," *AQUASTAT*, 2008.

<sup>42</sup>"Syrian Arab Republic."

to solve this trilateral dispute, but also it didn't use the Soviet-Saudi proposal as an impetus for the creation of a permanent trilateral settlement.

Since the planning stages of Turkey's Southeastern Anatolia Project (*Guneydogu Anadolu Projesi: GAP*) in 1977, technical meetings of the JTC have proven insufficient in addressing concerns over water security. GAP is a prodigious water infrastructure project intended to decrease the historical asymmetry in hydro-development characteristically dividing upper and lower riparian states. Consisting of 22 multipurpose dams (of which 19 are complete), and 19 hydraulic power plants (of which 13 are installed), this project will have the capacity through 25 irrigation projects to restore 18,000 km<sup>2</sup> of arable land and produce 10% of the Turkey's electricity consumption.<sup>43</sup> Spanning 9.5% of the country's land mass and incorporating both the Euphrates and Tigris Rivers, GAP's potential water storage capacities is triples the capacity of both Syria and Iraq together at over 100 billion m<sup>3</sup>.<sup>44</sup>

In 1980 with the downstream riparian states sensing imminent shifts in the regional balance of power following GAP's formal agenda announced, the JTC decided to reconvene. Unable to agree on a regime to dictate a TBM, the countries designed informal bilateral protocols: the 1987 Syrian Turkish protocol guaranteeing a minimum flow throughout the year of 500 m<sup>3</sup>/sec from the Euphrates River; the 1989 Syrian Iraqi protocol to allocate 58% of the Euphrates water to Iraq (290 m<sup>3</sup>/sec of the 500 m<sup>3</sup>/sec that enters Syria from Turkey).<sup>45</sup> Despite their existence, these bilateral accords constituted interim agreements rather than genuine plans for cooperation. Lacking complete geostrategic foresight, both accords addressed only the Euphrates River and failed to reference water quality, usage, or preparations for flow irregularity from frequent droughts and floods.<sup>46</sup>

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<sup>43</sup>“Current Situation in GAP,” *Republic of Turkey Ministry of Development: Southeastern Anatolia Project Regional Development Administration*, accessed April 25, 2017, <http://www.gap.gov.tr/gap-ta-son-durum-sayfa-32.html>.

<sup>44</sup>Lossow, “The Multiple Crisis: Perspectives on Water Scarcity in the Euphrates and Tigris Basin,” 49.

<sup>45</sup>“Syrian Arab Republic.”

<sup>46</sup>Kibaroglu and Scheumann, 288.

Throughout the late 1980s and into the 1990s water insecurities served as a threat amplifier inflaming political tensions and historical rivalries. Coinciding with Turkey's announcement of GAP, Syrian President Hafez al-Assad began exploiting Turkey's domestic instability to impede the project's development. Through the support of dissident factions and liberation groups, Damascus functioned as a safe haven for the Turkish People's Liberation Army, the Armenian Secret Army for the Liberation of Armenia, *Dev Genc* and *Dev Sol* guerrillas, the Kurdish Workers' Party (PKK), and pro-Greek resistance groups for Cyprus independence.<sup>47</sup> By actively employing Soviet support to shelter leaders, such as Abdullah Öcalan of the PKK, Syria and Syria-occupied Lebanon became a training camp and arms provider for insurgency campaigns in the Southeast Anatolia region of Turkey.<sup>48</sup> Although denying their aid to Turkish separatist groups, Syria lost considerable trust with its upstream neighbor when in 1986 Turkish police discovered Syrian-backed terrorists designing a plan to blow up the Atatürk dam.<sup>49</sup>

Prioritizing domestic policies over strengthening regional relations, Assad's strategy to breed social destabilization in Turkey in order to obstruct the progression of GAP underscored Syria's concern and vulnerability to water scarcity. Already strained by population growth and the underperformance of the Tabqa Dam's hydroelectric generation, Assad's energy production and irrigation plans to ameliorate Syria's food insecurity would be damaged by GAP's predicted increased consumption of 40% of the Euphrates flow.<sup>50</sup> Interconnecting ethnic wars with water security, Assad exploited Turkey's impatience to solve the Kurdish issue. Despite being economically and militarily inferior to Turkey, Assad leveraged his undeclared (but obvious) support of the PKK to successfully pressure Özal into conceding to Syrian water demands. Although the PKK didn't bring GAP to a halt, violent attacks and vandalism, such as the 1984

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<sup>47</sup> MacQuarrie, 34.

<sup>48</sup> Ibid.

<sup>49</sup> Medzini and Wolf, 112.

<sup>50</sup> MacQuarrie, 34.

destruction of nearly 1,100 vehicles and construction machinery for the Atatürk Dam, severely impaired the project's progress and building costs.<sup>51</sup>

Likewise, Iraq attempted to hinder the progress of GAP through financial means. Anticipating disadvantageous conditions from the Atatürk impoundment, Syria and Iraq set aside political differences and used water security as the basis of their cooperation. Despite the Ba'athist rivalry, a combined lobbyist effort between Baghdad and Damascus successfully forestalled international funding to GAP from the World Bank and encouraged the 1989 Syrian Iraq protocol on Euphrates water allocation.<sup>52</sup> This joint endeavor has had a long-lasting impact on Turkey's financing capabilities because the World Bank and the UN General Assembly continue to reinforce their unwillingness to finance hydro-infrastructure projects that are not agreed upon by all riparian states.<sup>53</sup>

In 1990 Turkey began impounding the reservoir of the Atatürk Dam suspending the Euphrates water flow to Syria and Iraq for approximately 30 days.<sup>54</sup> Bringing the three nations to the margin of military conflict, the four-week plug deteriorated the JTC's channels of information sharing among engineers, ministers and hydrologists. Asserting that Turkey had violated the 500m<sup>3</sup>/s agreement, Syria and Iraq interpreted the 1987 protocol as a breach of continuous flow. Turkey contended that it maintained the *annual* flow of 500m<sup>3</sup>/s by increasing the volume of water flowing to Syria and Iraq prior to the period of impoundment. Engendering misunderstanding and inflaming distrust the Atatürk incident disbanded the JTC, which completely halted all trilateral communication on water. This lack of dialogue invigorated Syria's support for Kurdish nationalism in Southeastern Anatolia and drove Turkey to employ the tact of brinkmanship against Syria. By 1998, with Turkish troops amassing at the border with

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<sup>51</sup>DamsTurkey.pdf 238

<sup>52</sup>Andrew Langer, "Hydro Wars: The Struggle for Water and Survival in the Euphrates-Tigris River Basin," *Journal of Politics and Society* 20, no. 1 (2009): 6.

<sup>53</sup>Langer, "Hydro Wars: The Struggle for Water and Survival in the Euphrates-Tigris River Basin," 7.

<sup>54</sup>"Syrian Arab Republic."

Syria, a military clash was only avoided by the signing of the Adana Accords. This agreement effectively coerced Assad into halting the following actions: support to the PKK through weapons supply, finance, commercial enterprises, camp facilities, propaganda, and sheltering of the PKK leader Öcalan.<sup>55</sup> Syria's use of the Kurdish bargaining chip proved successful up until Turkey threatened war with the potential to manipulate the basin's influx with a twist of the tap as seen in 1990.

Since the early 2000s, improved state-led synergy on a bilateral basis and the introduction of 'track two' diplomacy through non-governmental actors indicated positive steps towards regional water cooperation. In 2008 Turkey and Iraq signed the Joint Political Declaration on the Establishment of the High-Level Strategic Cooperation Council (HSCC), which was later followed in 2009 by the creation of a similar HSCC between Turkey and Syria. These ministerial meetings attempted to broaden the scope of the discussion beyond quantitative water sharing to include modernization of domestic supply and irrigation systems, water treatment facilities and joint research assessments on the effects of climate change.<sup>56</sup> Drafting a series of protocols, Memorandums of Understanding (MoUs), the Turkish-Iraqi and Turkish-Syrian HSCCs also attempted to set up the framework for non-governmental meetings on hydrological information sharing among firms, NGOs, and academic institutions.<sup>57</sup> This objective complemented the 2005 attempt at 'track two' diplomacy through the Euphrates-Tigris Initiative for Cooperation (ETIC) where academics and scholars from the three riparian states intended to collaborate on ideas for technical, economic, and social mechanisms for basin management.<sup>58</sup> Although all these protocols appear to indicate progress, not even a meager semblance of a tangible trilateral agreement was produced or implemented.

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<sup>55</sup>Langer, 15.

<sup>56</sup>Kibaroglu and Scheumann, 290.

<sup>57</sup>Ibid.

<sup>58</sup>Ibid., 296.

In light of the 2011 outbreak of the Syrian civil war, bilateral political relations have deteriorated and the technical and diplomatic willpower to negotiate a TBM has faded. With trilateral cooperation reduced to an absolute minimum, the quality and quantity of the ET Basin has been degraded by protracted conflicts in Syria and Iraq. The territorial expansion of IS and other armed non-state actors has given rise to new trends in water manipulation and weaponization for political leverage. In the backdrop of these conflicts, over 50% of the Syria and Iraq's hydro-infrastructures has been damaged, destroyed or left in disrepair, while delivery systems, pipeline networks, and dams have become strategic targets for insurgent control.<sup>59</sup>

The absence of an official TBM has created a vacuum of power for non-state actors to manipulate regional relations and social stability. Without this context, international environmental and humanitarian laws has been neglected while the asymmetry of power continues to tip in favor of Turkey's geostrategic location.<sup>60</sup>

Turkey has proposed to Syria and Iraq a tripartite plan called the Three-Staged Plan for Optimum, Equitable and Reasonable Utilization of the Trans-boundary Watercourses of the Euphrates-Tigris Basin. This plan begins with inventory studies of the water resource, followed by an inventory of the land resources, and ends with an integrated evaluation of the land and water interaction. Heavily dependent on the exchange and verify of data, the studies investigate and evaluate each country's total water need by weighing evaporation losses from reservoirs, leakage from irrigation systems, industrial water supply, soil conditions for planned projects, crop patterns and discharge rates.<sup>61</sup> Syria and Iraq have refused this plan doubtlessly because sharing data on their dilapidated hydro-infrastructure will expose their overestimated water demand. Turkey is calling for an "equitable, rational and optimum utilization of the water

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<sup>59</sup>Lossow, 51.

<sup>60</sup>Amanda Kron, Personal Communication, April 12, 2017.

<sup>61</sup>"Water Issues Between Turkey, Syria and Iraq" (The Turkish Ministry of Foreign Affairs, Department of Regional and Transboundary Waters, 2012), <http://sam.gov.tr/wp-content/uploads/2012/01/WATER-ISSUES-BETWEEN-TURKEY-SYRIA-AND-IRAQ.pdf>.

resources' claiming that it can only be achieved through "a scientific study which will determine the true water needs of each riparian country."<sup>62</sup> Turkey is blatantly taking advantage to Syria and Iraq's subordinate positions. Even in spite of the refusal of the Three Stage Plan, maintaining the status quo enables Turkey to justify its unilateral expansion and increase its respective power.

### CURRENT STAKES IN THE EUPHRATES TIGRIS RIVER BASIN

This section expounds upon the broadening range of stakeholders and emerging international actors that are influencing the management of the ET Basin. Juxtaposing the stakes of the lower riparians to the upper riparian highlights the linkage between water availability and national security. Significant attention is placed on analyzing Turkey's GAP project and the gradually increasing influence of internal and external stakeholders including the Kurds, NGOs and foreign investors.

#### Lower Riparian Water Security

Syria and Iraq have similar water insecurities faced with 'Turkish water imperialism,' protracted socio-economic and political conflicts, and shrinking water discharge from the Euphrates and Tigris. 72.29% of Syria renewable freshwater resource flows from six international rivers with a disproportionate dependence on the Euphrates for a majority of the country's hydroelectric and agricultural needs.<sup>63</sup> Likewise, Iraq's heavy dependence on external sources of fresh water underpins the government's fear of the repercussions of restricted water access from upstream riparians on the nation's agricultural production. With both countries dealing with food insecurity due to drought conditions and war, Turkey has capitalized on its geostrategic location à propos the lower riparians. In 2013, Iraq imported 25% of Turkey's

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<sup>62</sup>“Water Issues Between Turkey, Syria and Iraq”

<sup>63</sup>Syrian Arab Republic.”

agricultural exports and Syrian demand for Turkish agricultural exports nearly quadrupled.<sup>64</sup> Food and water security are intrinsically linked; therefore, with the completion of GAP threatening to reduce the ET Basin discharge to Syria and Iraq, agricultural and water dependency will continue to escalate the asymmetry of power dynamics. From a sociopolitical viewpoint, the fact that Syria and Iraq must depend on a non-Arab power for their supply of water suggests a degree of vulnerability that contradicts the image of powerful autocratic leadership.

Regardless of their high stakes, the lower riparians do not have strong negotiation position vis-à-vis Turkey. Baghdad depends heavily on Ankara's benevolence, as Iraq's largest crude oil pipeline, the Kirkuk-Ceyhan, traverses Turkey to reach the Mediterranean. In 1990, around the same time as the 30-day halt of the Euphrates water, Turkey also closed the oil pipeline in compliance with the UN embargo resolutions following Iraq's invasion of Kuwait.<sup>65</sup>

Subsequently, Iraq is historically distrustful towards Turkey due to Ankara's ability to turn the tap controlling water and oil whenever it favors Turkish economic and political interests. Syria's ability to complain about Turkey's manipulation of water is similarly limited. Syria uses up to 90% of the Orontes water flow, a trans-national river of which Turkey is the downstream riparian to Syria and Lebanon.<sup>66</sup> Owing to Damascus's unwillingness to share this resource or even discuss the issue with Ankara, the extent to which Syria can criticize Turkey's unilateral water policies in the ET Basin is restricted.

As long as internal civil conflict continues, the lower riparians will continue to have minimal bargaining power to defend their stakes vis-à-vis Turkey. Water scarcity plays a

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<sup>64</sup>“Turkish Agricultural Exports Continue to Surge,” International Agriculture Trade Reports (Washington, D.C.: United States Department of Agriculture: Foreign Agriculture Service, December 18, 2014), <https://www.fas.usda.gov/data/turkish-agricultural-exports-continue-surge>.

<sup>65</sup>Medzini and Wolf,118.

<sup>66</sup>MacQuarrie,18.



significant role in amplifying socio-political instability.<sup>67</sup> Directly preceding the 2011 civil war Syria experienced a devastating droughts causing massive urbanization with over 800,000 farmers losing their livelihood.<sup>68</sup> The current rate of urbanization in Syria and Iraq has resulted in the concentration of high water demands in specific areas. Affecting the per capita usage, urbanization ultimately overwhelms the hydro-infrastructure by amassing the demand for resources in a small area.<sup>69</sup> This prolonged state of water vulnerability heightens ethnic animosity commonly targeting internally displaced populations, of which there are 7.5 million in Syria.<sup>70</sup> Within the context of deprivation, societal frictions creates a radicalization breeding ground for IS to recruit approximately 60% of its force locally.<sup>71</sup>

Flawed water policies coupled with damaged or inefficient infrastructure has sparked a vicious deterioration spiral of municipal services. “The fact that the rate of technological adaptations has failed to keep pace with the increased demand for public services exacerbates the region’s water insecurity,” claimed Evaristo de Pinho Oliveira, Head of the ICRC Water and Habitat Unit.<sup>72</sup> Water infrastructure is the centerpiece of a series of economic linkages. Although water sources, treatment plants, wastewater treatment plants, and hydro-electric power plants compose the most influential parts of the service system, if other components such as the storage or delivery systems, pumping stations and transmission lines, are neglected the entire service system will breakdown.<sup>73</sup> The vulnerability of municipal services is exacerbated by the fact that most water facilities are situated outside the densely packed urban centers.<sup>74</sup> This means that for cities such as Damascus, Aleppo, and Mosel water and electricity delivery systems along with

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<sup>67</sup>Kron, Interview.

<sup>68</sup>Lossow, 48.

<sup>69</sup>Evaristo De Pinho Oliveira, Personal Communication, April 11, 2017.

<sup>70</sup>Oliveira, Interview.

<sup>71</sup>Marcus DuBois King, “The Weaponization of Water in Syria and Iraq,” *The Washington Quarterly* 38, no. 4 (2015): 154, doi:10.1080/0163660X.2015.1125835.

<sup>72</sup>Oliveira, Interview.

<sup>73</sup>Ibid.

<sup>74</sup>Ibid.

civic engineers and technicians must traverse conflict zones.<sup>75</sup> The lack of a TBM and a system of securing the shared water resource exposes the fragile urban infrastructure to the manipulation of combatants for political and military advantage.

### Upper Riparian Water Security

Since the 1970s Turkey has aspired to become the breadbasket for the Middle East through the implementation of the Southeast Anatolia Project (GAP). This major irrigation project is designed to transform the dry but nutrient rich soil into a 1.8 million-hectare fertile area. Governmental rhetoric describes GAP as a “regional, integrated, sustainable development project,” transforming economic growth into social welfare through “fairness in development, participation, environmental protection, employment generation, spatial planning and infrastructure development.”<sup>76</sup> The advantageous geographical position of the Southeast Anatolia makes the region ideal for the exportation of agricultural produce to both the Middle East and Europe.<sup>77</sup> The share of exports from the GAP region has risen from \$3.3 billion in 2007 to \$8.8 billion in 2015, and while the country’s exports have increased roughly 34%, the exports specifically from the Southeast Anatolia have surged by 168%.<sup>78</sup> Capitalizing on the fact that both Iraq and Syria face food deficits, the GAP irrigation projects have enabled Turkey to boost its leverage over the lower riparians.

Aside from the international trade benefits, GAP’s increased agricultural production may also be expected to stimulate a ripple effect on the Southeast Anatolian economy. Aiming to reduce inequalities in education, land ownership and income, the 2014-2018 GAP Action Plan prioritizes disadvantaged groups through speeding up the socio-economic development of the Southeast Anatolia region. Linking irrigated agriculture, agro-industry, and support services such

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<sup>75</sup> Ibid.

<sup>76</sup> “Sustainable Water Management,” *Republic of Turkey Ministry of Foreign Affairs*, accessed April 25, 2017, <http://www.mfa.gov.tr/sustainable-water-management.en.mfa>.

<sup>77</sup> Medzini and Wolf, 130.

<sup>78</sup> “Current Situation in GAP.”

as communications, healthcare and new education facilities, GAP is estimated to contribute \$6.6 billion annually to Turkey's economy.<sup>79</sup> The project's macro targets for 2018 include: reduction of the unemployment rate to 10.3%, increase of the employment rate to 35.3%, increase of the labor force participation rate to 39.1%, increase of the regional export value to \$22.12 billion, and increase of the ratio of gross value added per capita by GAP to Turkey's average to 54.4%.<sup>80</sup>

By targeting one of the most economically underdeveloped areas in the country where the Kurds represent 90% of the regional ethnic identity, the government claims that this multi-sector approach will bear immense economic and social fruit.

### The Kurdish Question and National Identity

Despite its forecasted domestic benefits, the GAP scheme continues to insight major internal and external allegations that the project is not in line with World Bank standards or committed to international law regarding the safeguarding of the environment, cultural heritage or affected people and co-riparian states.<sup>81</sup> The most recent controversy surrounds the socio-cultural and environmental risks of the Ilisu dam. Situated on the Tigris River, Ilisu is a majority Kurdish village and the location of numerous religious heritage and archaeological sites. To fully grasp Turkey's water security policy and the objectives of GAP it is essential to note that the 'Kurdish question' is much more complex than the mere characterization of an armed minority population demanding equal rights. Addressing this issue is one of Turkey's most challenging initiatives, which explains why the government is so adamant and committed to investing in the development of the Southeast Anatolia region. The government continues to pursue policies that persistently deny the existence of a Kurdish identity separate from the Turkish identity.<sup>82</sup> By

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<sup>79</sup> Ali Ünal, "Turkey Will Invest \$10 Billion in Southeastern Anatolia Project," *Daily Sabah*, March 8, 2015, sec. Economy, <https://www.dailysabah.com/economy/2015/03/08/turkey-will-invest-10-billion-in-southeastern-anatolia-project>.

<sup>80</sup> "Current Situation in GAP."

<sup>81</sup> Christine Eberlein et al., "The Ilisu Dam in Turkey and the Role of Export Credit Agencies and NGO Networks," *Water Alternatives*, 2010.

<sup>82</sup> MacQuarrie, 18.

2020 the Kurdish minority is expected to become Turkey's largest ethnic group, which will drastically inflame domestic security if integration continues to fail.

GAP is frequently criticized as an underhanded mechanism to forcefully assimilate the Kurds into Turkish society. A study conducted by the Swiss Federal Institute of Technology reported that within the last 25 years of the implementation of GAP, Turkey's hydraulic policies have resulted in both ecological and social destruction, including sedimentation, salinization, decreased water quality, population displacement and archeological site destruction.<sup>83</sup> The World Commission on Dams also noted the underhanded intentions driving large dam construction: "While dams have delivered many benefits and made a significant contribution to human development, in too many cases the price paid to secure those benefits, especially in social and environmental terms, has been too high and, more importantly, could have been avoided."<sup>84</sup>

When applied to the Turkey's Atatürk Dam, over 300 villages were flooded, between 150,000 and 200,000 people (majority Kurdish), were displaced without the implementation of relocation plans, and approximately 80% of the displaced population did not receive compensation from Turkey's General Directorate of State Hydraulic Works (DSI).<sup>85</sup> These statistics prompt the question whether or not the Turkish government is using water as a political instrument against the Kurdish identity.

Similar to the Atatürk dam, the impoundment of the Ilisu dam is expected to result in extensive Kurdish displacement and destruction of cultural heritage sites. Despite the project's plans to flood 199 settlements, including the ancient Kurdish town of Hasankeyf, which has been continuously inhabited for nearly 12,000 years, the Turkish Ministry for Culture and Tourism lifted cultural heritage laws protecting the region in 2006 due to the attested 'indispensability' of

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<sup>83</sup>Christine Eberlein et al., "The Ilisu Dam in Turkey and the Role of Export Credit Agencies and NGO Networks."

<sup>84</sup>Ibid.

<sup>85</sup>MacQuarrie, 20.

the dam's economic benefits.<sup>86</sup> Based upon this administrative maneuver it is evident that the implementation of GAP has served a duplicitous purpose in moving the Kurds off their land into cities where they would be compelled to absorb into Turkish society. However, it is difficult to gauge the legitimacy and integrity of Turkey's manifold objectives due to the polarized rhetoric of the government and the Kurds as they vie to shape the domestic and international perception of GAP.

Regardless of whether or not Turkey is exploiting its water as a weapon against the Kurds, a hydropower project of the Ilisu dam's dimension is more than just a technical endeavor. Requiring an elaborate governance and financial structure, human and budgetary resources must not only be devoted to the construction component but also the implementation of resettlement. Considering the relocation of over 78,000 people, managers of the Ilisu dam should not be treating displacement as a sub-category element of the entire dam project. Resettlement warrants its own distinct development plan.<sup>87</sup> In a study conducted by the World Bank's resettlement expert Michael M. Cernea (2008), he exposed the Turkish ministry of "beginning the technical construction without having a soundly prepared program for resettlement, material resources for relocation, a full population census, and a feasible timetable for population transfer harmonized with the technical construction over the duration of the project."<sup>88</sup> On a visible scale it seems that a disproportion amount of resources are being allocated to the security of dam construction rather than the displaced population. Since 2008 military defense units have been stationed throughout the Tigris reservoir area employed to block PKK terrorist attacks and vet international monitors of the project's progress.<sup>89</sup> This securitization of the Ilisu dam demonstrates the dam's dual purpose. Owing to the location of the network of dams in the country's mountainous region bordering Iraqi Kurdistan, the Turkish government is compelled to militarize the areas

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<sup>86</sup>Christine Eberlein et al.

<sup>87</sup>Ibid.

<sup>88</sup>Ibid.

<sup>89</sup>Ibid.

surrounding the dams and reservoirs. The physical presence of the dams and reservoirs coupled with military protection divides the northern and southern Kurdish population and counters the PKK's movement over the frontier. Nevertheless, attacks targeting GAP hydropower sites persist slowing progress, heightening the cost, and discouraging private and international investments.<sup>90</sup> Jeopardizing the country's unity and overall economic benefit, armed Kurdish separatist groups are a threat to Turkey's international and domestic reputation.

### Turkey's International Reputation and External Stakeholders

Nevertheless, Turkey seems to be taking a path towards autocratic rule and more overt disregard for international norms. On 16 April 2017, the Turkish electorate voted in a constitutional referendum to abolish the office of Prime Minister and the parliamentary system for a presidential system. This effectively diminishes the government's system of separation of powers in favor of concentrating more autonomy in the hands of the president. Due to President Erdoğan's recent victory discussions regarding Turkey's application for EU membership has come to a complete halt. The backdrop of this referendum is colored by the 2016-2017 'Turkish purges:' a failed military coup d'état on 15 July 2016 resulting in the dismissal, detention and suspension of more than 100,000 public workers along with several hundred organizations including news outlets.<sup>91</sup> Prompting international denunciation for human rights violations, Turkey's projected image towards the West is in the midst of reevaluation.

Although the purge and referendum are not directly associated to Turkey's hydro-development scheme, reports of gross negligence for environmental and social norms along with human rights violations damages Turkey's ability to attain foreign investment. This tendency of severe responses to domestic unrest exhibits a prioritization of sovereignty and internal authority even at the cost of international reputation. The GAP project is a symbol of prestige, innovation,

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<sup>90</sup>“Dams Power Turkey's Conflict With the Kurds,” *Stratfor Worldview*, June 23, 2016, <https://www.stratfor.com/analysis/dams-power-turkeys-conflict-kurds>.

<sup>91</sup>Rod Nordland and Safak Timur, “15,000 More Public Workers Are Fired in Turkey Crackdown,” *New York Times*, November 22, 2016, sec. Europe.

and regional power for the government. Treated as a national security asset in Turkey's campaign against terrorism, the securitization of GAP has fueled NGOs' persuasive endeavors to mobilize anti-privatization actors, and human and cultural rights activists calling to reform Turkish policies on dam construction. Because the government lacks the financial means to meet the upfront cost of building each dam, the future of GAP's completion depends on international funding.

In 2005, Turkey expanded the Ilisu building consortium to European companies, thus elevating GAP to an international project and expanded the range of external stakeholders in the water resource. The export credit agencies (ECAs) of Austria, Germany and Switzerland outlined 153 conditions that the Turkish ministry had to fulfill both preceding the signing of the contract and during dam construction.<sup>92</sup> The conditions reflected the standards upheld by the World Bank Safeguard Policies and the World Commission on Dams in terms of providing an environmental impact assessment, a resettlement action plan, and a cultural heritage plan.<sup>93</sup> "There was a gap between Turkish law surrounding dam construction and the World Bank standards; therefore, the conditions set by the ECAs attempted to work with the Turkish government to raise their standards for dam construction," stated Bernhard Müller, environmental and social specialist from Swiss Export Risk Insurance (SERV).<sup>94</sup> However, Turkey's main shortcomings involved the poorly prepared resettlement plan and relocation of cultural heritage sites, in which the ministry refused to adapt its policies contending that it cannot treat people in Ilisu differently than it would the rest of Turkey.<sup>95</sup> This perspective underscores Turkey's reluctance to formally acknowledge the Kurdish population. Austria, Germany and Switzerland initiated the exiting procedure of the ECAs' contracts by sending the Turkish ministry an Environmental Failure

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<sup>92</sup> Bernhard Müller, Personal Communication, April 25, 2017.

<sup>93</sup> Müller, Interview.

<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

notice giving the ministry 180 days to meet the conditions. When Turkey proved unwilling to uphold its responsibilities, the ECAs' contracts regarding the Ilisu dam were withdrawn in 2009.

Turkey's determination to maintain sovereign control over the project and thus the water resource has resulted in a trans-national challenge. International backlash does not seem enough to deter Ankara from using water to exercise its control directly over the Kurdish population and the national security of Iraq and Syria. The repercussions of the withdrawal of the three European ECA contracts may have dissuaded Western foreign investment in Turkey's hydro-development; yet has not deterred President Erdoğan from continuing his pursuit of water control. Even when confronted with a global petition to halt the Ilisu dam and make Hasankeyf a UNESCO world heritage site, the Turkish environmental minister Veysel Eroğlu told reporters, "These power plants will be built. No one can stop it. This is the decision of the state and the government."<sup>96</sup> Turkey is willing to finance the dam with its own money and is likely to redirect its foreign investment relations towards non-western countries such as China that do not place such stringent conditions on environmental and human rights.

## CONCLUSION AND TOPICS OF FUTHER DISCUSSION

Within the context of increased water scarcity and insecurity, determining an equitable water management plan for Euphrates and Tigris rivers has long been a source of tension between Turkey, Iraq and Syria. Characterized by climatic and topographic variability, asymmetrical power politics, and protracted civil conflict, inter- and intrastate competition over resource allocation has hindered all negotiation attempts from producing an official agreement. Uncoordinated and lacking transparent data sharing, the riparians continue to pursue unilateral hydro-development projects even in light of three decades of continuously shrinking flow rates

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<sup>96</sup> Elizabeth Angell, "The Ilisu Dam's Uncertain Future," *Chinadialogue*, August 19, 2009, <https://www.chinadialogue.net/article/show/single/en/3223-The-Ilisu-Dam-s-uncertain-future->.



from both the Euphrates and Tigris.<sup>97</sup> Without an overall agreement, the riparians' development programs have similar objectives: securitize rights to water flow; irrigate arid regions to boost food security; and generate hydroelectricity for industrial and social development. Operating on different agendas and driven by varying and often incompatible motivations and ideologies, the three nations will continue to deal with water tensions. However, it is unlikely that there will be a regional 'water war;' rather, water will continue to be leveraged as a political tool. As water scarcity becomes more acute, the shared resource will increasingly be exploited at the national level by both governments and armed non-state actors for rent-seeking and to exercise control over persons and territory. At the international scale, water shortage in the ET Basin will augment Turkey's political and economic leverage over Syria and Iraq.

Seeing as Turkey does not observe or comply with the principles of international water law, trilateral discussions need to broaden the scope of negotiated opportunities. When examining the record of failed attempts at drafting a TBM, it is evident that solely focusing on the quantitative division of the resource leads to a diplomatic deadlock. Therefore the scope of negotiations must be broadened to take into consideration water's linkage to a variety of economic activities. Rather than just sharing the water, Syria, Iraq, and Turkey should investigate ways to incorporate a range of benefits they attain from water utilization to form a more comprehensive agreement. The coordination of energy production, creation of transportation and delivery routes, and renovation of hydro-infrastructure offer unique opportunities to generate greater domestic benefits and stronger foreign relations. If done correctly, the coordination of benefits would help states regain control over public services and organize mechanisms to provide protection for the shared resource. Systematized security of the Euphrates and Tigris that is harmonized among the riparians would drastically decrease the fragility of urban infrastructure and thus the ability of non-state actors to gain control over

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<sup>97</sup> Lossow, 70.

municipal services and leverage the resource over the population and the government. At a macro-scale, such an integrative approach to trans-boundary water management would facilitate post conflict reconstruction and help solicit international funding.

Although an in depth analysis of the way in which terrorists manipulate water was beyond the scope of this paper, further research should be done on defining water ‘weaponization.’ This terminology encompasses a wide range of motivations and actions by state and non-state actors. During armed conflict the expansive linkage between water and municipal services multiplies the short and long-term threat to civil populations. Greater research should be conducted examining the degree to which water is protected under International Humanitarian Law and how this protection should be extended and clarified to safeguard vulnerable people and infrastructure against new techniques revolutionized by insurgency groups.

## LIST OF ABBREVIATIONS

ECA – Export Credit Agency ET  
– Euphrates and Tigris Rivers  
ETIC – Euphrates-Tigris Initiative for Cooperation  
EU – European Union  
FAO – Food and Agriculture Organization of the United Nations  
GAP – Southeastern Anatolia Project  
HSCC – High-level Strategic Cooperation Council  
ICRC – International Committee for the Red Cross  
ILA – International Law Association  
IS – Islamic State  
JTC – Joint Technical Committee MoU  
– Memorandum of Understanding  
NATO – North Atlantic Treaty Organization  
NGO – Non-government Organization  
PKK – Kurdistan Workers’ Party  
SERV – Swiss Export Risk Insurance  
TBM – Trans-boundary Management Plan  
UN – United Nations

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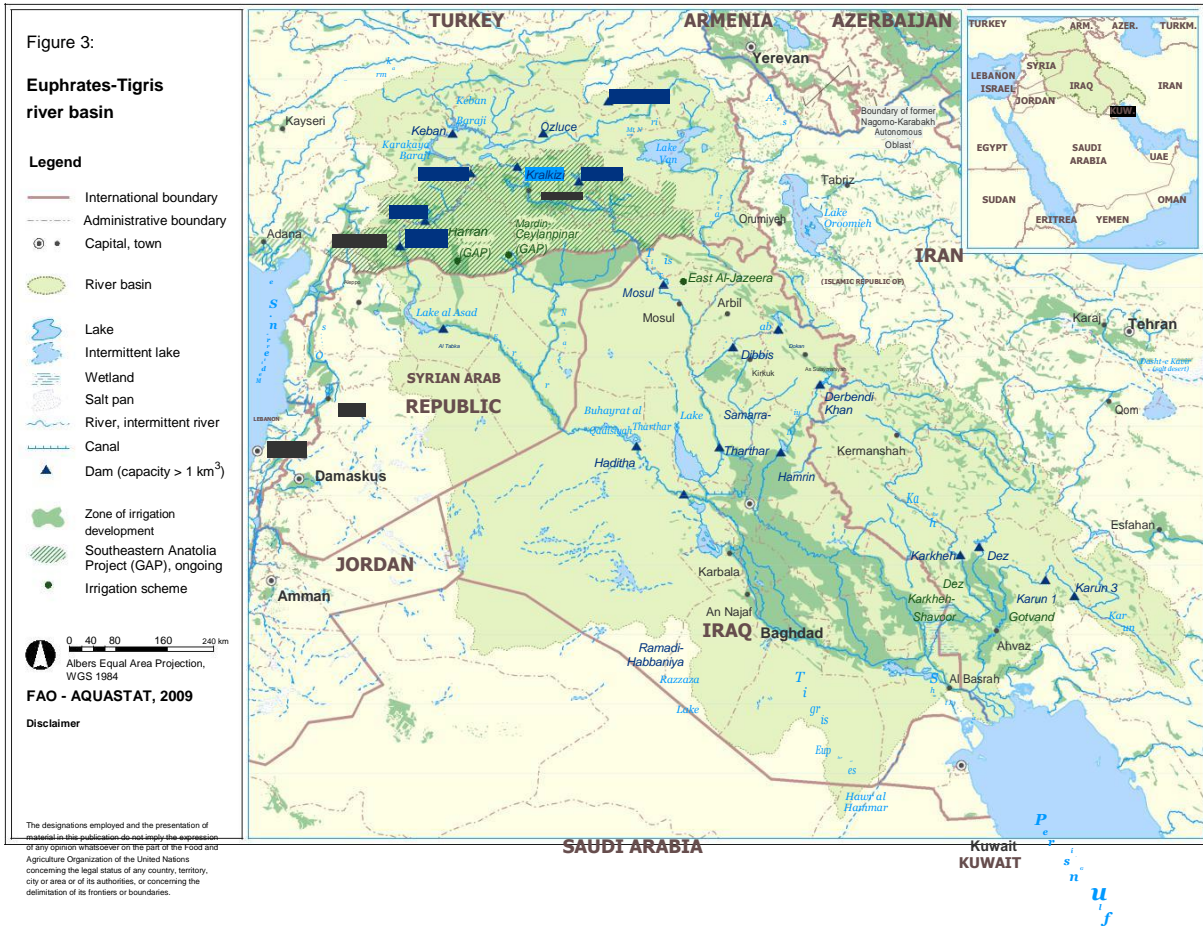


Figure 1: Map of the Euphrates-Tigris River Basin<sup>98</sup>

<sup>98</sup>“Euphrates-Tigris River Basin” (FAO-AQUASTAT, 2009),  
[http://www.fao.org/nr/water/aquastat/basins/euphrates-tigris/Euphrates.tigris-map\\_detailed.pdf](http://www.fao.org/nr/water/aquastat/basins/euphrates-tigris/Euphrates.tigris-map_detailed.pdf).

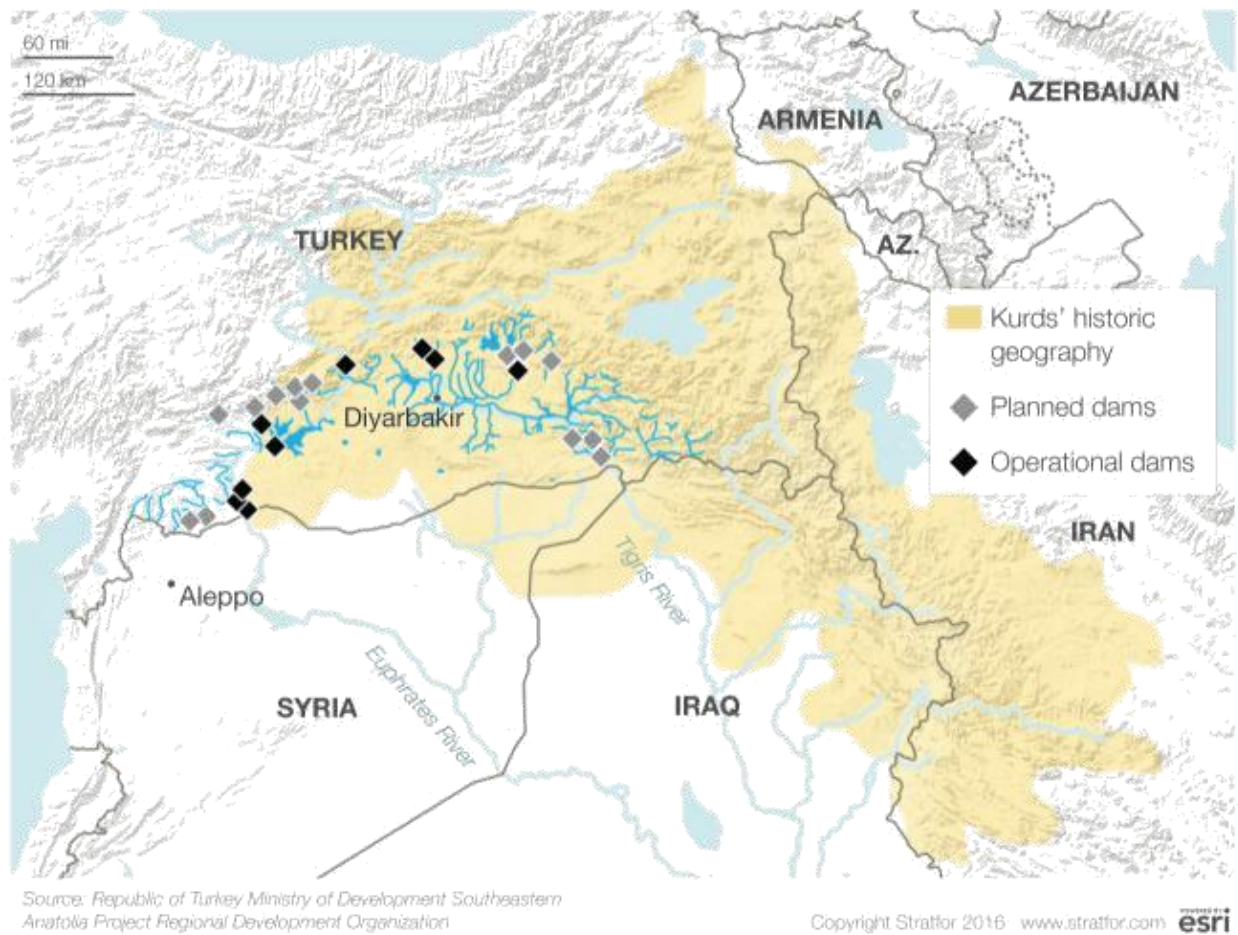


Figure 2: Water Management, Turkey and the Kurds<sup>99</sup>

<sup>99</sup> “Water Management, Turkey and the Kurds” (Stratford, 2016), <https://www.stratfor.com/analysis/dams-power-turkeys-conflict-kurds>.

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