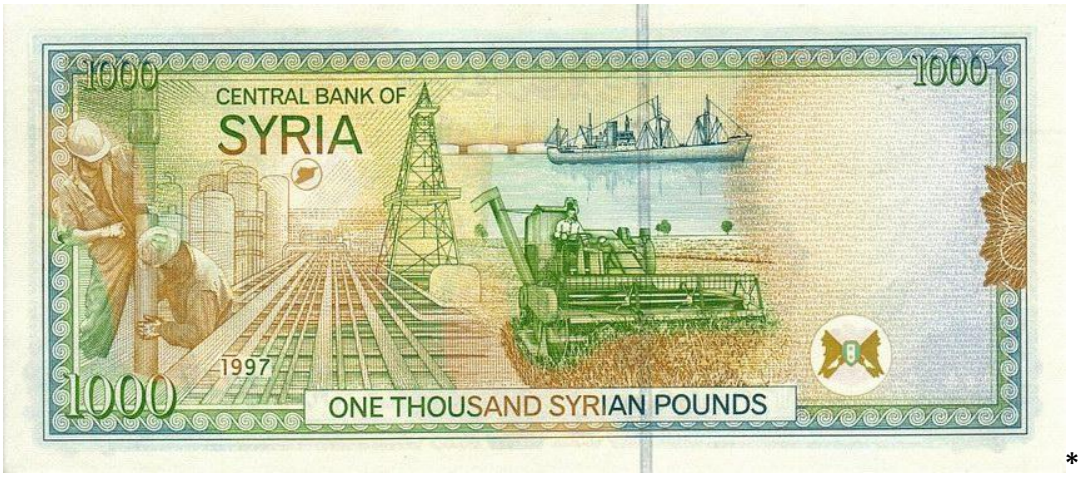
Water as a political tool? Water management in Syria from the advent of Hafez al-Assad to the current Syrian crisis



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Abstract

Debates around water in the MENA region center on its potential for conflict or for cooperation, with predictions of future water wars. Water is presented as a natural resource or an economic or political commodity. The debate is mostly focused on the international, inter-state scale. In recent years, however, some scholars have argued that a focus on the national or local level would generate more interesting and useful research regarding the importance of water and water management. The Middle East is generally regarded as a very water-scarce and fragile region. Syria, that since the Arab Spring of 2010-2011 has been torn by civil war, is particularly interesting. Water scarcity and climate change have been mentioned in scholarly and popular discourse as possible factors for the Syrian population's dissent. In this thesis I explore the theoretical and practical political dynamics of water within the paradigm of water as a tool for conflict or cooperation. Through an integrative historical framework I identify four possible political functions of water: water as a tool for diplomacy, development, democracy, or war. Political water management can be conducted at different scalar levels via pragmatic strategies that serve different political agendas. I argue that both the notion of relative availability of water and the appearance of pragmatic strategies in water management must be taken into account in the debate on water. Furthermore, through balancing theory and practice of Syrian water management, both abstract and concrete political dynamics are revealed.

* On the front page the reverse sides of respectively five hundred and thousand Syrian pounds as issued by the Central Bank of Syria are shown. On the five hundred pound bill, hydrological infrastructures are visible. On the thousand pound bill agricultural and industrial practices are pictured. These bills may be regarded as an indicator for the importance the Syrian state attached to agriculture and its hydraulic mission.

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Abbreviations

ACU – Assistance Coordination Unit

BGR – Bundesanstalt für Geowissenschaften und Rohstoffe

ETIC – Euphrates-Tigris Initiative for Cooperation

FoS – Friends of Syria

GAFTA – Greater Arab Free Trade Agreement

GAP – Great Anatolian Project

GTZ (currently GIZ) – Deutsche Gesellschaft für Technische Zusammenarbeit

IFIs – International Financial Institutions

ISIS / IS – Islamic State of Iraq and Al-Sham (or Islamic State)

ISW – Institute for the Study of War (American think tank)

IWRM – Integrated Water Resource Management

MAAR – (Syrian) Ministry of Agriculture and Agrarian Reform

MENA – Middle East and North Africa (region)

MFA – (Dutch) Ministry of Foreign Affairs

MoI – (Syrian) Ministry of Irrigation

MoU – Memorandum of Understanding

NAPC – (Syrian) National Agricultural Policy Centre

PKK – Turkish Kurdish Nationalist organization

PPP – Public-Private Partnership

SDWC – Syrian-Dutch Water Cooperation

SNHR – Syrian Network for Human Rights

SOC – Syrian Opposition Coalition (also: Syrian National Coalition)

UN-ESCWA – United Nations Economic and Social Commission for Western Asia

UN-FAO – United Nations Food and Agricultural Organization

YPG – Syrian Kurdish militias

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Figure 1.General geographic map of Syria, *Geographic Guide*

Introduction. Water as a weapon

In June 2014, as the Islamic State (ISIS) rapidly advanced in Iraq and conquered Mosul, alarming messages about the consequences for Iraqi and Syrian water resources sounded. When the group briefly seized the Mosul Dam in August 2014, the United States backed an Iraqi and Kurdish operation to retake the dam. When the operation succeeded on August 18, president Obama mentioned that the breaching of the dam '[…] could have proven catastrophic, with floods that would have threatened the lives of thousands of civilians […].'[1] Earlier in February that year, ISIS took over the Iraqi city of Fallujah and in April closed the gates of the Fallujah Dam in the Iraqi Western Anbar province. While this was probably meant to slow the water flow to the Shi'ite provinces in the south, it resulted in flooding a Sunni area nearby the dam, affecting around forty thousand people there.[2]

This episode is quite instructive for the military use of water that has been happening in not only Iraq but particularly also in Syria. Since the beginning of the Syrian conflict in early 2011, Syria has steadily eroded into chaos with no clear solutions in sight. It is estimated that many of the hydrological infrastructures have been destroyed by the various forces on the ground. In the media, alarming cries about water becoming a tool of conflict resound. Both the Syrian regime and opposition forces are being accused of using water as a weapon. Monitors on the ground testify to the destruction of bridges and heavy fighting around dams. Since the advance of ISIS to Mosul and the broadening of the conflict to Iraq, the situation has become increasingly unclear and complicated.[3]

Such messages raise questions about the uses and functions of water, other than as a natural resource. To what extent does water have a military or, broader, a political function? This question of political uses and functions of water is central to this thesis. The overarching research question, then, is how water can be regarded as a political tool in Syria. By coining the term "tool", I mean to emphasize the possibility to *use* water in a strategic way by actors; to actively *employ* it to pursue a certain agenda or political purposes, using several instruments. The term "tool" consequently stresses the active political function of water, as well as the influence of human agency – rather than structural features – on water. Furthermore, by coining the question how water can be *regarded as* rather than *used as* a political tool, I emphasize that a theoretical approach is part of this research. At the same time, theory will be extensively mirrored to practice throughout this research.

Before setting to systematically answer the main question, it is interesting to first conduct a closer examination of the alarming messages and analyze how or to what extent water has been and is being used as a weapon in Syria and by whom. An analysis of these messages and its messengers may provide insights into the broader question of political water use in Syria and in the wider region. Media and think tanks appear to be the key messengers regarding the military usage

[1] Washington Post, 7 October 2014, http://www.washingtonpost.com/world/middle_east/islamic-state-jihadists-are-using-water-as-a-weapon-in-iraq/2014/10/06/aead6792-79ec-4c7c-8f2f-fd7b95765d09_story.html (accessed 10 February 2015).
[2] Ibid.
[3] See for example Reuters, Al-Jazeera English, The Guardian.

of water. Carnegie's Middle East Center and Carnegie Endowment[4] have dedicated several articles to the role of resource constraints in the conflict: the failing of power supplies and its effect on the Syrian population, the struggle of the regime with fuel and energy, the resource problems of opposition forces and their management of infrastructures. Chatham House[5] has published an account of the cutting of water supplies in Aleppo, and attacks on water treatment plants around Hama and Homs. Several newspapers publish similar pieces on their websites or in print.[6] Important other sources are the writings of organizations with people or informants on the ground. The Institute for the Study of War (ISW) provides useful updates on the situation in Syria and Iraq. The Syrian Network for Human Rights (SNHR) and the newsletters of the Syrian Opposition Coalition (SOC) are another source of information.[7]

The Institute for the Study of War (ISW)[8] is an American public policy think tank that writes regular updates on military and political developments on the ground in Syria and Iraq through reliance on both primary and secondary sources. Their monitoring of the evolvement of events is highly useful for examining the current military use of water in Syria. The updates, along with articles from media like Al-Jazeera English, The Guardian, and Reuters, offer a first line of inquiry regarding the political function of water: the question of the actor. Both the Syrian regime (the state) and non-state actors like rebel and Islamist groups seem to be involved in the military use of water. The Pacific Institute – a California-based leading institute in the research of water resources and sustainability[9] – has formulated a split between different actors and their uses of water. State actors can use water either as a military tool or target; non-state actors can use water in acts of terrorism or domestic violence (including cyber terrorism); both state and non-state actors can use water in a development dispute.[10] Following these lines, in the Syrian conflict water seems to be used both as a military tool or target and in acts of terrorism, as the following brief inquiry shows.

The above-mentioned sources show that water has been used as a weapon in various ways. Some of the heaviest fighting has concentrated around water infrastructures like dams and bridges,

[4] Carnegie Endowment for International Peace is the oldest international affairs think tank in the United States and proclaims to be a centrist institution within the American political spectrum. It has a global network of policy research centers, of which Carnegie's Middle East Center, based in Beirut, Lebanon is one. See http://carnegieendowment.org/about/.

[5] Chatham House, the Royal Institute of International Affairs, is a British independent policy institute. See http://www.chathamhouse.org/about.

[6] See the articles of Y. Sayigh, "What Will Jabhat al-Nusra and the Islamic State Do Next in Syria?", *Al-Hayat* 20 November 2014, available via http://carnegie-mec.org/2014/11/20/what-will-jabhat-al-nusra-and-islamic-state-do-next-in-syria/hux4; Y. Sayigh, "The Assad Regime's Political "Achilles Heel"", *Al-Hayat,* 11 December 2014, http://carnegie-mec.org/2014/12/11/assad-regime-s-political-achilles-heel/hwdw; A. Lund, "Cold Winter Coming: Syria's Fuel Crisis", *Carnegie Endowment for International Peace* 13 Oct. 2014 (all accessed 12 December 2014), http://carnegieendowment.org/syriaincrisis/?fa=56917; Oxford Analytica Daily Brief, "Islamic State Will Use Water as Weapon in Iraq, Syria", 2 September 2014. See for an example of media reporting http://www.aljazeera.com/news/middleeast/2014/07/water-war-syria-euphrates-2014757640320663.html.

[7] See http://understandingwar.org/ (ISW), http://sn4hr.org/ (SNHR), http://www.etilaf.org/ (SOC).

[8] The ISW describes itself on its website as a non-partisan, non-ideological organization focused on fact-based research; see http://www.understandingwar.org/research. The institute has sometimes been labeled as hawkish by media like The Washington Post.

[9] See http://worldwater.org/about-us/.

[10] P.H. Gleick and M. Heberger, "Water and Conflict. Events, Trends, and Analysis (2011-2012)", *The World's Water* 8 (2013), 160.

whereby the infrastructures were either damaged or destructed, or used by one party as a strategic tool against the other. This does not necessarily remain confined to the intra-state level. Al-Jazeera reported in July 2014 that ISIS' capture of the Tabqa Dam at Lake Assad and consequent water mismanagement resulted in a drastic fall in water levels. The group blamed this via online forums on Turkey, stating that it had 'intentionally cut off the flow of the Euphrates River into Syria as a tool of war.'[11] Moreover, Chatham research from June 2014 showed that both regime and opposition forces continuously target water supply networks and related structures to put its opponents under pressure. Aleppo, where many such incidents have occurred, is a good example. A water pumping station in Al-Khafsah stopped working in May, thereby cutting water supply to half of the city. According to Chatham, allegedly the Syrian regime ordered this to prevent the flow of water to ISIS territory. Earlier that month, Aleppo's opposition-held main water pumping station was targeted when the regime attacked the al-Sakhour plant, which provides electricity to the station. Chatham reports that also in the same month, Jabhat al-Nusra (inadvertently?) cut off water to the city for nine days, when it tried to divert water away from regime-held areas.[12] As a result of these actions, wastewater treatment facilities throughout the country have been destroyed and water has been severely polluted. Nouar Shamout, a Syrian civil engineer writing for Chatham, argues that 'both Syria's regime and opposition groups are in a state of denial: neither is responding to, or preparing for, a food and water crisis. All efforts are concentrated on fighting […].'[13]

The newsletters and updates of the Syrian Opposition Coalition (SOC) of the past four months (December 2014 – April 2015) confirm this. Water or water-related issues are only mentioned three times throughout this period. On 16 December 2014, the SOC makes mention of an agricultural project sponsored and supported by the Assistance Coordination Unit (ACU) in rural Homs, that is to result in self-sufficiency in besieged areas where water and food are scarce due to cuts by the regime.[14] On January 30, 2015, the SOC calls upon the United Nations to take action to relieve 300.000 civilians in Deir Az-Zor, who are under siege by ISIS. According to the SOC, ISIS blocked the entries and exits to the city and its food supply, and cut all communications, power, and water. The SOC stresses that this same policy is carried out by the Assad regime, particularly in Al-Waer district in Homs, and Al-Ghouta in Damascus.[15] On 19 February 2015, the regime's cutting of the water supply and electricity in the Yarmouk Refugee Camp in southern Damascus is mentioned.[16] The Syria updates on control of terrain and the situation reports of the ISW in the same period breathe similar images: the Syrian regime cutting supply lines in its encirclement of

[11] D. Chudacoff, *Al-Jazeera*, 7 July 2014. Available online via http://www.aljazeera.com/news/middleeast/2014/07/water-war-syria-euphrates-2014757640320663.html
[12] Ibid., N. Shamout, Chatham, "Syria Faces an Imminent Food and Water Crisis", 24 June 2014 http://www.chathamhouse.org/expert/comment/14959
[13] Shamout, "Food and Water Crisis".
[14] Syrian Coalition's Daily Newsletter, 16 December 2014. See http://www.etilaf.org/. The ACU is the humanitarian arm of the SOC. Its main task is to coordinate the humanitarian efforts by NGOs, UN bodies, and others in Syria.
[15] Ibid., 30 January 2015.
[16] Ibid., 19 February 2015.

Aleppo – the same tactic they used in the siege of the Old City of Homs 2011-2014 – and the seizure of bridges from ISIS by the Syrian Kurdish forces (YPG) and rebel forces.[17]

Following these sources, a twofold image of the military use of water arises. On the one hand attacks on and fighting around infrastructures. On the other hand the cutting of water supplies. These usages of water as a weapon or as a military tool are international "attention grabbers". An analysis of these usages provides some information on the complex situation on the ground in the Syrian conflict, as has been showed. But a broader approach of the use of water must be adopted to grasp its meaning and impact. The how and why of the military use of water by both state (the Syrian regime) and non-state actors (ISIS, Jabhat al-Nusra, rebel forces) cannot be separated from the background of political water management in Syria as well as in the wider MENA region.

In this thesis I explore this topic of political water use by arguing that water can be regarded as a political tool in Syria in various ways. In the existing literature, water is often regarded as either a natural resource or an economic commodity. But its political function and potential are particularly important, as I will argue. While non-state actors play an important role in the use of water as a weapon, in the question of water as a broader political tool the Syrian state is the first actor that must be examined, before taking into account other, non-state actors. To explain this selection and the structure of my research, an initial exploration into the literature and the role and meaning of water in the Middle East is needed.

[17] Institute for the Study of War, "Syria Update", 9-16 December 2014 and "Control of Terrain in Syria", 9 February 2015. See for the most recent updates http://iswsyria.blogspot.nl/?utm_source=Syria+Update:+December+9-16,+2014&utm_campaign=ISW+New+Syria+update&utm_medium=email.

Chapter 1. Water in the Middle East – an introduction to the research

How have the functions of water and water management been presented in scholarly literature? Sussex professor of International Relations Jan Selby provides a good introduction to the debate on the larger question of water geopolitics in the Middle East.[18] He argues that there are several ways in which water issues in the MENA region are represented in Western media and academia. Generally, he argues, the discourse is one of water as a commodity of '[…] immense though generally under-recognized geopolitical significance.'[19] On the one hand, this results in theses about water wars in media, political, and popular circles. On the other hand, those who Selby labels "liberal functionalists" argue that water and water scarcity have an important role in nurturing co-operation. Therefore, either way, 'the implicit assumption is that water shapes, or can be employed to help reshape, the geopolitics of the entire Middle East.'[20] The dominant paradigm is that water can lead to either conflict or cooperation.

Indeed, most literature and policy briefs on water in the MENA region seem to – either implicitly or explicitly – adhere to one of these ideas. The debate about water and water scarcity is framed within certain disciplinary boundaries: environmental studies and (geo)politics and conflict studies. Three influential discourses dominate popular and scholarly discourse: the ecological, technical, and political discourse.[21]

1.1 Three discourses

- ***Ecological discourse***

In the first discourse, the image of water as a scarce and finite natural commodity prevails. In the debate on scarcity, this has been termed neo-Malthusianism; a rather static view of nature centered on the limits of natural resources. This view neatly fits within the boundaries of the environmental and conflict frames, and is prevalent within popular discourse, as many alarming environmental reports testify.[22]

The scarcity discourse is often dominant in connection to the Middle East. Environmental issues appeared first on the international political agenda in the early 1970s, and concern about conflict over resources has increased since then.[23] At the end of the twentieth century, there was a widespread sentiment among both academics and international institutions alike that international pressures over water were likely to increase in the MENA region in the near future. A 1995 World Bank Report titled "From Scarcity to Security. Averting a Water Crisis in the Middle East and North Africa" opens as follows:

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[18] See J. Selby, "The Geopolitics of Water in the Middle East: fantasies and realities", *Third World Quarterly* 26.2 (2005) 329-349.
[19] Ibid., 330.
[20] Ibid.
[21] G.R. Trumbull IV, "Speaking of Water", *Middle East Report* Vol. 40 nr. 254 (Spring 2010). Available via http://www.merip.org/mer/mer254.
[22] See T.F. Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton 2001) for an overview of 'two centuries of debate', 28-48.
[23] N.P. Gleditsch, "Armed Conflict and the Environment: A Critique of the Literature", *Journal of Peace Research* 35.3 (1998), 382.

Water is widely distributed around the globe. In fact,

- Over 70 percent of the earth's surface is covered with water.
- 97 percent of all water is in the world's oceans as unusable salt water.
- Of the remaining 3 percent freshwater:
  - 87 percent is locked in ice caps, glaciers, the atmosphere, soil, or deep aquifers;
  - Only about 13 percent (0.4 percent of all water) is usable.
- And of that, less than 1 percent is in the Middle East and North Africa.[24]

In the foreword of the report it is stated that the perceived vicious downward spiral of water availability in the region 'would spell disaster'.[25] The adoption of a regional perspective and national and international partnerships are acutely needed to address the water scarcity.[26] The director of the earlier-introduced Pacific Institute, Peter Gleick, makes in a 1994 article a similar plea for the implementation of an international water law and institutions to counter growing pressures.[27] Natural scarcity is the most important underlying notion of the reports and articles published within this vein. Water is thus mostly regarded as a natural resource here. John Cooley, an American journalist and foreign correspondent even stated in an article in 1984 that 'the Middle East's problems of water and agriculture stem fundamentally from its climate, not from its politics. […] The scarcity of water has weighed upon the region's life since prehistoric times.'[28] On a different note, Gleick argues that water scarcity has influenced political relationships in the region for thousands of years: 'no region has seen more water-related conflicts than the Middle East, and some of these go back more than 5000 years to the earliest civilizations in Mesopotamia.'[29]

In more recent years, scholarly predictions of international water wars have decreased, but they have been replaced within this discourse by increased emphasis on (human-induced) climate change and its possible consequences for the region. Climate change would lead to more frequent and harsher droughts, higher temperatures, and lower and more irregular rainfall and precipitation levels. It has also been determined as a "threat multiplier" within societies, exacerbating other (negative) trends.[30] Thus, recent reports argue that 'even in the absence of clear-cut "water wars" so far, there are strong links between water mismanagement, the impacts of climate change, and risks of social and political instability.'[31] And '"water wars" are not around the corner, but the havoc

[24] World Bank Report, "From Scarcity to Security: Averting a Water Crisis in the Middle East and North Africa" (December 1995), i.
[25] Ibid., ii.
[26] Ibid., 22.
[27] P.H. Gleick, "Water, War & Peace in the Middle East", *Environment* (1994), 15, 39.
[28] J.K. Cooley, "The War over Water", *Foreign Policy* 54 (1984), 5.
[29] Gleick, "Water, War & Peace", 7. See also M.E. Morris, "Water and Conflict in the Middle East: Threats and Opportunities", *Studies in Conflict and Terrorism* 20.1 (1997), 1-2 for some – in hindsight – interesting possible 1998 and 2005 scenarios.
[30] P.H. Gleick, "Water, Drought, Climate Change, and Conflict in Syria", *Weather, Climate, and Society* (2014) 11-13; B. Pohl et. al., Report Climate Diplomacy (collaboration German Federal Foreign Office and Adelphi, a Berlin-based think tank), "The Rise of Hydro-Diplomacy. Strengthening Foreign Policy for Transboundary Waters" (PRINTPRINZ GmbH 2014), 9.
[31] Pohl et. al., "Rise of Hydro-Diplomacy", 6.

wrought by climate change and poor water management upon the ordinary people of the Middle East could be no less tragic.'[32] What is visible here, is that climate change – linked to ecological and natural scarcity – is often connected to water management. This shifts the emphasis from a structural factor – the enduring feature of water scarcity – to an emphasis on (human) agency – scarcity due to human activities. The emphasis on human agency is characteristic of the second and third discourse. In this thesis, while not ignoring the influence of structural (ecological) scarcity, water will predominantly be regarded as something that can be influenced by human activities, thus tending towards agency rather than structure.

- ***Technical discourse***

The technical or economic discourse – also known as the liberal-technical paradigm – is a second dominant stream within the debate, in which water is mostly regarded as an economic commodity.[33] Selby argues that in this discourse resources are '[…] material social constructs and products, brought into being through economic and technological development, through the fact that humans are producers and not just consumers of 'nature' […].'[34] In this regard, an amount of human responsibility is assumed rather than environmental or natural determinism. A lack of water thus becomes a result of inefficiency or mismanagement. The malleability of nature and human influence are principles on which the technical discourse – as well as the third (political) discourse – build.[35] Prevalent within these "economic optimists" is the idea that innovation and properly functioning (economic) institutions could contribute to an alleviation of or perhaps even an end to water crises. International institutions like the World Bank encourage this view.[36] The technical discourse that sees water as an economic commodity, then, breathes a more positive, neoliberal view that tends towards cooperation rather than conflict over non-renewable resources.

What is particularly interesting in the technical discourse is the emphasis put on innovation. This touches upon the question of availability of water resources: if techniques can enlarge the availability of or even create water resources, ecological and geographical factors become less influential. In this regard, we can speak of what I term "relative availability" of water. Water availability depends not just on environmental matters, as the ecological discourse propagates, but on human agency as well. This leads to the third discourse.

- ***Political discourse***

The third discourse assumes a Marxist political economical or "distributionist" view that contradicts the previous neoliberal technical view. Within this discourse, scarcity is considered to be a result of the maldistribution of resources and wealth and the inability of social and political-economic structures to address these problems, including water. Water is in this discourse linked to power asymmetry and can be used as a political tool by "haves" against "have-nots".[37] The focus

[32] J. Sowers and C. Toensing, "Editor's Note", *Middle East Report* 40.254 (Spring 2010). Available via http://www.merip.org/mer/mer254.
[33] Trumbull, "Speaking of Water".
[34] Selby, "Geopolitics", 332.
[35] Ibid.
[36] Ibid., 333; Homer-Dixon, *Environment,* 28.
[37] Selby, "Geopolitics", 333; Trumbull, "Speaking of Water", MER254.

within this discourse is on political dependencies and water allocation. Rather than is the case with the ecological or the technical discourse, in practice this can lead to both conflict and cooperation within states.[38] And the political discourse is closely intertwined with water management.

This leads to the essence of this thesis. Sowers argues that 'water […] flows depend upon government policies and infrastructure, economic purchasing power and other factors not reducible to physical scarcity.'[39] In accordance with this, I argue that water management underlies all three discourses, and that human activities and agendas are highly important factors regarding water and its potential for conflict or cooperation. The technical and political discourse view water as a commodity that can be used in various ways. The ecological discourse focuses more on scarcity and the presence or absence of water. But also within this discourse arguments about scarcity are increasingly coupled to water management and water policies.[40] This shifts the focus from water as a natural resource to the potential of water as a political instrument.

In this thesis, I operate across the discourses. Through accepting the notion of water that comes forward in the three discourses, I posit that water can indeed be regarded as either an ecological, economic, or political commodity, but that it is politicized through these discourses – the manner in which water resources are presented serves a certain aim. The argument is consequently not so much aimed at expressing judgments on the accuracy of these discourses. Rather, the aim is to analyze how political agendas underlie each of these discourses. How can water be regarded as a political tool – be it in its capacity of scarce and finite natural resource, be it in its capacity of renewable technical product? How is water management by different actors politicized?

Literature on water management and water governance has pointed to the state[41] as the official authority in water-related matters.[42] But it has also increasingly emphasized that water management involves more actors than governmental ones. In the introduction, different actors in the military use of water already came to the fore. In the coming chapters, water management with the Syrian state as actor will form the starting point of the research, but other actors will also be taken into account. Alongside the different actors, diverse scalar levels at which water management takes place – the international, the national and local, and the global level – will be examined.

1.2 Research design

Following the here outlined discourses, water problems in the Middle East exist because of natural limits, technical flaws, or structural political, social, and economic societal deficiencies. They can lead to either conflict or cooperation. Subsequent to this fragmentation of the discourses, discussions on water and water management are divided across different disciplinary fields. The

[38] Ibid.
[39] Sowers, "Water, Energy, Human Insecurity", MER271.
[40] Pohl et. al., "Hydro-Diplomacy", 1, 6.
[41] In this thesis I use the terms "state", "government", and "regime" – all pointing to the Syrian leadership – quite interchangeably, as most scholars do. See for example Bassam Haddad, who argues that '[…] *regime* and *state* have been largely collapsed into one another in Syria'; B. Haddad, *Business Networks in Syria. The Political Economy of Authoritarian Resilience* (Stanford: Stanford University Press 2012), 19. However, when referencing to the current crisis situation in Syria, I use the term "regime" rather than "state" or "government".
[42] See for example M.-L. Moore, "Perspectives of Complexity in Water Governance: Local Experiences of Global Trends", *Water Alternatives* 6.3 (2013) 487-505.

groundwork for the study of water in the Middle East lies mostly within the boundaries of environmental studies, whereas the implications of water scarcity relate to the field of (geo)politics. Little are these two fields – their theories, methods, empirical studies, implications – integrated; research often remains fragmented between the disciplines.[43] In this thesis I suggest an alternative philosophical approach. I explore the use of water as a political tool from a historical angle, incorporating the different disciplines. Using the work of Fernand Braudel as a philosophical reference, I aim to show how a historical approach towards a political focus can be an all-encompassing one, incorporating the different disciplinary fields that are at stake.

A political focus that alternates theoretical and practical approaches also provides the opportunity to research the topic of water and water management in the MENA region at the international and global as well as the national and local level. The literature discussed earlier is predominantly focused on water scarcity and water management in the entire region. Other literature focuses on the national or local level but omits a wider perspective.[44] The different scalar levels are not often linked together.[45] However, if both the larger and the smaller levels are included in a more integrative approach, new ways of political water use may be unveiled.

- ***A historical approach***

A historical approach is at the basis of the proposed research. Naturally, research on water in the Middle East has already been conducted from a historical angle. The Pacific Institute, for example, has an interesting and long chronology of water conflicts on its website, ranging from the earliest water dispute in the Middle East dating back as far as 2500 BC (between Lagash and Umma, in current Iraq, whereby water flows were diverted and water supplies were cut off) to recent clashes between the Iraqi army and the militants of the Islamic State around the Haditha Dam.[46] Despite being highly interesting their research does not succeed in capturing the entire historical picture because of its main focus on conflict situations. Literature on power (asymmetry) and negotiations frequently employs a historical perspective as well, mixed with more contemporary cases set within a designated area – mostly inter-state level – and period.[47] This literature also tends to focus on historical heights and lows. It should not be dismissed, but a broader historical outlook must be adopted.

[43] See also the comments of Machlis and Hanson on the integration between different fields of study: G.E. Machlis and T. Hanson, "Warfare Ecology", *BioScience* 58.8 (2008) 729-736.

[44] The works of Francesca de Châtel on water management in Syria (among a broader oeuvre) are exemplary of this kind of scholarship.

[45] With perhaps the exception of Jessica Barnes' highly interesting "Managing the Waters of Ba'th Country: The Politics of Water Scarcity in Syria", *Geopolitics* 14 (2009) 510-530.

[46] See http://www2.worldwater.org/conflict/list/. If religious accounts are included as sources, the first water dispute in the Middle East occurred even earlier on, in 3000 BC with, according to ancient Sumerian legend, a six-day storm inflicted upon humanity by the deity Ea. And, according to the Bible, the account of Noah and the deluge. See http://www2.worldwater.org/conflict/map/ for an interesting map of historical conflicts (accessed 25 October 2014).

[47] For example M. Daoudy, "Asymmetric Power: Negotiating Water in the Euphrates and Tigris", *International Negotiation* 14 (2009) 359-389; J. Jongerden, "Dams and Politics in Turkey: Utilizing Water, Developing Conflict", *Middle East Policy Council* 17.1 (2010); United Nations Economic and Social Commission for Western Asia (UN-ESCWA) and Bundesanstalt fur Geowissenschaften und Rohstoffe (BGR), "Inventory of Shared Water Resources in Western Asia" (Beirut 2013) 12-26.

As the introduction to the literature indicated, the topic of water in the Middle East touches upon many different subjects, disciplines, and discourses. My aim is to integrate these into a single historical approach centered on the question how water can be used as a political tool – in past and present times. From a mosaic to a melting pot, incorporating the paradigm of scarcity, but also moving beyond it. Once again, the emphasis in this thesis is on active political agendas that render water a tool that can be used.

Therefore I turn to Fernand Braudel and his famous work *The Mediterranean and the Mediterranean World in the Age of Philip II.*[48] In this work, which is divided into three parts, Braudel offers an interesting division of levels of history. The first part of his book is about the history of man in relation to the environment; '[…] a history in which all change is slow, a history of constant repetition, ever-recurring cycles.'[49] This level of history is closely connected to geography. Braudel argues that geography can help to discover structural realities, in contrast to 'history [that] usually only concerns itself with the crises and high points of these slow movements.'[50]

On a second level, there is the history of groups and trends; social history, more concerned with social structures and closer to the individual. This history combines '[…] what have come to be known as *structure* and *conjuncture*, the permanent and the ephemeral, the slow-moving and the fast. These two aspects of reality […] are always present in everyday life, which is a constant blend of what changes and what endures.'[51]

Finally, a third scale of history to complete the picture is the history of events and of the individual. Braudel warns of this *histoire événementielle* that '[…] it is the most exciting of all [but] we must learn to distrust this history with its still burning passions, as it was felt, described, and lived by contemporaries whose lives were as […] short-sighted as ours.'[52] By solely examining events within history, the selectivity and perspective of the historian may become too dominant for a thorough historical explanation. Transported to the introduction, if we only examine the military use of water in Syria, we limit ourselves to this *histoire événementielle.*

Braudel is indebted to the ideas and works of the *École d'Annales* – scholars like Bloch and Febvre – and works in their tradition.[53] The famous British historian Trevor-Roper argued in his 1972-comment on Braudel's work that the greatest achievement of the Annales School was the integration of disciplines like geography, sociology, and law into the stream of history.[54] Their philosophy was to grasp the totality of a certain history. The famous philosopher of history Thomas Kuhn argued that history, '[…] if viewed as a repository for more than anecdote or chronology'[55], could provide scientific transformation and progress by breaking through paradigms. These broad approaches correspond to my intention to provide a thorough and fuller narrative to explore the

[48] F. Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II Vol. I and II* (Berkeley: University of California Press 1995; transl. from French by S. Reynolds [orig. published in France, 1949]).
[49] Ibid., 20-21.
[50] Ibid., 101.
[51] Ibid., 353.
[52] Ibid., 20-21.
[53] The Annales School was a group of twentieth-century French historians centered around the journal *Annales*. The historians and their successors aimed at returning history to its scientific origins, among others by analyzing all evidence that might be useful in their research. They had a great impact on researching and writing history.
[54] H.R. Trevor-Roper, "Fernand Braudel, the Annales, and the Mediterranean", *Journal of Modern History* 44.4 (1972), 468.
[55] T. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press 1962), 1, 160.

issue of water as a political tool in Syria, incorporating both a theoretical and a practical approach to the matter.

- ***Structure of the research***

How does this mold into a structured research? It appeared that the dominant paradigm is one of water as a tool for either cooperation or conflict. I will explore the question of political water use and management within this paradigm. Braudel's integrative history will serve as an underlying philosophy. First, a brief introduction to Syria and its geography and contemporary history will be provided in chapter two. Subsequently, within the paradigm of conflict or cooperation water is politicized in various ways at various scalar levels by different actors, and the chapters are set up accordingly. Alongside these levels water can be used for different political purposes. Water can serve as a tool for diplomacy for the Syrian state, as will be explored in chapter three. I will examine the Syrian politicizing of water management through the political discourse at the international level. Water can also serve as a tool for development for the Syrian state through the ecological discourse. The developmental function has mainly been studied in connection to the broader theme of state building, but much less so in studies with a particular focus on water.[56]

In this regard, it is also important to briefly mention the connectedness between water and energy, termed the water-energy nexus.[57] The politicizing of water is often related to security; water is connected to possible vulnerabilities and risks, as the larger paradigm of conflict or cooperation also indicates. Sowers argues that energy supply, its growing demand, and its effect on water consumption are an increasing concern in the MENA region. Yet on the other hand, states defend their (often unsustainable) water practices in terms of development: providing energy for its citizens.[58] Therefore, water management must be regarded in connection to the electricity sector and energy management – and both are thoroughly intertwined with questions of (national and international) security. Although this nexus cannot be explicitly taken into account in this thesis, one must bear this connection in mind while reading throughout.

In chapter 4, I will examine Syrian political water management at the national and local level via a case study. Third, water may serve as a tool for democracy. In my fifth and final chapter I will examine the politicizing of water through the technical discourse at the global level, via a critical examination of international agendas. And finally, as already has been analyzed, water can also be used as a military tool by both the state and non-state actors. This happens at the level of the history of events. As Braudel already warned, it is important not to limit oneself to this level of history. The exploration into the military use of water in Syria in the beginning of this introduction showed the shortcomings of an analysis based solely on the *histoire événementielle.* Such an account obscures larger trends and underlying meanings and backgrounds.

- ***Methodology and demarcations***

[56] See for examples of works on the developmental function of water W.L. Cleveland and M. Bunton, *A History of the Modern Middle East* (Fourth Edition; Philadelphia: Westview Press 2009) and P. Seale, *Asad of Syria. The Struggle for the Middle East* (London: I.B. Tauris & Co Ltd, 1988).
[57] Sowers, "Water, Energy, Human Insecurity", MER271.
[58] Ibid.

Some methodological and philosophical remarks need to be included here. The German historian Leopold von Ranke (1795-1886) posed that historians needed to understand, explain, and narrate history "as it really was" by putting themselves in the place of their subjects of study.[59] For integral history writing the historian's mind and ideas in the present must be taken into account. Concretely, with regard to Syria this means avoiding too heavy judgments from hindsight. Besides, it also means accounting for the fact that the study of the Middle East has been fraught with controversies and disputes over approaches, interpretations, and methods. Imagery, essentializing, and othering have heavily informed and influenced dominant paradigms and knowledge production on the region.[60] One must not be oblivious to this. In this research, almost all of the used sources emanate from European or American scholars and journalists. Other materials have been written in cooperation with organizations like the UN. Consequently, these sources cannot be and are not free of some built-in biases.

In this thesis I mainly conduct qualitative, inductive research. Because of the current situation in Syria I could not conduct fieldwork for this thesis. Therefore I am more dependent on the works of others and the fieldwork that I can do *in situ*. The focus on relatively topical issues renders it a challenge to find sources and collect data.[61] The research is built upon the use and analysis of secondary literature and reports, updates, and newsletters. Moreover, I rely on two main bodies of materials: for my case study I use documents from the Syrian-Dutch Water Cooperation (SDWC), a cooperation between Dutch companies and the Syrian Ministry of Irrigation. Furthermore, I use published as well as unpublished documents from the Dutch Ministry of Foreign Affairs. Additionally, my talks to two experts who have worked in Syria provided me with background information and a glimpse into the situation in the country before the current crisis.

Geographically, Syria will be the focus of this thesis. Syria is not only an interesting country because of the current situation; also, Syria's water management has among some scholars been regarded as indicative for the rest of the region.[62] The nation-state as 'the assumed space of all social scientific inquiry'[63] may be a somewhat outdated idea in history. But because of the focus on politics it is useful here. The national context is central in this thesis, and the politicization of water via various scalar levels must be regarded within this context. Because of this focus on one specific country, comparative research vis-à-vis other countries in the region must unfortunately be left out. Nevertheless, additional (comparative) research into for example the Saudi Arabian water policies

[59] R.C. Williams, *The Historian's Toolbox. A Student's Guide to the Theory and Craft of History* (Armonk and London: M.E. Sharpe, Inc. 2007 [second ed.]), 16.

[60] See for an overview of these debates for example Z. Lockman, *Contending Visions of the Middle East. The History and Politics of Orientalism* (Cambridge 2004) or D.M. Varisco, *Reading Orientalism. Said and the Unsaid* (Seattle 2007) and R. Irwin, *For Lust of Knowing. The Orientalists and Their Enemies* (London 2006) and B. Lewis, "The Question of Orientalism" in B. Lewis, *Islam and the West* (Oxford 1993) 99-118. Naturally, a discussion on imagery and the other in Middle Eastern Studies is not complete without having read Edward Said's *Orientalism* (New York 2003 [orig. 1978]).

[61] See for an interesting analysis of this challenge the background note of B. Schuurman and Q. Eijkman on highly topical and "applied" research, "Moving Terrorism Research Forward: the Crucial Role of Primary Sources", *ICCT Background Note* (June 2013), 3.

[62] K.A. Mourad and R. Berndtsson, "Syrian Water Resources Between the Present and the Future", *Air, Soil and Water Research* 4 (2011), 93.

[63] T. Mitchell, "The Middle East in the Past and Future of Social Science", in D. Szanton (ed.), *The Politics of Knowledge. Area Studies and the Disciplines* (Berkeley and Los Angeles: University of California Press 2004), 99.

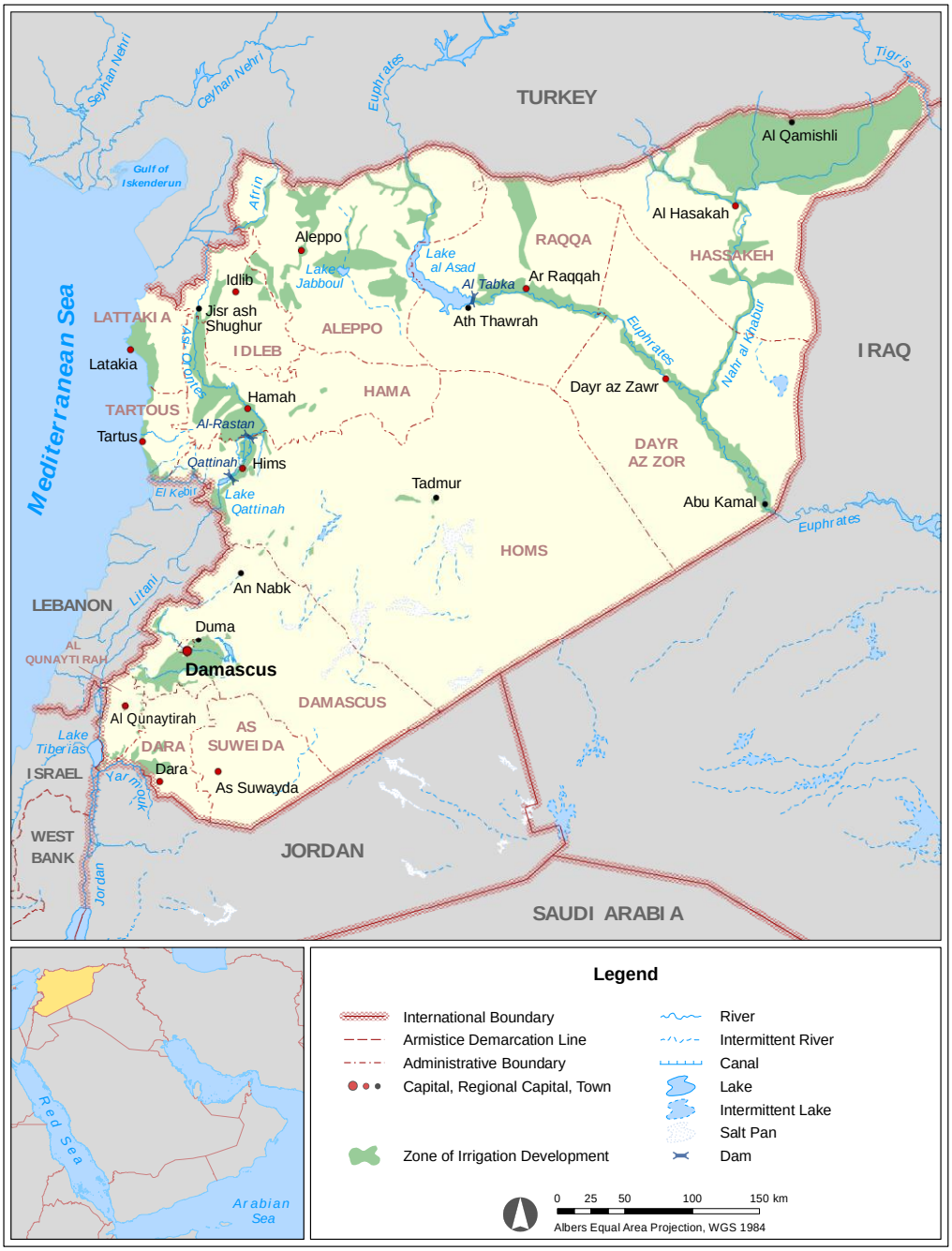
aimed at state-building, or an integration of this analysis with the role of water in the Israeli-Palestinian conflict would in a beneficial way complement the research here.

Temporally, the focus will be on Syria's contemporary history: the second half of the twentieth century (1960-2000) and the following period (2000-2010) up until the current crisis. When examining the political dimensions of water and water management, solely taking into account the current crisis is too short-sighted. This could already be seen in the analyses of water as a weapon, that are often limited to the period since the outbreak of the crisis, or at best include the situation in Syria a couple of years before the uprising.

Chapter 2. Narrowing the scope: a history of Syria

2.1 Geographical history

Figure 2. Syria and its water resources and irrigation zones, *FAO Aquastat*.



Before analyzing international and national water management in Syria, an exploration of the geography and (recent) history of the country is required. The long-term geographical history forms the starting point of this chapter, for 'geography has shaped Syria's historical fate.'[64] Due to its strategic location between three continents, and its varying geographical features – plain, desert, oasis, mountain – the country has historically been fragmented. Syria has an arid to semi-arid climate in the east, north, and south, and humid zones in the west, along the Mediterranean coast. There are broad variations in annual precipitation and a large seasonal variety in available water resources. Droughts form an integral part of the climate; it has been estimated that from 1961 to 2009 Syria experienced nearly 25 years of drought.[65] Regarding surface water, Syria has five agro-ecological zones depending on rainfall, and can be broadly divided into seven hydrological basins: Barada and Awaj, Al-Yarmouk, Orontes, Dajleh and Khabour, Euphrates and Aleppo, Desert, and the Coastal Basin (see also figure 2 for water resources and irrigation zones). It has 21 main rivers, some of them now seasonal, and twelve of them are shared with other countries.[66]

Climate change in Syria – and in the Middle East in general, as already mentioned – has in a growing number of studies been marked as an alarming development. While the predictions in these studies certainly are worrisome, they also remain very general, with wide ranging and contradicting numbers. For example, the estimates of reduction of the Euphrates River flow in climate models vary as much as 29 to 73 percent, depending on factors ranging from rain fall to peaceful water allocation between the riparian countries Turkey, Syria, and Iraq.[67] Nevertheless, different drought indices have indicated a changed drought frequency and intensity, in which climate change may play a role.

Studies on the connections between possible climate changes and international security and conflict issues that have appeared in the past decades have suggested that climate change could have significant geopolitical impacts.[68] In the case of Syria – and, for that matter, the broader Arab Spring – it has been suggested that climate change played a role in the uprising.[69] From 2006 until 2011 there was a very severe drought in northeastern Syria, triggering a humanitarian crisis with large-scale migration and widespread malnutrition. Eventually, this resulted in displaced and impoverished populations in the cities, fuelling discontent and sparking the uprising.[70] This line of argument, however, is too much centered within the ecological discourse and largely ignores the role of human agency: the Syrian state and other actors. Domestic political developments, such as the lifting of subsidies on oil and energy, had by the time the drought struck resulted in rendering a

[64] R. Hinnebusch, *Syria. Revolution from above* (London: Routledge 2001), 15.
[65] Hinnebusch, *Syria,* 15; F. de Châtel, ''The Role of Drought and Climate Change in the Syrian Uprising: Untangling the Triggers of the Revolution", *Middle Eastern Studies* 50.4 (2014), 523.
[66] Mourad and Berndtsson, "Syrian Water Resources", 93-95; De Châtel, "Role of Drought", 523.
[67] Mourad and Berndtsson, "Syrian Water Resources", 96.
[68] Gleick, "Water, Drought, Climate Change", 11-13.
[69] I use the term "Arab Spring" here to indicate the uprisings in the MENA region that started in Tunisia and swept to other countries, among them Syria. It is not an undisputed term, but it is here meant in a neutral vein. I furthermore use a variety of terms regarding the current Syrian civil war: Syrian conflict, uprising, crisis, or revolution. Within this thesis, these terms all point to the current situation in Syria.
[70] De Châtel, "Role of Drought", 522-524.

large part of the population socio-economically vulnerable.[71] The connections between climate change, water management, and the Arab Spring are a slippery slope. It is not the aim of this thesis to speculate about or indicate all the factors that led to the Arab Spring and the current situation. Climate change may indeed have functioned as a "threat multiplier" here. But rather than trying to indicate a direct causal connection between water mismanagement, climate change, and the revolution, which has already been the focus of recent international research[72], the different possibilities of political water management and their historical and geopolitical backgrounds need to be examined to advance the research.

2.2 A brief introduction to contemporary political-economic history[73]

A great many academic works have been written on the modern and contemporary history of the Middle East and Syria. Syria has a long and fascinating history to which this thesis unfortunately cannot do justice. Its contemporary political history does, however, offer a convenient starting point for picking up the narrative threads of Syrian water management: the coming to power of Hafez al-Assad.

Hafez al-Assad came to power in 1970 and remained president until his death in 2000, after which he was succeeded by his second son Bashar. During his presidency, Hafez al-Assad established an authoritarian regime in Syria, with his power based on the military and the Ba'th party, which he had helped bringing back into power by a coup in 1963.[74] The Ba'th party was founded in the early 1930s by two Syrian students in Paris, Michel Aflaq and Salah al-Din Bitar, who formulated a vision of Arab unity and a single Arab nation, combining aspects of nationalism and socialism.[75] It became a formal party in 1946, at the time of Syrian independence, and the party attracted young Arabs in and beyond Syria. It briefly formed a union with Egypt – the United Arab Republic (1958-1961) – and an offshoot of the Syrian parent party exercised increasing powers in Iraq, eventually culminating into the presidency of Saddam Hussein.

In 1966 Assad and his young officers purged the Ba'th party of many of its original supporters, including Aflaq and Bitar, and Assad became Minister of Defense and commander of the Syrian air force. Notwithstanding the Arab defeat at the hands of Israel in the June War of 1967, Assad managed to gain control over all aspects of the Syrian democracy. In early 1971 he was elected to a seven-year presidency. He set up institutions for political participation and introduced a new constitution. However, it has been argued that in reality political control, indoctrination, and

[71] See the writings of Bassam Haddad on Jadaliyya, http://www.jadaliyya.com/pages/index/21237/four-years-on_no-easy-answers-in-syria-(part-ii).

[72] See, for example, the article in the Dutch newspaper De Volkskrant "Droogte droeg bij aan oorlog in Syrie" ("Drought contributed to war in Syria"; research by scholars of Columbia University) of March 3, 2015.

[73] See the works of political scientist and professor of International Relations Raymond Hinnebusch, who has conducted extensive research into Syria. See particularly R. Hinnebusch, *Syria. Revolution from above* (London: Routledge 2001) for a thorough history of the ruling of Hafez al-Assad and the Ba'th party in Syria; a history that forms the basis of this thesis. Because of the focus on the Syrian state's water management here, domestic contemporary political and (socio-)economic history are most important. Cultural and religious history as well as Syrian foreign policy other than directly relevant events are largely omitted from this account.

[74] See for more details Cleveland and Bunton, *History of the Modern Middle East*, 398-400.

[75] Ibid., 325.

nepotism – bringing the Alawite community from an impoverished and isolated position into power – were his most important instruments.[76] Assad consolidated his authority through party ideology, bureaucratic organization and control, and a combination of coercion and surveillance. Hinnebusch has argued that by incorporating a wide range of interests the regime succeeded in providing itself with a broad cross-class, urban-rural social base.[77]

The American historians Cleveland and Bunton argue that the Arab defeat by Israel in the war of 1967 led to largely similar regimes in Syria and Iraq, with the big exception being the contrast in national wealth due to oil revenues.[78] In the 1970s Syria flourished economically, but could eventually not sustain it. Capital flowed into Syria after 1973 due to the oil boom and Arab Aid after the October Arab-Israeli war. Government spending increased heavily, and public sector projects were established in many economic sectors. Efforts were undertaken by the regime to promote development by managing agricultural production – the Syrian economy was largely agricultural based at the advent of Assad's power. The regime embarked on a top-down bureaucratic agricultural development strategy, supervised by technocrats. Development was, however, strained by corruption and a lack of coordination among the different ministries.[79] Priority was given to establishing food self-sufficiency and the improvement of peasant living conditions through land reform. Among others, irrigation systems were developed and damming projects were initiated.[80] The Tabqa Dam project and its reservoir Lake Assad – initiated in 1968-69 and completed in less than ten years – in the Euphrates basin was the largest and most expensive project of this era. It aimed to bring electricity to remote villages and to double Syria's irrigated land area. In its wake, towns like Tabqa, al-Thawra, and Raqqa experienced an enormous boom, while at the same time 72.000 people were displaced from their homes by the new lake Assad.[81]

In the 1970s and 1980s patterns of economic change became visible. By the mid-1980s Hafez al-Assad embarked on a gradual liberalization of the economy, moving from state-centered economic policies to increased economic pluralism.[82] Bassam Haddad, director of Middle East Studies at George Mason University, has in his book *Business Networks in Syria* critically outlined these 'shifting alliances from labor to business.'[83] In a nutshell, he argues that Syrian economic liberalization went hand in hand with the bolstering of the public sector rather than official privatization. The Syrian state's underlying agenda must be regarded through a security prism: moderate concessions from the side of the regime were made for the purpose of preserving its autonomy and rule.[84] By reaching out to the Sunni-dominated urban private sector, Assad succeeded in partly legitimizing his Alawi rural nationalist-socialist regime. Through strategic

[76] Ibid., 400-401.
[77] Hinnebusch, *Syria,* 88.
[78] Cleveland and Bunton, *History of the Modern Middle East,* 397-398. While Syria had its own modest oil industry, its revenues were basically nothing compared to Iraqi revenues.
[79] See Hinnebusch, *Syria*, 115-138.
[80] I.M. Lapidus, *A History of Islamic Societies* (Second Edition; Cambridge: Cambridge University Press 2002), 549.
[81] P. Seale, *Asad of Syria. The Struggle for the Middle East* (London: I.B. Tauris & Co Ltd, 1988), 445-446. The development policies of the regime will also be examined more extensively in chapter 4.
[82] A. Hanieh, *Lineages of Revolt. Issues of Contemporary Capitalism in the Middle East* (Chicago: Haymarket Books 2013), 159.
[83] B. Haddad, *Business Networks in Syria. The Political Economy of Authoritarian Resilience* (Stanford: Stanford University Press 2012), xiv.
[84] Haddad, *Business Networks*, 73.

regime selections of the private sector, loyal economic networks developed in which the state still controlled much of the private sector assets.[85]

Haddad is critical of the consequences of economic liberalization: unemployment, removal of subsidies, erosion of social security, fragmentation among the state's institutional structures. He argues that the Syrian government increasingly intensified its trade off, that consisted of 'compromising the state's infrastructural and administrative power for the sake of preserving its decisional and coercive power [...]'.[86] This "security prism" as a political frame repeatedly returns in Syrian domestic politics. Indeed, political and social repressions were common under Hafez al-Assad, with the intelligence services forming an important and even integral part of everyday Syrian life. Particularly after popular revolting and protesting in several Syrian cities and the infamous showdown by the regime of the revolt in Hama in 1982, control and repression became important tools to stem any unrest.[87]

- ***Water as a weapon – the 1982 Hama revolt***

It is interesting to draw a brief historical parallel here with the military use of water as examined in the opening of this thesis. Most of the sources on the military use of water do not move beyond the current situation and conflict, thereby by-passing the larger context of the use of water as a military weapon in Syria. Examining whether water was used in a similar military way in recent Syrian history could broaden the perspective on this water use. The 1982 Hama revolt and the regime's response to that could in this respect form an interesting case. Zooming in to this particular Syrian history also provides some additional insights in the complicated political relations and security threats under the rule of Hafez al-Assad.

The eyewitness account of the British journalist Robert Fisk is one of the very few foreign accounts on the revolt. The absence of Hama 1982 in academic literature is remarkable, as some journalists have noted.[88] The Tunisian political scientist Larki Sadiki has argued that Hama was "murdered" twice; first by the troops of Hafez al-Assad (and his brother Rifaat), and then a second time, by 'erasure from the nation's emotions, memory, history books, newspapers, photography, and typography.'[89] As the revolt was cracked down in three weeks in February 1982, journalists were banned from entering the city. Only since the outbreak of the current revolution have accounts of the events found their way to (international) media.[90]

Hama was traditionally a conservative stronghold of the Muslim Brotherhood in Syria. It had already seen rioting and fighting in 1964, when the Brotherhood rebelled against the Ba'th's National Guard, and the army was used to put down the insurgence, killing approximately seventy

[85] Haddad, *Business Networks*, 2, 28-45, 70-95.
[86] Ibid., 150-151.
[87] Ibid., 337-338.
[88] See e.g. J. Nassar, "Hama: a Rebirth from the Ashes?", *Middle East Monitor,* 11 July 2014*:* https://www.middleeastmonitor.com/articles/middle-east/12703-hama-a-rebirth-from-the-ashes and L. Sadiki, "Syria: the Revenge of Hama, 30 Years On", *Al-Jazeera*, 3 February 2012: http://www.aljazeera.com/indepth/opinion/2012/02/20122382325175537.html, (accessed 6 January 2015)
[89] Sadiki, "Revenge of Hama".
[90] Nassar, "Hama: a Rebirth".

Muslim brothers.[91] Throughout 1980-1981 the Brotherhood conducted a series of bomb attacks and assassinations against government targets in diverse Syrian cities, and Hama was – alongside Aleppo – at the forefront of the rebellion. In retaliation for the killing of Ba'th party members, special regime forces and the *mukhabarrat*[92] arrested and executed citizens of Hama who allegedly collaborated with the Muslim Brotherhood.[93] In early February 1982, all-out revolt broke out. Government forces were ambushed, and hundreds of fighters overran government buildings and besieged the residence of Hama's governor. During the three week battle, the regime cut all telephone and road communications with the city, forbidding foreign journalists to enter the city.[94] However, the British journalist Robert Fisk, writing for The Times, managed to enter Hama during the weeks of fighting for a very brief moment, and described the destruction of the city. The mostly female refugees he encountered were starved and all were in desperate need of drinking water. Because of the heavy fighting in the streets and the government's blockades of the city, the citizens of Hama were left (in winter time) without food, water, and fuel.[95]

The Jordanian journalist Suleiman al-Khalidi interviewed Syrian survivors of the massacre in Lebanon, Jordan, and the Gulf for a July 2011 article. The survivors argued that the tactics of the security forces against the 2011 demonstrations are comparable to the methods used by Hafez' forces. Among them are the cutting of water supplies and electricity to the city.[96] This mainly shows that the use of water as a weapon is nothing new in Syria nor in the wider region; it is a tried strategy. For example, another famous historic instance of the military use of water was the systematic draining of the Iraqi marshlands where the Marsh Arabs lived by Saddam Hussein in the late 1980s and 1990s – a move that some academics have labeled "ecocide".[97] This provides another example of the short-sightedness that is sometimes ingrained in *histoire événementielle*; comparable instances are overlooked in its insistence on uniqueness. Once again, an incentive for a different historical approach.

2.3 Presidency of Bashar al-Assad

With the death of Hafez in 2000 and the succession by his second son, Bashar al-Assad, some sort of thaw in the repression was expected. According to Hinnebusch, Bashar had generally positioned himself as a "modernizer"; open to information technology and economic modernization.[98] In the so-termed "Damascus Spring", civil society demanded a multiparty system and representative elections, as well as an end to emergency law.[99] After a brief period of relative freedom, however, Bashar proved to be loyal to his father's legacy and state repression remained central to the Syrian

[91] Seale, *Asad,* 92-94.
[92] The *mukhabarrat* is the Syrian intelligence service.
[93] Seale gives a highly interesting and detailed account of the years of battle that occurred before the 1982 showdown in Hama and its surrounding complexities; see Seale, *Asad,* 314-338.
[94] R. Fisk, *Pity the Nation. Lebanon at War* (Oxford: Oxford University Press 1991), 181-183.
[95] Ibid., 183-187, Seale, *Asad,* 332-334.
[96] S. al-Khalidi, "Survivors of Syria's Hama Massacre Watch and Hope", *Reuters*, 7 July 2011 (accessed 6 January 2015). http://www.reuters.com/article/2011/07/07/us-syria-hama-idUSTRE7665R620110707.
[97] See G.E. Machlis and T. Hanson, "Warfare Ecology", *BioScience* 58.8 (2008) 729-736.
[98] Hinnebusch, *Syria,* 165.
[99] Ibid.; R.A. Hinnebusch, "Syria: from 'Authoritarian Upgrading' to Revolution?", *International Affairs* 88.1 (2012), 103.

power base. Scholars argued that Bashar inherited an authoritarian state with accompanying vulnerabilities. The president tried to "upgrade" the state's characteristics, but failed to adapt corresponding political changes.[100]

- ***Internal unrest***

Between 2000 and 2010 Syria faced a number of political and economic challenges. Economically, with his accession to power, Bashar al-Assad further abandoned Ba'thist socialist-focused ideology and initiated reform efforts in the administrative and private and public sector. In 2005 the president announced the adoption of the Social Market Economy at the tenth Ba'th Regional Command Conference. Through this '[…] odd combination of central planning and market forces'[101], the development of market institutions and mechanisms was for the first time in Ba'thist Syria officially legitimated. The reform program – by some scholars classified as deeply neoliberal[102] – consisted of policies of privatization, Syria's opening up to foreign direct investment, and the removal of state control in some industrial sectors. Syria became part of the Greater Arab Free Trade Agreement (GAFTA), which opened up new markets for Syria's export.[103] New investment laws were passed from 2005 onwards.

Nevertheless, Haddad argues in a 2011 article that most Syrians have not been able to benefit from these macroeconomic changes because '[…] there is not a firm political will to launch a new social contract and […] more comprehensive institutional reform.'[104] While Syria appeared relatively unharmed following the 2008 global economic crisis, sustainable economic growth, needed for social and political stability, was lacking. Social development failed to take place, threatening social stability.[105] Furthermore, on a political level the Assad regime did not succeed in broadening its power base by connecting to the secular nationalist opposition. In 2003, when the United States invaded Iraq, the opposition supported Assad's opposition to the invasion, but no further rapprochement took place. In 2005 Syria was forced to withdraw from Lebanon, where it had dominated political and economic life for 29 years.[106] As a result of this, the secular opposition

[100] See again Hinnebusch, "'Authoritarian Upgrading' ", 95.
[101][101] Haddad, *Business Networks*, 4.
[102] See for example the work of Adam Hanieh, *Lineages of Revolt. Issues of Contemporary Capitalism in the Middle East* (Chicago: Haymarket Books 2013).
[103] The Agreement came into place as an initiative of the Arab League on 1 January 2008, and on 1 January 2005 most tariffs among the GAFTA members were abolished. See http://www.bilaterals.org/?-GAFTA-&lang=en for more information. See also B. Haddad, "The Political Economy of Syria: Realities and Challenges", *Middle East Policy* 18.2 (Summer 2011), 46-47.
[104] Haddad, "Political Economy", 56.
[105] Ibid., 46-47.
[106] In 1976, Syria employed troops to Lebanon as part of an Arab peacekeeping mission after the Lebanese civil war broke out. When in 1989 the war ended with the Taif Agreement, it was agreed that Syria would withdraw its troops within two years, but Syria did not live up to this agreement. In September 2004, the United Nations passed resolution 1559 that called – among others – for immediate Syrian withdrawal. In 2005, Lebanese prime minister Rafik Hariri was assassinated. As Syria was accused of alleged involvement in the murder, international pressures to withdraw from Lebanon grew, and on 26 April 2005 Syria formally left Lebanon. See http://www.nytimes.com/2005/04/26/international/middleeast/26cnd-lebanon.html?_r=0 (accessed 17 March 2015) and R.A. Hinnebusch, "Documenting the Roots and Dynamics of the Syrian Uprising", *The Middle East Journal* 67.3 (Summer 2013), 468.

published in October 2005 the Damascus Declaration, calling among others for pluralism and rule of law and rejecting totalitarianism. However, as Hinnebusch argues, the Syrian public, wary of external threats, continued to support Assad, who launched several waves of repression in 2006 and 2008, and was re-elected in 2007.[107]

With regard to Syria's domestic affairs these years, Haddad names unemployment, a "social gap" between rural and urban areas, and a looming water crisis as the most important challenges or threats to social, political, and economic stability.[108] In the mid-2000s there was a projected exhaustion of Syria's oil reserves, which resulted in cutting subsidies on fuel. This affected a wide range of Syrians '[…] from farmers using irrigation pumps to taxi drivers and those who found heating oil priced beyond their means.'[109] Privatization resulted in degradation of the public sector. Agriculture declined because of the removal of subsidies, the neglect of agricultural planning and cooperatives, and the severe 2006-2010 drought. The cities saw an influx of not only migrating farmers, but also Iraqi refugees. In the real-estate sector, rent-control was abandoned and Gulf capital invested, resulting in a housing crisis.[110] Such was the situation on the eve of the Arab Spring.

- ***The Syrian revolution***

In March 2011, following uprisings in other countries, the Arab Spring reached Syria when protests in the province of Dar'a broke out. The protesters demanded an end to the Emergency Law, the legalization of political parties, and the removal of corrupt officials.[111] As the protests spread to other cities in Syria, the Syrian regime reacted with repression and force as Assad clung to power. The past years, Syria has floated into complete chaos, with innumerable factions with different backgrounds and interests fighting their own proxy wars as well as one another. The (then) United Nations high commissioner for human rights Navi Pillay estimated the death toll to be over 191.000 by late August 2014. Use of chemical weapons, sectarian strife, genocide and crimes against the humanity have been committed. More than three million Syrians have sought refuge in other countries – most importantly placing Syria's direct neighbors Lebanon, Turkey, and Jordan under heavy strain. An additional 6.5 million are reported to be internally displaced, accounting in total for almost half of the population.[112] Politically, the international community – the regional players, United Nations, EU, United States, Russia, China and more – has not been able to agree on appropriate measures. The UN has appointed several special representatives, sometimes with a joint mandate from the Arab League, but the representatives nor conferences like Geneva I and II have generated the needed results. In the meantime, Assad was re-elected on June 3, 2014,

[107] Hinnebusch, "Documenting Roots and Dynamics", 469.
[108] Haddad, "Political economy", 52-55.
[109] Hinnebusch, "'Authoritarian Upgrading'", 102.
[110] Ibid.
[111] CIA Factbook, available online via https://www.cia.gov/library/publications/the-world-factbook/geos/sy.html (accessed 11 December 2014).
[112] See http://www.reuters.com/article/2014/08/29/us-syria-crisis-refugees-idUSKBN0GT0AX20140829 and http://www.nytimes.com/2014/08/23/world/middleeast/un-raises-estimate-of-dead-in-syrian-conflict-to-191000.html for more details on these numbers and the UN reports on which they are based (accessed 11 December 2014).

receiving 88.7 percent of the votes in presidential elections that were disregarded by the international community as a "parody of democracy".[113]

This geographical and historical background is important to take into account when examining political water management by the Syrian state. Geographical features determine to a certain extent the need for water management at the international level – transboundary rivers and basins automatically push towards interactions between countries over water. But Syria's Ba'thist domestic policies also directly underlie water management at the international and national level. With these geographical, historical, and political backgrounds in mind, we first move to international water management and the question of water as a tool for diplomacy.

[113] http://www.theguardian.com/world/2014/jun/04/bashar-al-assad-winds-reelection-in-landslide-victory. See for a good overview of the current state of affairs and all parties involved B. Haddad, "Four Years On: No Easy Answers in Syria", *Jadaliyya* (18 and 30 March 2015), available via http://www.jadaliyya.com/pages/index/21117/four-years-on_no-easy-answers-in-syria-(part-1) and http://www.jadaliyya.com/pages/index/21237/four-years-on_no-easy-answers-in-syria-(part-ii) .

Chapter 3.Water as a tool for diplomacy – international water management

Water management by the Syrian government has been conducted at several levels. In the international political arena treaties exist between Syria and Turkey, Iraq, Lebanon and Jordan on shared water resources in the region. On the national, regional, and the towns and village levels water policies have been implemented and projects have been carried out. I will here focus on the international level – by which I mean intra-state interactions between Syria and its neighboring countries – and argue that international water management can render water a tool for diplomacy through the use of certain instruments. Diplomacy or hydro-diplomacy, a term that is used to specifically indicate cooperation over water[114], is consequently regarded here as an aim of political international water management, that can be reached via diverse canals.

The Syrian part of the Euphrates-Tigris River basin will be central in this chapter. As fits the general paradigm of water as a tool for conflict and cooperation, both difficulties and collaboration have marked relations between the riparian countries over the Euphrates-Tigris River basin.[115] The negotiations over the basin are exemplary of international, inter-state negotiations conducted at a high-policy level; the level that most scholarly and analytical literature has focused on. From this body of literature, some interesting findings on international water negotiations and hydro-diplomacy can be derived.

3.1 International negotiations literature

A 2013 report on hydro-diplomacy opened with the argument that the management of transboundary waters like the Euphrates is '[…] eclipsed by politics and complicated by power asymmetry.'[116] This reflects the highly politicized nature of water management. More often, however, negotiations literature has been written from within the ecological discourse, focusing on scarcity and consequent risks or possibilities. As already mentioned in the introduction to the literature, within this ecological discourse there are some interesting differences between the older 1970s-1990s literature and more recent writing from the end of the 1990s onwards. There has come to be more regard for positions within the MENA region itself. For example, the UN-Economic and Social Commission for Western Asia (UN-ESCWA) signals that climate change has become a prominent argument in the region in debates on sustainability in the past decade.[117] Moreover, the emphasis is increasingly placed on the cooperative potential of water, rather than its potential for conflict. In a more recent (2013) article than the ones outlined in the introduction to the literature (early 1990s), Pacific Institute director Peter Gleick has also somewhat backed out of the idea of actual great water wars. According to him, the media rather than academia propagates this image. Indeed, yet in 2013 the infamous CNN journalist Fareed Zakaria posed '[…] will ME upheavals in future be directed by water instead of oil? We often talk of a world of nuclear haves and have-nots,

[114] See for example the United Nations, http://www.un.org/apps/news/story.asp?NewsID=50458#.VS9sMZSsVNU .
[115] Riparian countries are countries bordering the rivers, in this Turkey, Syria, and Iraq. Iran is also connected to the basin because of tributary rivers and the mounting of the Euphrates and the Tigris in the Persian Gulf. However, because of the focus on Syria the Euphrates is more important here, and Iran is not taken into account.
[116] Pohl et. al., "Rise of Hydro-Diplomacy", 2.
[117] UN-ESCWA and BGR, "Inventory of Shared Water Resources in Western Asia" (Beirut 2013), 22.

but a world of water haves and have-nots could be even more dangerous. Water is the resource we need to worry most about.'[118]

Despite these shifts, then, the perceived increased risks of water-related violence – due to increasing scarcity – that may turn into international conflicts continue to be emphasized. Gleick argues that international mechanisms have not succeeded in reducing these risks.[119] Here I disagree with Gleick. As I will show with regard to Syria, international negotiations have resulted in political advantages and risk reduction for the riparian countries. In practice, the international sharing of water resources has allowed governments to politicize water resources for strategic international diplomacy. This political dimension should not be overruled by the scarcity discourse. Negotiations and hydro-diplomacy literature have understandably focused on basins or water flows rather than specific countries.[120] Here, however, I will focus specifically on Syria and its international water management vis-à-vis the other riparians.

3.2 Syria's international water management: the Euphrates-Tigris River basin

The Euphrates-Tigris River basin has been the focal point of international negotiations between the riparians – Turkey, Syria, and Iraq – since the 1960s onwards. It has even been argued that the Euphrates and Tigris waters lie at the core of the political and strategic interactions that have taken place between Syria and Turkey in the past half-century.[121] Hydro-political tensions have characterized the interactions, but no actual military conflict has arisen.

The Euphrates originates in the eastern mountains of Turkey, flows through Syria, and joins the Tigris flow in Iraq, where the rivers form the Shatt al-Arab, which discharges in the Persian Gulf. The Tigris originates in the same mountains, flows along a brief stretch of the Syrian-Turkish border, and then enters Iraq. The rivers cross several climatic conditions, from a Mediterranean climate in Turkey to highly arid zones in Iraq. The estimated population in the Euphrates basin is 23 million, in the Tigris basin 23.4 million. Regarding the Euphrates population, 25 percent or almost six million people live in Syria. For the Tigris basin, this is only fifty thousand people. Syria is very much dependent on the Euphrates, as more than fifty percent of the used water in the country is abstracted from the river. Both Euphrates and Tigris River flows show negative trends and heavy deviations regarding mean annual flow, and water quantity and quality are a source for concern in the entire basin. Both rivers have been impacted by large infrastructures. Also, historical joint agreements have addressed both rivers.[122]

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[118] See http://globalpublicsquare.blogs.cnn.com/2013/03/22/the-coming-water-wars/; published in 2013; (accessed October 2014).

[119] Gleick and Heberger, "Water and Conflict", 165, 159.

[120] See for example Daoudy, "Asymmetric Power", 359-389, A. Kibaroglu, "The Role of Epistemic Communities in Offering New Cooperation Frameworks in the Euphrates-Tigris Rivers System", *Journal of International Affairs* 61.2 (2008) 183-198, and A. Kramer, "Regional Water Cooperation and Peacebuilding in the Middle East", Regional Case Study: Middle East in: IFP Regional Cooperation on Environment, Economy and Natural Resource Management Cluster, Adelphi Research, and Initiative for Peacebuilding (2008) 7-42.

[121] See Daoudy, "Asymmetric Power", 359-360.

[122] See the highly informative "Inventory of shared water resources in Western Asia" (2013), a cooperation between UN-ESCWA and the German Federal Institute for Geosciences and Natural Resources (BGR); available via http://waterinventory.org/sites/waterinventory.org/files/chapters/Chapter-01-Euphrates-River-Basin-web.pdf

Figure 3. The Euphrates-Tigris River basin, *Encyclopaedia Britannica*

From the 1960s onwards, intertwined with state-building, all riparian countries started to develop plans to exploit the rivers. Syria alone constructed three very large dams (Tabqa, Ba'th, Tishreen), created its largest water reservoir Lake Assad (1970s), and initiated the Great Khabour Irrigation Project (2000s).[123] The Turkish political scientist Aysegul Kibaroglu divides water politics in the

(Euphrates) and http://waterinventory.org/sites/waterinventory.org/files/chapters/Chapter-03-Tigris_River-Basin-web_0.pdf (Tigris).

[123] Ibid., 62-65.

basin in four periods. While the 1920-1960 period was characterized by harmonious transboundary water relations, the consolidation of the riparian states between 1960-1980 brought increased competition and disagreements. Negotiations were mainly conducted by riparian technocrats. Between 1980 and the late 1990s, however, transboundary water issues became the stake of high politics. In 1980 the Joint Technical Committee was established between Turkey and Iraq, and Syria joined in 1983. Between 1983 and 1993 sixteen meetings were held. Yet, as Kibaroglu argues, 'a series of diplomatic crises over the development and usage of transboundary water erupted.'[124] In the fourth phase, from the late 1990s onwards, water issues were again relegated to the technical level and handled by intergovernmental networks, while a lack of mutual trust and confidence amongst the riparians remained in place.[125]

Kibaroglu's diplomatic crises fall within a negotiation cycle outlined by political scientist Marwa Daoudy. She argues that the negotiation process is characterized by both 'peaks of conflict *and* periods of mutual cooperation'[126]. Power is key to the negotiations. Interestingly, Daoudy distinguishes between structural power and bargaining power in the negotiation process. In the international arena, power asymmetry is a fundamental aspect of hydro-diplomacy and riparian negotiations. In the Euphrates-Tigris River basin, Turkey as the upstream riparian holds the keys to water allocation, benefitting from its geographical position. Bargaining power, however, provides the downstream riparians some leverage and narrows the power gap.[127] Syria has in this regard used "issue-linkage", which occurs when '[…] an upstream-downstream issue is linked to another issue and cooperation is generated by mutual concessions.'[128]

Turkey's Great Anatolian Project (GAP) provides an interesting example for studying Syria's international water management. Since 1980 upstream riparian Turkey has been working on the GAP, that is to result in irrigating twenty percent of the country's total irrigable area and producing 22 percent of its total hydro-electric potential. To achieve this, 22 dams and nineteen hydro-electric power plants are built on the Euphrates and Tigris.[129] It is estimated that the impact on the downstream countries will ultimately – the GAP is scheduled to be completed in 2047 – be quite significant. Although the exact plans have been revised repeatedly, both quantitative and qualitative water supply to Syria comes under pressure because of the GAP.[130] Most of the water conflicts and cooperation between Syria and Turkey are connected to Turkey's GAP. Four occurrences are most significant. In 1987, within the framework of the Protocol of Economic Cooperation, Turkey agreed to a minimum yearly average flow to Syria. Then, early 1990 Turkey drastically reduced the Euphrates flow to fill its Atatürk Dam, and a conflict loomed. In protesting the situation, Syria strategically joined forces with Iraq. In 2001 a Joint Communiqué was issued, under which the Syrian Ministry of Irrigation and the Turkish Regional Development Administration of the Southeastern Anatolia Project agreed to joint research and projects. The past ten years, UN-ESCWA research suggests that political relations between Turkey and Syria have improved. Bilateral visits,

[124] Kibaroglu, "Epistemic Communities", 187; see also 185-191.
[125] Ibid., 188-189.
[126] Daoudy, "Asymmetric Power", 362. Italics in original.
[127] Ibid., 363-365.
[128] Ibid., 365.
[129] Ibid., 367.
[130] This is not to mention possible consequences for Iraq, which has the most vulnerable position as the lowest downstream riparian.

a free trade agreement, and the Syrian-Turkish Strategic Cooperation Council Agreement (2009) – which stated that water is a focal point for cooperation and emphasized improvements to water quality and the development of joint water policies – provide opportunities for increased cooperation.[131]

Between Syria and Iraq, the negotiations history follows a roughly similar path. A hydro-political crisis erupted in 1974 when Iraq accused Syria of withdrawing too much water following a severe drought. Resumed precipitation, together with combined Soviet and Saudi mediation resulted in oral agreements between the countries. In 1990 Syria and Iraq reached a bilateral agreement on the water allocation of the Euphrates on a 42-58 percent ratio. Furthermore in 2009, following the regime change in Iraq, the countries signed 48 Memoranda of Understanding (MoU). In the MoU on water, they agreed to share and exchange hydrological and meteorological data and expertise.[132]

As can be seen when analyzing Syria's hydro-diplomacy, Syria has strategically managed its transboundary water resources at the international level in various ways, particularly vis-à-vis the hegemon in the basin, Turkey. It has on occasion allied with Iraq against Turkey to enhance its bargaining power. Also, throughout the negotiations, issue-linkage has been a vital strategy of Syrian international water management. Most importantly within this issue linkage, Syria has used the Kurdish issue as a collateral subject by rendering support to the PKK between 1984-1998.[133] Although this triggered several peaks of conflict – most notably in 1998 before Syria backed down from supporting the PKK – Daoudy argues that the subsequent need for collaboration with Syria on security issues was on the Turkish part the main driver to conclude the 1987 agreement on a minimum water allocation.[134] Additionally, Syria has tried to exert financial pressures on Turkey by appealing to European agencies and the World Bank to block investments in the GAP.[135]

Power asymmetries in the Euphrates-Tigris basin seem to have guided upstream-downstream interactions towards bilateral arrangements.[136] No basin-wide agreements are in place, rendering the current agreements more preoccupied with the short run and less stable. Additionally, the riparians disagree on international water laws, and external mediation like the combined Soviet and Saudi one between Syria and Iraq in 1974 has not necessarily lead to sustainable arrangements.[137] Nevertheless, this analysis of Syria's international water management in the Euphrates-Tigris basin does confirm the prevalence of cooperation over conflict. It shows how international water management can become highly politicized through issue-linkage and how water can thus become a tool to work towards diplomacy.

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[131] ESCWA -BGR, "Inventory", 70-72. See for more details and primary sources on the negotiations also Daoudy, "Asymmetric Power", 369-373.

[132] ESCWA-BGR, "Inventory", 70-72.

[133] The PKK, the militant Kurdish Nationalist Organization in Turkey, has waged armed struggle against the Turkish state for decades, calling for an independent Kurdish state. See for more information the BBC profile: http://www.bbc.com/news/world-europe-20971100 .

[134] Daoudy, "Asymmetric Power", 375-377. See also for more information A.T. Wolf and J.T. Newton, "Case Study of Transboundary Dispute Resolution: the Tigris-Euphrates Basin", Research by Oregon State University: Institute for Water and Watersheds (2007).

[135] Daoudy, "Asymmetric Power", 376-381.

[136] Ibid., 375.

[137] ESCWA-BGR, "Inventory", 70; Wolf and Newton, "Case Study"; Daoudy,"Asymmetric Power", 370, 380-381.

3.3 Politicizing Syria's international water management

Syria's water management in the Euphrates-Tigris River basin vis-à-vis upstream Turkey and downstream Iraq shows that conflict over water is not shunned but has not resulted in actual wars. Moreover, it indicates the difficulties and dependencies in cooperation within asymmetric power relations. And finally, it shows connections between the field of politics and the long-term geographical history, as I will briefly explain.

Syria's hydro-diplomacy has in the first place been determined by geographical features; the need for interaction over a shared water resource. Thus, structural geographical history – the relation between in this case a country and its environment – dictates the stage on which the play is set. But afterwards, human agency takes over. Looking at Syria's hydro-diplomacy in the Euphrates-Tigris basin, it is characterized by what I would label "pragmatic strategies". These pragmatic strategies are visible in Syria's alliance with Iraq against Turkey and in its use of issue-linkage. By linking water management, in which Turkey has a given advantageous position, to the Kurdish question, the Syrian state provided itself with leverage. Equally, Syria's appeal to international institutions can be seen as a pragmatic move rather than a constructive effort. The strategies seem not to be necessarily aimed at establishing long-term, lasting agreements or cooperation. Rather, they are – to some extent – ad-hoc reactions to actions by Turkey that may disadvantage Syria. Turkey is put under pressure, which eventually results in diplomatic dialogue or agreements. It has not, however, resulted in sustainable basin-wide agreements between the three riparians.

Water management at the international level is intertwined with power asymmetry. Consequently, it can be considered to relate to the political discourse with its (Marxist) distributionist view of the uneven allocation of resources. By emphasizing this discrepancy in (resource) wealth through its pragmatic strategies but also through its appeals to global institutions like the World Bank, the Syrian government politicizes international water management through the lens of the political distributionist discourse.

The development of Syria's hydro-diplomacy can roughly be related to the timeline of Ba'th domestic policies. From the 1960s onwards Hafez al-Assad and the Ba'th Party engaged in a process of state-building which included the development of water infrastructures and other forms of water management.[138] In these years, as Kibaroglu pointed out, the first tensions between the riparians appeared.[139] Hydro-diplomacy was mostly exerted via technocrats and technical meetings. After the consolidation of Assad's power, it seems that Syria emboldened its international water management in the 1980s and 1990s, bringing it more into the realm of international politics by the above-mentioned pressuring pragmatic strategies. Hafez' succession by Bashar was followed by some economic relaxation in Syria. Equally, relaxation in riparian relations and increasing cooperation between both Syria and Turkey and Syria and Iraq can be observed in the examination of the Euphrates-Tigris basin.

Since the Syrian crisis started in 2011, relations between Syria and Turkey have seriously deteriorated. Turkey has issued sanctions against Syria, but these have not touched upon its water

[138] In chapter 4 on national water management I will more extensively outline and analyze these domestic developments.

[139] See again the four periods Kibaroglu outlined: Kibaroglu, "Epistemic Communities", 185-191.

supply to Syria in the Euphrates-Tigris basin. The UN-ESCWA report mentions that the Syrian Ministry of Irrigation has reaffirmed that water agreements between the riparians have not been affected by the conflict. Nevertheless, they also report that continued meetings and negotiations seem to have come to a halt.[140] With the current levels of destruction and despair the country faces, it seems unlikely that Syria's hydro-diplomacy will soon be resumed let alone advanced.

3.4 Conclusions

Annika Kramer, a German environmental engineer, argued in her 2008 case study on regional water cooperation in the Middle East that water is often a starting point for dialogue, but that actual cooperation in water resources management remains difficult.[141] The examination of Syrian international water management, with a focus on its hydro-diplomacy in the Euphrates-Tigris basin confirms this argument. Tools such as issue linkage and strategic cooperation constituted pragmatic strategies. Employing these pragmatic strategies allowed the Syrian state to push for hydro-diplomacy within its international water management. Geographically-based power asymmetries were consequently (partly) neutralized, although they were at the same time accentuated through the Syrian government's emphasis on the maldistribution of resources. This resulted in Syrian agreements with Turkey and Iraq, but sustainable settlements and cooperation to guarantee continuing stability in the basin are not yet in place. Nevertheless, it can be concluded that shared water resources lead to diplomacy rather than big conflicts or war – smaller disagreements between the riparians left aside. The analysis shows how Syrian water management, in this case at the international level, must also be regarded in its connection to security; hydrological power asymmetry comes hand in hand with certain vulnerabilities and risks.

In this chapter, Syria has been presented as one abstract entity, as is the case in most of the mentioned negotiations literature. Much of the research on water and water management has focused on this abstract, international level. My arguments on water as a tool for diplomacy are based on a solid body of secondary literature. But as some scholars have argued, an examination of the national or local level may generate a completely different view and outlook.[142] On the national and local level research on water management has been conducted differently and less extensively. Trumbull argued that people view water first as a domestic issue, close to home, and only secondly as a global problem mediated through the state.[143] Zooming in from Syria as an abstract entity to the situation on the ground will provide insights in this smaller-scale, every day water management. In this third chapter, I argued that Syrian hydro-diplomacy evolved roughly alongside Ba'th domestic policies. In the next chapter, I will shift the focus to the smaller, national scale that is the focus context of this thesis, and closer examine the dynamics of national policymaking and its impact on water management. I will argue that water management at the national level has mostly been aimed at using water as a tool for development.

[140] ESCWA-BGR, "Inventory", 72.
[141] Kramer, "Regional Water Cooperation", 30.
[142] See e.g. Selby, Sowers.
[143] Trumbull, "Speaking of Water", MER254.

Chapter 4. Water as a tool for development – national water management

In October 2010, an article appeared in the New York Times, bearing the ominous title "In Mideast, a Drought of Biblical Proportions".[144] Its author reported from Ar-Raqqah in Syria on the drought that had struck parts of Syria and Iraq around the Euphrates River, causing the abandonment of hundreds of villages and the growth of refugee camps sheltering dispossessed farmers and their families throughout the region. Experts estimated that Syria's total water resources had diminished with fifty percent between 2002 and 2008. Additionally, the United Nations special rapporteur on the right to food, Olivier de Schutter, reported that the drought, which started in 2006, pushed two to three million Syrians into extreme poverty. Among the alleged causes of the drought, corruption and failed administration were mentioned.[145] In this chapter, I will further explore the Syrian water management at the national level – the level of the Syrian central government – with some links to the local level – the level of towns and villages. Hereto, I will examine the question how political water use can render water a tool for development. Development is in this regard closely linked to modernization; two important pillars in Ba'th state-building and domestic policies, as I will show. And how can water management be politicized at the national level? This is a second part of the larger argument of water as a tool for both cooperation and conflict, and can again be related to the Syrian state's security prism, as I will show.

4.1 Research on national water management

A different body of literature has focused on this smaller scale level of water management. The works of Francesca De Châtel, a journalist and editor specializing in water issues in the Arab world and the Mediterranean, are characteristic for this stream. De Châtel has conducted extensive research into the issue of water in Syria and water management by the Syrian regime, and has written many highly useful articles and books on the subject. She lived in Damascus from 2006-2010 and bases her research on her on-the-ground experiences, thus providing a valuable insight in the period just before the Syrian uprising. In her works, she advocates that mismanagement of water resources by the Syrian government, with its accompanying consequences, has been an important cause of the current conflict.

In one of her articles, De Châtel describes the fate of Wadi Barada (the Barada valley), the Barada River, and the village Kufayr al-Zayt, situated in the west of greater Damascus.[146] The Barada River formed the main source of water for Damascus and the Ghouta plain. From the 1960s onwards, there was an enormous population growth in Damascus and its suburbs – from 700.000 people in 1950 to approximately seven million in 2011. This resulted in drinking water shortages, which the government tried to compensate through pipelines and boreholes and a new distribution system. Soon after these constructions, the Barada River ran dry from May until December. The supply of drinking water became unreliable, there was no water available for agricultural irrigation, and the tourist industry in the valley ran dry while unemployment ran high. Villagers encountered

[144] R.F. Worth, "In Mideast, a Drought of Biblical Proportions", *New York Times (*23 October 2010).
[145] Ibid.
[146] F. de Châtel and M. Raba'a, "Waterless Wadi Barada. Manufacturing Scarcity in a Syrian River Valley", *Middle East Report* 271 (2014) 10-17. See also figure 2 (p. 19) for irrigation around Damascus.

unresponsiveness and some suppression from the government when they voiced their complaints in the 2000s. Meanwhile, new Damascene suburbs situated closely to Wadi Barada enjoyed a constant supply of good quality water drawn from groundwater reserves in a different area.[147]

When protests in Kufayr al-Zayt occurred in April 2011, following the larger uprising in Syria, restoration of the river and permanent access to clean drinking water were the first demands to the government, rather than the fall of the regime. When the regime did not respond to the demands, local militias were set up, and the Syrian army eventually moved in to crush the resistance. After this, with its location in the vicinity of Damascus, the Barada valley has not seen much fighting since 2012 and has remained (nominally) under government control. As the revolt sank into civil war, an enormous influx of internally displaced civilians from war zones has resulted in a more than doubling of the population in Wadi Barada. The already problematic water supply has thus come under even more severe pressure, alongside food and electricity supplies.[148]

Research like this, carried out on a small, local scale provides insights in the larger problems here at stake. It shows how at the smaller level local grievances were linked to the larger Syrian uprising. De Châtel does not stand alone in her argument about the link between water scarcity and water management and the current crisis. From 2013 onwards, hydrologists and political experts alike have noted (possible) connections between the severe drought of 2006-2011 that generated mass migration to urban centers, and the uprisings that – as they argue – were sparked by angry, unemployed men in the cities. While this line of argument seems perfectly valid, it often lacks an empirical base. Unlike De Châtel, who conducted extensive research on the ground, most of these claims are made by media or political scientists who deduct their ideas from secondary literature.[149] This does not render their arguments invalid, but their argumentation has a limited focus on crisis situations, without an outlook on the broader backgrounds of water management. Reports that focus on security, risks, and vulnerability of Syria's natural resources, appearing both before and during the conflict, stress the perils of increased drought 'due to a combination of man-made and natural factors.'[150] Moreover, they all urgently recommend the addressing of the total array of Syria's societal, environmental, and climatic problems.[151] This is highly important. Focusing just on the current situation obscures political and societal backgrounds. The works of De Châtel thus form the starting point from which to move into a deeper analysis. A more integrative and systematic approach to the discussion of water (mis)management by the Assad regime, its historical connection to development, and its relation to Syrian politics is needed.

4.2 Hydraulic mission: water management and development

[147] Ibid., 15-16.
[148] Ibid., 16-17.
[149] See for example J. Hammer, "Is a Lack of Water to Blame for the Conflict in Syria?", *Smithsonian Magazine*, June 2013; Gleick, "Water, Drought, Climate Change", 1-34.
[150] W. Erian, B. Katlan and O. Babah, "Drought vulnerability in the Arab region: Special case study: Syria" (Geneva: U.N. International Strategy for Disaster Reduction, 2010), 16.
[151] See for example F. Femia and C.E. Werrell, "Climate Change Before and After the Arab Awakening: The Cases of Syria and Libya", in: C.E. Werrell and F. Femia (eds.), "The Arab Spring and Climate Change. A Climate and Security Correlations Series", *Center for American Progress, Stimson, The Center for Climate and Security* (February 2013), 28.

Water can also become politicized through development policies. National water management by the Syrian state since the advent of the Ba'th Party will be examined. In the quest for state-building and modernization, agricultural – thus, water related – policies fulfilled a key role. These ushered the Syrian government into what has been termed the hydraulic mission to lift the Syrian population from poverty via the modernization of agriculture. The development of the electricity sector was also closely connected to this.[152]

In the 1950s Syria was a predominantly agricultural country, with two million peasants out of a then population of 3.5 million.[153] The British historian and journalist Patrick Seale describes the 'degraded peasantry' as Syria's 'most fundamental problem'[154]; highly dependent on their landowners and uncertain rainfall, especially on the plain around Hama. Farmlands were often neglected and no investments in durability were made, while the city of Hama lived 'parasitically' on the surplus of the lands.[155]

Socioeconomic improvements predated Hafez al-Assad's rule, but took a flight with Assad in power in the late 1960s and 1970s. Infrastructural projects like the building of roads, railways, dams, and bridges were initiated, and the life of the peasantry was to be improved by investments in agriculture, the main focus of the Ba'th Party. The American geographer and anthropologist Jessica Barnes as well as De Châtel have traced Ba'th's agricultural and water policies since its ascent to power in 1963.[156] Barnes emphasizes the party's member's rural origins and subsequent strong ties with the rural sector, arguing that 'Al-Assad, the first ruler in Syria's history of peasant origin, cemented the state-rural relationship.'[157] The importance of the agricultural sector is reflected in figure 4, which shows that it accounts for 87 percent of water withdrawal. The hydraulic mission to develop Syria was most significantly exerted by the establishment of centrally managed irrigation schemes with dams, and support for the development of groundwater resources. Another key agricultural policy objective was a central planning strategy for agriculture with subsidization of strategic (water intensive) crops like wheat and cotton. This was meant to result in self-sufficiency in the main food staples. Figure 5 illustrates the quantity of used land per crop. Figures estimate that between 1960 and 2000 twenty billion dollar, or twenty percent of the country's total investment resources, was spent on agricultural projects.[158]

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[152] E. Elhadj, *Experiments in Achieving Water and Food Self-Sufficiency in the Middle East: The Consequences of Contrasting Endowments, Ideologies, and Investment Policies in Saudi Arabia and Syria* (Dissertation; Boca Raton, Florida 2006), 139 (page via Google Books).

[153] According to the CIA Factbook the population in 2014 numbered almost eighteen million. This includes the Syrians who have fled the country since the beginning of the crisis.

[154] Seale, *Asad,* 44.

[155] Ibid., 45.

[156] See J. Barnes, "Managing the Waters of Ba'th Country: The Politics of Water Scarcity in Syria", *Geopolitics* 14 (2009) 510-530; F. de Châtel, "Leaving the Land: The Impact of Long-Term Water Mismanagement in Syria", in: Châtel, F. de, G. Holst-Warhaft, T. Steenhuis (eds.), *Water Scarcity, Security and Democracy. A Mediterranean Mosaic* (published by Global Water Partnership Mediterranean, Cornell University and the Atkinson Center for a Sustainable Future, 2014) 86-96;

[157] Barnes, "Managing Waters", 521.

[158] De Châtel, "Leaving the Land", 87-88.

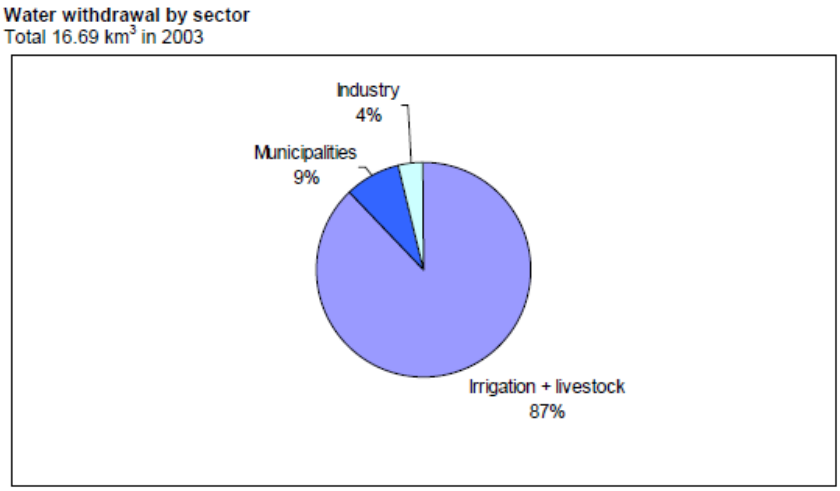

Figure 4. Aquastat: Water withdrawal by sector (2003)

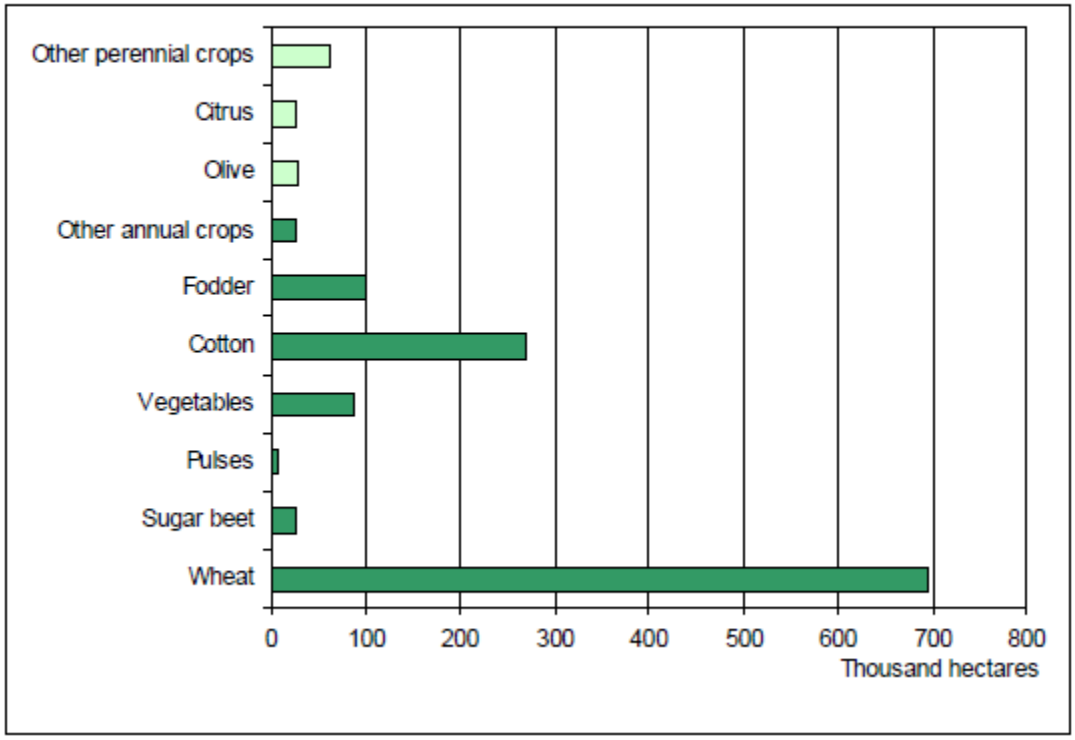

Figure 5. Aquastat: Quantity of land and irrigated crops (2000)

Irrigation infrastructure expanded in a high pace from 1963 onwards. Between 1963 and 2001 around 160 dams were constructed, with 28 new dams scheduled within the Ninth Five Year Plan 2001-2005. New projects were planned and launched right until the start of the revolution: in March 2011 several new hydropower dams were being planned and built on the Euphrates and Orontes Rivers, and a 2.1 billion dollar Tigris River program was launched.[159] The building of dams, in particular in the case of the Euphrates Basin Project of 1968, is regarded among scholars as a "showcase of Ba'thist development policies".[160] By bringing electricity to villages and by boosting agricultural production and local industries, the regime aimed not only at social change and modernization, but also at establishing political control over unruly regions. Using water as a tool for development, than, should strengthen centralization efforts and should provide the state with a sense of authority and respect.[161] This again relates to the Syrian government's political security prism: strengthening the political power of the regime.

With these top-down measures to modernize Syria, however, came increased stress on water resources. The Tabqa Dam project in the Euphrates basin did not succeed in creating 640.000 hectares of additional fertile land – as was hoped for and planned – but rather brought to light the problem of rapid salinization due to a lack of proper irrigation and drainage. The establishment of industries led to pollution of ground water. A cement factory built near Tartus caused the destruction of thousands of olive trees among a valuable stretch of the Mediterranean coastline.[162] Following Syria's economic boom in the 1970s, money was pumped into the agricultural and electricity sector, however, Haddad critically poses that investment chaos arose, whereby '[…] experts from Bulgaria and Romania, in addition to local experts, would prepare feasibility studies in a hasty manner, not considering all the practical aspects of the projects.'[163] This resulted in improper locations or improper soil for agricultural projects and no consideration of the environment. Moreover, a severe drought in the 1980s indicated Syria's ongoing heavy dependence on rainfall. The country had to import costly food, experienced severe power cuts due to a fall in the Euphrates flow, and thirty percent of the sheep had to be slaughtered because of a lack of grazing grounds in the last decade(s) of the twentieth century.[164] When the state pushed forward its liberalization agenda and reversed its agricultural reform policies from the 1970s, large private farms emerged, that appropriated much of the underground water.[165]

The United Nations Food and Agriculture Organization (FAO) runs a highly useful global water information system, Aquastat. A 2008 report on Syria offers an insight in state water management before the current crisis, and provides some alarming figures. In 2003, the total annual water withdrawal was estimated at 16.69 km^3/year, which is an increase of 31 percent compared to the total annual water withdrawal of 1993. Between 1995 and 2005 the annual per capita water availability decreased from 1.791 m^3 to 882 m^3 – below the water scarcity line of

[159] Barnes, "Managing Waters", 524; De Châtel, "Leaving the Land", 88.
[160] Ibid., 88.
[161] E.g. the Jazira region in the northeast of Syria, where the Euphrates Basin Project was launched. De Châtel, "Leaving the Land", 89.
[162] Ibid., 445-448.
[163] Haddad, *Business Networks*, 93-94.
[164] De Châtel, "Leaving the Land", 451.
[165] A. Hanieh, *Lineages of Revolt. Issues of Contemporary Capitalism in the Middle East* (Chicago: Haymarket Books 2013), 160.

1000m^3 per person every year. Syria usually has around 15.6 billion m^3 water per year at its disposal, but with its steady increase in water use has built up an annual deficit of 3.5 billion m^3. The deficit is mostly solved by heavily tapping into groundwater reserves; by 1997 five of the seven water basins had a negative water balance. 60.1 percent of irrigation water comes from groundwater. In 2000 28.5 percent of agricultural crop areas were dependent on irrigation, with crops such as sugar beet and cotton and the citrus area being entirely irrigated.[166] The availability of groundwater is thus vital for the Syrian economy, but has in the past years come under extreme pressure.

For a closer examination of the developmental use of water and its accompanying consequences, we turn again to the basin scale. Whereas the Euphrates-Tigris basin was central in the previous chapter, water management in the Orontes River basin will be the focus here. Although this basin is also shared by three riparian countries and bilateral and international agreements are in place, it makes an interesting case study at a different geographical and geopolitical level. Employing a national scale and conducting a brief case study of cooperation in the Orontes basin allows for a switch to inductive research.

4.3 Syria's national water management – the Orontes River basin

The Orontes River starts from springs in Lebanon, flows south-north through Syria, thereby passing the cities of Homs, Hama, and Idleb, and debouches into the Mediterranean Sea via Turkish soil. In 2010 it was estimated that the basin had a population of approximately 5.7 million, of which 4.2 million Syrians.[167] According to a 2014 Swiss research of the basin, the combined surface water and groundwater supplies accounted for a quarter of the agricultural production and a third of the industrial production in Syria prior to the conflict.[168] Water infrastructures dating back as far as the Bronze Age bear witness to the river's historical significance in Syria. Hama is renowned for its *norias*, large wooden waterwheels that raised water to aqueducts that were used for irrigation and drinking water supply. They are claimed to date back to 1100 BC and some have survived throughout the ages.[169]

The Orontes basin became one of the first industrialized regions in Syria from the late 1940s onwards and formed the first focus for the Ba'th Party's agricultural projects. Farmers who cultivated irrigated lands in the Orontes basin benefited from the agricultural reforms and policies of the Party, until in the second half of the 1970s the Euphrates became the priority of the government.[170] Irrigation for agricultural products expanded rapidly over the past thirty years. The basin was one of the prime tree production regions in Syria and accounted for a large part of the livestock production. Prior to the current conflict, 95 percent of urban and 89 percent of rural

[166] Data and numbers from FAO Aquastat (accessed 8 January 2015), http://www.fao.org/nr/water/aquastat/countries_regions/SYR/index.stm. See also Syria Today (January 2010), 36-37, and De Châtel, "Leaving the Land", 88.
[167] ESCWA-BGR, "Inventory", 230.
[168] Swiss Agency for Development and Cooperation (SDC) and Graduate Institute of International and Development Studies Geneva, Report "Syria: the Impact of the Conflict on Population Displacement, Water, and Agriculture in the Orontes River Basin", February 2014, 7.
[169] See http://www.bbc.com/news/world-middle-east-17868325.
[170] Report SDC, "Impact Conflict", 7.

households in the basin were connected to the public water supply system, with the Ministry of Water Resources claiming in 2010 that the availability of drinking water per capita in most rural areas ranged from fifty to 75 liters per day. According to the latest figures – dating, however, from 1999 – the Orontes basin accounted for twenty percent of Syria's water withdrawal (with the Euphrates-Tigris basin accounting for fifty percent). Therefore, water management of the basin is or should be of vital interest.[171]

Figure 6. Map of Syria (2001) with the Orontes River flowing from Lebanon through western Syria, bypassing among others the cities of Homs, Hama, and Idleb, *Arab Culture and Civilization*.

[171] Ibid., 14-23; J. Dagge, "Parting the Waters", *Syria Today: Focus section* (January 2010), 28 (available online via http://francescadechatel.com/wp-content/uploads/2014/05/Out_of_its_Depth.pdf).

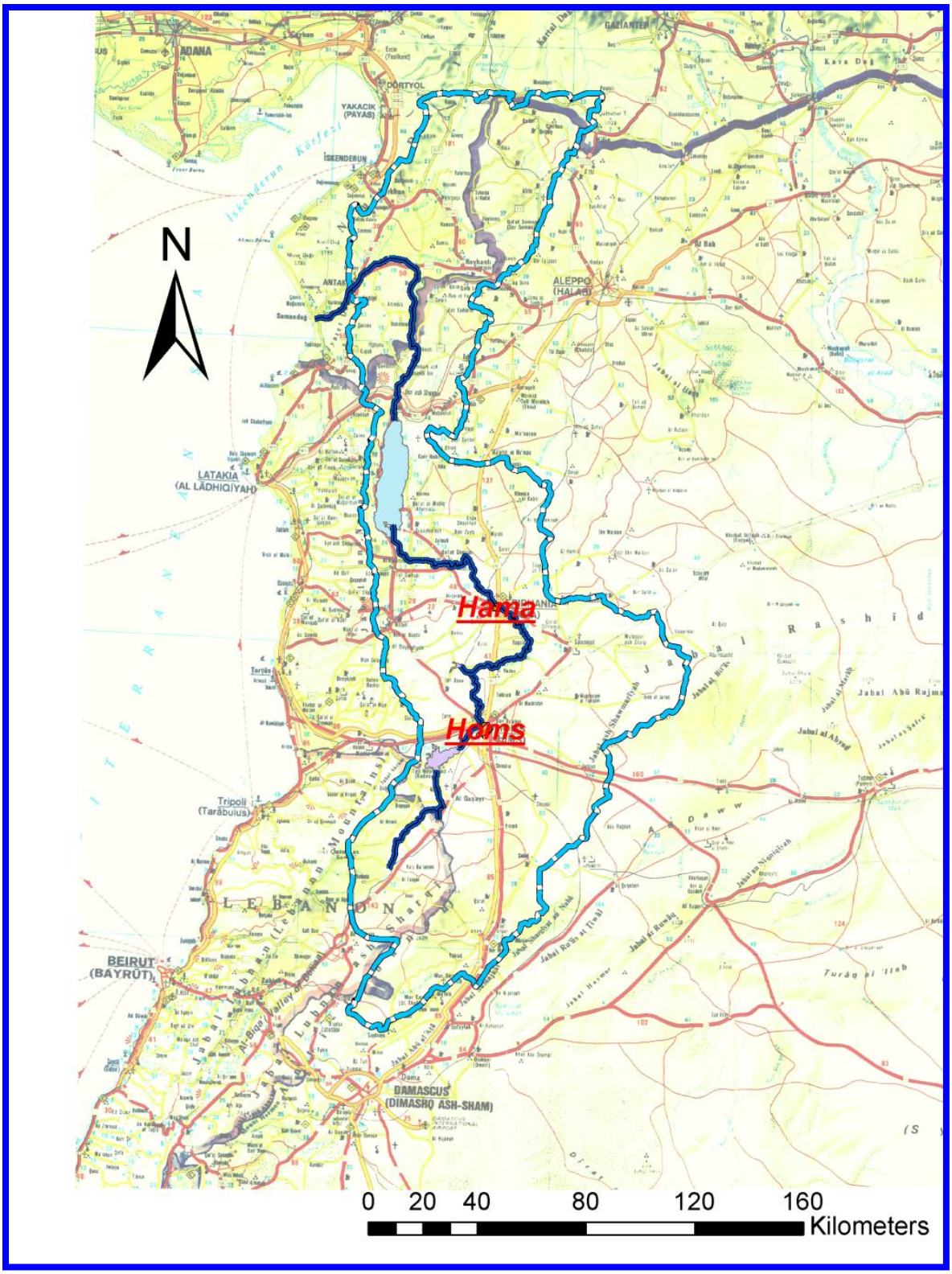

Figure 7. SDWC (2008): Orontes River Basin with the positions of Hama and Homs specifically highlighted.

All three riparian countries (Lebanon, Syria, Turkey) have intensively used the river for agricultural purposes and additional irrigation projects have put pressure on the resources. Comparable to the Euphrates-Tigris basin there are no basin-wide agreements between the three riparians in place, but bilateral arrangements on water allocation and water infrastructures do exist. Syria and Lebanon have for several years cooperated in the Lebanese-Syrian Joint Committee for Shared Water. In 1994, Syria and Lebanon signed the Agreement on the Distribution of Orontes River Water Originating in Lebanese Territory, under which Lebanon received a certain amount of water, with the figure being adjusted downwards relative to the reduction in flow. Also, the countries agreed that already operational wells were allowed to remain in use, but new wells were not permitted.[172] Since 2009, a Memorandum of Understanding exists between Syria and Turkey, concerning the construction of the joint Orontes River Friendship Dam. The MoU was linked to the establishment of the Syrian-Turkish Strategic Cooperation Council in the same year, mentioned in the previous chapter. However, experts have generally indicated that cooperation between Syria and Turkey has been more strained because of 'the status of their relations in general, and discussions over the sharing of the Euphrates River in particular.'[173]

Regarding the Orontes basin, Syria has been criticized by international organizations on the intensification and long-term sustainability of its water use.[174] Groundwater abstraction is the most important component of Syrian water management in the Orontes basin. Since the 1960s, following the use of diesel-motor pumps, extraction rates have soared while the groundwater table has rapidly dropped. While previous small extractions for drinking water were naturally replenished, fundamental changes took place from the 1960s onwards. Figures from the National Agricultural Policy Centre (NAPC) estimate that lands irrigated by groundwater more than doubled between 1985 and 2005, whereas the number of wells increased between 1999 and 2007 from 135.089 to 213.335.[175] According to a NAPC 2010 report, the Orontes basin has an annual water deficiency of 1.2 billion m^3.[176] Water experts (both foreign and local) have been warning about the sustainability of the increased groundwater use for several years. A Dutch hydro-geologist argues that due to the advent of electricity in the 1970s and the explosion of wells in the 1980s withdrawal rates in the Orontes basin in the 1980s and 1990s were five times higher each decade than the previous decade, leading in some areas to a drop in the groundwater table from fifty to hundred meters between the 1950s and 2000.[177]

Another problematic component linked to water management in the Orontes basin is water pollution. Aquastat reports that surface and groundwater are polluted by industrial and municipal

[172] See for these figures United Nations Economic and Social Commission for Western Asia (UN-ESCWA) and Bundesanstalt fur Geowissenschaften und Rohstoffe (BGR), "Inventory of Shared Water Resources in Western Asia" (Beirut 2013) , chapter 7. Orontes River Basin, 224-243, available via http://waterinventory.org/surface_water/orontes-river-basin and http://francescadechatel.com/wp-content/uploads/2014/05/Out_of_its_Depth.pdf (accessed 16 December 2014).
[173] ESCWA-BGR, "Inventory", 224; http://waterinventory.org/surface_water/orontes-river-basin.
[174] Ibid.
[175] Syria Today, 48.
[176] NAPC Report 2010, 7, available online via http://www.napcsyr.net/dwnld-files/periodical_reports/en/sofas_2010_en.pdf (accessed 8 January 2015).
[177] Syria Today, 48-49. See also the argument of Theib Oweis, water specialist at the International Centre for Agricultural Research in Dry Areas (ICARDA) in Syria Today, 47 (available via http://francescadechatel.com/wp-content/uploads/2014/05/Out_of_its_Depth.pdf)

waste in all areas near larger settlements. In the period 1995-2000 some waterborne diseases such as typhoid and hepatitis increased tenfold, while diarrhea more than doubled as compared to the period 1991-1995. Aquastat suggests that this is due to scarcity of water resources, a lack of infrastructure to treat wastewater, a general lack of awareness regarding pollution, and the non-existence or failure to adopt regulations to protect the environment and public health. This is a nation-wide phenomenon.[178]

In this examination of the Orontes basin we see different issues than in the previous chapter where the Euphrates-Tigris basin was the focus. There, international water allocation was the dominant bottleneck, with water quantity and quality coming in second. In the Orontes basin, both water quantity and quality are identified as major issues. This indicates the earlier noticed discrepancy between the environmental field and (geo)politics. Studies that solely focus on international clashes or collaboration largely bypass smaller-scale practical and ecological water issues of quantity and quality. In a similar vein, if only the local or ecological scale is taken into account, larger water politics and implications are overlooked.

- ***Perceptions of water management***

Following the reports and statistics on the Orontes basin and the state of the wider Syrian resources, an image arises of Syria as a country overly depending on unreliable rainfall, rapidly depleting its limited resources, with little feeling for long-term consequences. While water historically played an important role in Ba'th policies, in recent years the dominant attitude of the state to water seems to be one of neglect and indifference. This matches with the image that comes forward from the works of De Châtel. In an interview in 2010 with the Syrian minister of Irrigation, Nader al-Bunni, De Châtel asks about Syrian population growth and water availability in the future. After describing some of the measures the government has taken, he answers 'I am confident we will reach 2035 in good shape. If you ask me about 2050, however, I would say that we should leave some work to our children.'[179]

On a different note, other scholars stress the active role of the Syrian state in creating a narrative of helplessness vis-à-vis water scarcity and water management. Barnes argues that the Syrian government created scarcity through its specific agricultural policies and consequently presented water scarcity as being one of the country's main developmental problems, resulting from geographical – natural – factors rather than mismanagement.[180] Thus, geographical or natural facts and data seem to be turned into a political water narrative communicated by the government. Whereas in the previous chapter the government politicized international water management through an emphasis on the uneven distribution of water resources, at the national level a neo-Malthusianist, ecological approach seems to prevail.

Even though water scarcity and the overstretching of resources became increasingly apparent in the 1990s, the government has continued its expansion of agriculture and irrigation, also after the death of Hafez al-Assad. Semi-arid areas around the Euphrates and the Khabour River continued to be turned into land for intensive agriculture, resulting in pumping the water table dry.

[178] See http://www.fao.org/nr/water/aquastat/countries_regions/SYR/index.stm
[179] See for the interview http://francescadechatel.com/wp-content/uploads/2014/05/Out_of_its_Depth.pdf
[180] Barnes, "Managing Waters", 510-511.

Also, irrigation systems and soil conditions continued to deteriorate.[181] A local journalist argued in 2009 to the International Crisis Group that the 2006-2010 drought was a man-made disaster that was being ignored by the central government. While the government continued to blame it on climate change, the depletion of water supplies has increasingly become an irreversible process.[182]

What perception of water problems did the Syrian government have? As has already been mentioned, the Syrian government at the international level propagated an image of asymmetric water distribution, and at the national level presented water scarcity as a result of population growth and climate change. The 2010 report of the government-affiliated National Agricultural Policy Center is a good example of this, breathing a political message through the ecological discourse. In its introduction it states that agriculture is considered 'a major pillar of the sustainable development [of Syria]'.[183] Whereas it characterizes Syria as a country with meager water resources due to increased water consumption and recent climatic changes, it emphasizes that the Syrian government tries its best to improve water management and water harvesting. Deficiencies in the water sector are largely caused by unorganized well-digging and water-pumping by the Syrian population and the absence of modern irrigation, which the government tries to counter. In accordance with its tenth Five Year Plan (2006-2011), the Syrian government implemented several policies to reduce water scarcity and maintain the sustainability of the available resources. The government issued a Water Law to organize the use of resources, modernized irrigation techniques, and banned the unorganized digging of wells as well as addressing the situation of illicit wells. To implement these policies, funds providing credits to peasants were set up. Also, cooperation with international experts was established.[184] This is another example of a Syrian pragmatic strategy that can be used to advance its own agenda by diffusing an image of water scarcity. Hereto, I will conduct a brief case study of one of such international collaborations between the Syrian Ministry of Irrigation and several Dutch companies.

4.4 Politicizing Syria's national water management – a case study of the SDWC

- ***Cooperation with international partners***

An important international collaboration was the Syrian-Dutch Water Cooperation (SDWC). The Netherlands has since 2002 been active in the Orontes basin, working together with the Syrian Ministry of Irrigation. The SDWC is interesting to examine here, because it was set up broadly, with a basin-wide focus and different project phases. It involved a range of Syrian ministries and local officials and ran for ten years. The (Dutch, Arabic, and English) reports of the SDWC as such provide new and unique insights into Syrian water politics and water management at the regional and local level, and they are useful as a new angle from which to analyze water management by the Syrian government and its surrounding narrative. They also form a test case for Barnes' ideas concerning the political construction and spatial representations of scarcity. Moreover, from the Syrian side there has been written a booklet about the water problems in the Orontes basin and the

[181] A. Lund, "Drought, Corruption, and War: Syria's Agricultural Crisis", *Carnegie* (18 April 2014), available online via http://carnegieendowment.org/syriaincrisis/?fa=55376 (accessed 12 December 2014).
[182] Lund, "Drought, Corruption, and War".
[183] NAPC Report 2010, XI.
[184] Ibid., 7-8, 70-72.

cooperation with the Dutch companies on that. Therefore, an analysis of the SDWC offers a practical view on how the Syrian state has used water as a tool for development.

The SDWC has since 2002 strived to improve the water management of Syrian surface- and groundwater resources in the Orontes basin. The project aimed at developing and transmitting knowledge, as well as providing technical and institutional support. This happened via two tracks: the modelling of ground- and surface water, and the introduction of Integrated Water Resource Management (IWRM) with stakeholders. The direct counterpart of the Dutch in the SDWC was the General Commission for Water Resources, a part of the Ministry of Irrigation. The Water Resources Department of Homs functioned as the coordinating unit for the Orontes basin. The Syrian State Planning Commission, that is responsible for the Syrian Five Year Plans but also for the coordination, strategic planning, monitoring, and evaluation of the water sector and donor coordination was an important associated organization. Also, a range of ministries like the Ministry of Agriculture and Agrarian Reform (MAAR), the Ministry of Housing and Construction (MHC), and the Ministry of Energy (MOE) was involved.[185]

The SDWC project was divided into three phases. First, a groundwater model was established to contribute to the knowledge and awareness of the water situation. In the second phase, a surface water model was also developed. The third phase of the SDWC, planned from 2010-2012 but as per 30 May 2011 temporarily postponed, furnished in the introduction of IWRM as a participative process to the stakeholders. IWRM was pioneered in three pilot areas, Mhardeh (Hama), Khan Shaykhun (Idleb), and Qusair (Homs).[186]

The models brought to light the urgency regarding a freshwater deficit and indicated problems with both the quantity and the quality of the water in the basin.[187] The most urgent issues identified were unsustainable groundwater abstraction (mining), unlicensed wells, inefficiencies and water loss in irrigation, deterioration of ecosystems, pollution of surface and groundwater resources, and limited awareness and knowledge amongst the Syrian population.[188] The experts noticed that price guarantees and cheap diesel and electricity had allowed farmers to withdraw more freshwater than could be naturally replenished. Additionally, protectionist agricultural policies with few adaptions to changing circumstances or diversity in geohydrological conditions – as indeed De Châtel argued as well – have worsened the problems. They also notified the lack of efficient cooperation between the involved Syrian parties; while the Syrian Ministry of Irrigation served as the official counterpart, some responsibilities fell under the ministries of Agriculture, Environment, Housing, and Finance. The government wanted to work towards a national water strategy, thus centrally determining to a large degree what is happening at the local level. However, the Dutch experts argued that practical experience on the ground should serve to guide national policies. For example, a central Syrian government initiative was introducing a modern irrigation program that provided loans to farmers to switch to more efficient irrigation systems. But because

[185] G. Bouma and K. Roest (SDWC and Ministry of Irrigation; General Commission for Water Resources), "The Application and Introduction of IWRM in the Pilot Areas in the Orontes Basin" (November 2010), i.
[186] See the maps at the beginning of this chapter.
[187] G. Bouma, J. de Sonneville, K. Roest, "Water en bodem onder druk in Syrië. Nederlandse kennisinstellingen actief onder de vlag van SDWC" ("Water and soil under pressure in Syria. Dutch knowledge institutions take actions under the banner of the SDWC"), *Bodem* 5 (2011), 13-14.
[188] O. al-Shamali and Homs Directorate of Water Resources, *Integrated Water Resource Management Plan Orontes Basin*, 14-19.

it was a national level program, it was applied in retrospective with too much rigidity at the local level, whereby farmers with illegal wells could not get a loan to switch their irrigation system.[189]

The SDWC operated at two levels: the national and the governorate. At the national level, the cooperation aimed at strategic policy development and the creation of an enabling environment and required legislation for the local level. At the governorate level, the main aim was the application of IWRM in the pilot areas, whereby in each area issues were identified and solutions proposed. Through the implementation of IWRM, the development of a national and regional water policy should enforce mutual coordination and cooperation between the different parties and levels.[190]

When the project was put on hold in May 2011, some important steps had been taken. The operational water management was to move from MoI to MAAR, who had requested SDWC assistance in advancing the development of a national water policy. A meeting between MoI and MAAR ministers on the continuation of the program beyond 2012 – the initial end-date of the cooperation – had taken place, and Syria was considering co-financing fifty percent of the program. These were considered positive developments. Moreover, the documents of the SDWC inform that the World Bank had taken an interest in the program and considered developing other projects in Syria. Other parties like the Swiss Development Cooperation were equally willing to invest in the water sector and were looking for possible cooperation.[191]

- ***Critique on cooperation with international partners***

Critique on international cooperation and projects like the SDWC has been voiced in several ways. Most interestingly, Barnes argues that documents of international organizations are often produced in consultation with the concerned ministries, resulting in the framing of Syria's resource problem as one of natural scarcity. By limiting this frame of reference to geography and nature, powerlessness and inequality are emphasized, rather than human agency – in this case the role of the Syrian government. She undertakes a quest to '"unmask" the social and political complexities underlying Syria's natural resource problem'[192]. She concludes that population growth – often named as the most important cause for increased water demand – puts far less pressure on Syria's resources than the government's continuous promotion of irrigation in the agricultural sector.[193] Hence, a resource problem with a political basis rather than an ecological basis. However, the Syrian government succeeds in naturalizing scarcity through framing and presenting the country's resources in a static way, which then leads to water management policies responding to that static view. Besides, water scarcity is being disconnected from its political, international, and historical context. The spatial (geographical, natural) division of water resources as outlined by the state forms a geographical frame within which the conceptualization of scarcity and plans to address it are being formed.[194] By framing its resource problems this way, the Syrian state communicates

[189] Bouma, De Sonneville, Roest, "Water en Bodem", 14; interview with De Sonneville, 13 February 2015.
[190] Ibid., Bouma and Roest, "Application and Introduction IWRM", 1.
[191] SDWC, "Status report on SDWC rounding-off activities due to the temporarily postponement of the program as per 30 May 2011" (December 2011), 3-4.
[192] Barnes, "Managing Waters", 513.
[193] Ibid., 515.
[194] Ibid., 516-520.

from within the ecological discourse. This shifts the blame from human-induced water mismanagement to a simple natural scarcity of water resources. Additional critique on cooperation with foreign experts has focused on the discourse of power asymmetry it reinforces. Equally, concern has been voiced over international water policies that may lead to exploitation at the local level.[195] What is interesting, is that we see how the Syrian government frames its water problems in different ways at different levels or in different contexts.

- ***Politicizing national water management – a view from inside through the SDWC***

How do these critiques on the framing of the Syrian water problem relate to the practice of water management? Because of their extensive fieldwork in Syria and their contacts with different Syrian officials, the SDWC and their experiences provide insights here. Their reports sketch a quite nuanced view of the role of the Syrian government. In 2010 the experts signal a developing "sense of urgency" amongst the Syrian government regarding the water situation in the country. Whilst they are critical of the human contributions to water mismanagement, they are also (modestly) positive about what they perceive as a shifting attitude of the government towards the importance of water management. The Syrian State Planning Commission would introduce a section specifically addressing water problems in its eleventh Five Year Plan (2011-2016). Moreover, it is argued that the State Planning Commission increasingly regards water scarcity as an urgent question to which funds must be allocated.[196]

The technical and practical reports and papers of the SDWC provide insights from a different angle into the role of the Syrian government in water management and its water narrative at the national level. Three important lines can be discerned about Syrian water management in the Orontes basin. First, the strong lack of cooperation and consequent lack of control between the different involved parties. Second, the Syrian wish for a national water strategy. This brings to mind the national agricultural policy that did not fit the diversity of the country and resulted in a lack of economic alternatives for part of the Syrian population. And third, the non-compliance to freshwater agreements with Lebanon and Turkey. As local water experts argued, the agreements are more 'gentlemen's agreements – generally observed, but not set in stone.'[197] This carries the threat of international political instability. Hence – again – a role for questions of security.

Particularly the first and the second observation offer practical information to complement or counter academic arguments. Cooperation between the various parties involved in the water sector in Syria is the first important topic in Syrian water management. Integration and cooperation of the different sectors and ministries is necessary, the SDWC experts argue, for food security policies cannot properly exist without water security. Likewise, industrial development cannot take place without water needed for the processing and production needs.[198] These related interests result at the national level in the involvement of both vertically organized and horizontally

[195] J.F. Warner and M. Zeitoun, "International relations theory and water do mix: A response to Furlong's troubled waters, hydrohegemony and international water relations", *Political Geography* 27 (2008) 202-210.
[196] SDWC, "Pleidooi" ("Plea"), 2010.
[197] Quoted from De Châtel, http://francescadechatel.com/wp-content/uploads/2014/05/Out_of_its_Depth.pdf; Bouma, De Sonneville, Roest, "Water en Bodem", 15.
[198] J. de Sonneville and W. Seif, "Integrated Water Resources Management as a Framework for Regional Planning in Syria: Policies, Decision-Making and Organisation" (March 2011), 2.

operating layers of government. Vertically organized 'water demand' ministries like the Ministry of Irrigation, the Ministry of Agriculture and Agrarian Reform, the Ministry of Industry, and the Ministry of Environment are important parties in the water sector. Horizontal, policy-oriented ministries like the Ministry of Finance, the Ministry of Energy, and the Ministry of Local Affairs interact with them. A 2010 SDWC position paper marks the lack of an integrated policy, legal, and institutional framework regarding the sectors drinking water, waste water, agriculture, irrigation, environment, and industry. It states that at the national level key policies and goals of the different ministries are separately presented. Therefore, increased integration and cooperation of all sectors is essential for sustainable development.[199] In fact, this is a practical echo of Hinnebusch' argument on the strains to top-down bureaucratic agricultural development.[200]

The earlier-mentioned critiques on water management and international cooperation are not only related to the framing but also to the scalar level at which the cooperation takes place. The SDWC operated at the national, governorate, and local level and identified problems and solutions on various scalar levels. In the position paper the need to create a link between the different levels of society is emphasized, where local realities are connected to and fed back at the national policy level. Communication and feedback between the different levels as well as clearly designated tasks and responsibilities at each level need to be improved.[201] At the national level, the long-term objective of the cooperation was to create a Syrian water strategy that manages and uses the available water resources in a sustainable manner, and effectively protects the resources from pollution. An effective and integrative national water strategy that aims to manage the available Syrian water resources in a sustainable and effective manner is necessary for regional planning. The different scalar levels are closely connected. The SDWC stresses that at all levels the efficacy, reduction and sustainability of water use should be prioritized, as well as the attainment of acceptable water quality. Water infrastructures need to be strengthened and more monitoring networks need to be developed. Ownership and responsibility at the national but also at the regional and local level need to be established.[202]

Barnes' conceptualization of scarcity takes place at the national level and her critique consequently also focuses on that level. The SDWC harbored the view that the national level should have a general overview of the water situation in Syria and is responsible for policy making and legislation, while at the regional or local level the stakeholders should actually implement the measures and need to be involved in defining solutions for local problems and challenges, which need to be enabled at the national level.[203] The emphasis is on interaction between different scalar levels and particular attention to stakeholders and dynamics at the local level. Moreover, because of the focus on the Orontes basin and specific research in pilot areas on the ground, the SDWC put together a geographical framework based on its own measures and research, rather than one based on the state's propagated scarcity. An analysis of the SDWC thus to a certain extent counters and refutes the academic critique on international collaboration and water management, although it

[199] SDWC, "Position Paper: Integrated Water Resources Management in Syria: Policies, Decision-Making and Organisation" (November 2010), 1-2.
[200] See chapter 2 page 24 (and footnote 79).
[201] SDWC, "Position Paper", 8.
[202] De Sonneville and Seif, 1-8.
[203] SDWC "Position Paper", 8.

also confirms the ecological framing that Barnes mentioned. This is reflected in their local pilot research.

On-the-ground research into Syrian water scarcity was conducted by the SDWC in designated pilot areas and by an exploratory mission into the Euphrates region. The pilot areas were selected after the creation of the surface- and groundwater models. Stakeholders were identified at various levels and contacts established. For the Qusair pilot area, operational water losses, pollution, climatic change, and diplomatic relations with Lebanon were identified as the main threats. In the Mhardeh pilot area, water quality problems, shortages of surface water supply and serious over-exploitation of groundwater, and – again – climate change were designated. Problems in the Khan Shaykhun area are decreased precipitation due to climate change, and a continuous drawdown of the groundwater.[204] In November 2009, the SDWC also undertook a reconnaissance survey into the Euphrates River and Khabour River valleys. The most important identified problems were groundwater pollution and salinization due to mistakes in irrigation practices and the absence of proper drainage systems. Again, they argued that climate change will result in decreased precipitation and consequently a higher variability in the Euphrates River.[205] To improve the conditions and particularly to prevent worse scenarios for the future, the SDWC indicated that government regulation and law enforcement were urgently needed.[206]

4.5 A Syrian narrative?

What is particularly interesting in the evaluation of these pilots is how on the one hand critique on the state's water management is voiced, but on the other hand climate change and population growth and its consequences are emphasized, thus "relieving" the government of some responsibility for the situation. This is in line with Barnes' argument of the Syrian framing of resource problems. But it is important to discern between the national and the local level. The SDWC documents are in this regard particularly informative for the local level, whereas Barnes' critique focuses on the broader Syrian management.

From the Syrian side, the director of the project Omar al-Shamali and the Homs Directorate of Water Resources have composed a small booklet in combined English and Arabic on the Integrated Water Resource Management Plan Orontes Basin. This book offers an insight into the Syrian sentiments regarding the SDWC and the narrative it carries to an international and Syrian audience alike. The images it disperses are both geographically and socially grounded: one the one hand, the emphasis is put on the limited amount of water in the Orontes basin, low recharge rates due to low precipitation and soil conditions, and climate change. On the other hand, the booklet describes the historical and traditional importance of the river, intensive multi-purpose use (drinking water, farming, industries, recreation and tourism), and population growth. Irresponsible governance or mismanagement of resources by the Syrian regime is somewhat swept under the rug. While the authors clearly identify the six most pressing problems in the basin – as mentioned

[204] G. Bouma and K. Roest (SDWC and Ministry of Irrigation; General Commission for Water Resources), "The Application and Introduction of IWRM in the Pilot Areas in the Orontes Basin" (November 2010), 2-7.
[205] SDWC, "Note on the Reconnaissance Surveys to the Irrigated Areas in the River Euphrate and River Khabour Valleys, 7-9 November 2009" (2009), 1-9.
[206] Ibid., 9-10.

earlier – the causers of these issues are not explicitly named, although the Syrian population is indicted of low awareness regarding the resource problem:

> Most of the population takes the availability of water for granted. It is taken for granted that the resources will be sufficient for current and future use. Leakages and wasting of water is easily accepted, and the river is being used as a dump in many places.[207]

The Syrian population comes off rather badly compared to the modest tone to which the government is treated when the issue of irrigation and infrastructure is mentioned:

> The Syrian administration recognizes that modernization of the irrigation infrastructure by far provides the best opportunity to reduce water demand. It has developed a large program to support the conversion from old to modern irrigation structures.[208]

Overall, however, mismanagement by the government is not mentioned at all. For example, when the authors note that state-built dams and infrastructures have had large impact on the watercourse of the Orontes, the message is carried across as neutral as possible.[209]

Based on this booklet, the National Agricultural Policy Center report, and the Five Year Plans of the Syrian government, the argument that the Syrian regime puts the blame for water scarcity on climate change and increased consumption by the population, not only at the international but also at the national level, is proven valid. In what Barnes has termed the Syrian government's narrative on water resources and water availability in Syria, emphasis is placed on geographical and natural factors rather than human agency. Here, water is politicized by presenting it through the ecological discourse. This obscures the state's historical mismanagement. The criticisms of Barnes but also of those authors like De Châtel that have linked Syrian water mismanagement to the current crisis are therefore justified with regard to the national level.

4.6 Conclusions

Water management at the national level has been politicized in a different way than at the international level. In the previous chapter I introduced the term "pragmatic strategies" to describe the pillars of Syria's hydro-diplomacy. Here, not only the state's scarcity narrative but also its cooperation with international experts and its developmental policies in the service of centralization and power-consolidation efforts may be regarded as pragmatic strategies at the national level. Through these collaborations, as Barnes argued, the state had an opportunity to disseminate its conceptualization of scarcity within a geographical framework. Consequently, Syrian national water management has been politicized via a more ecological narrative than the distributional narrative of the international level.

[207] Shamali and Homs Directorate of Water Resources, *Integrated Water Resource Management Plan Orontes Basin*, 19.
[208] Ibid., 16.
[209] Ibid., 17.

A brief case study of the SDWC served as a practical counterbalance to confirm or reject these academic ideas regarding political water management. Besides, it offered important and interesting insights in water conditions at the local level. The documents and experiences of the SDWC suggest a wish and willingness to contribute to the water problems by the Syrian state – to a certain extent. The SDWC experts are also critical of the Syrian government in the various mentioned ways, but are at the same time mildly optimistic about the impending changes they expected right before the outbreak of the crisis. Their reports suggest a gradual shift from a sectoral to an integral approach by the Syrian government and a democratization of water policies from 2009 onwards. They argue that the Syrian government is increasingly receptive to their ideas, willing to improve internal coordination, and eager to expand the cooperation. Furthermore, they are carefully optimistic about Syria's move towards market liberalization and the benefits that might stow upon agriculture and water policies and management, if past mistakes are avoided and integrated management implemented in all sectors involved.[210]

The SDWC documents move beyond the academic discourse here by noting a stimulus of change right before the revolution started. On the one hand, this small, practical case study thus indicates developments that may otherwise have gone unnoted. On the other hand, the SDWC is not free of political biases or agendas itself, as I will problematize in the next chapter. The cooperation arguably created awareness of the water problem among local governorates with its emphasis on vision, strategy, sustainability, and long-term thinking. A practical focus on the local level consequently offers a more nuanced view of Syrian water management. It also shows the differences between the politicized water management of the national level, and indicated a lack of knowledge among officials in water management at the local level. In the SDWC program, differences between the local and the national level were used to provide feedback to evaluate and possibly adjust national level policies.

It is also necessary to reflect on the argument of the developmental function of water. During the consolidation of the Assad regime in the second half of the twentieth century, the Syrian state sought development and modernization through agricultural innovation and water projects. Their hydraulic mission was part of their state building and was also meant to enhance centralization processes and the legitimacy of the state. Selby argued that the 'centralization of control over water through the construction of large-scale supply infrastructures has been a powerful instrument in the consolidation of administrative state power over territories and populations.'[211] However,

> Yet on the other hand, the costliness and difficulty of controlling water resources and infrastructures, and the local importance of those resources within rural

[210] See the update of Partners voor Water (January 2011), http://www.partnersvoorwater.nl/wp-content/uploads/2012/06/PvWNieuwsbrief1-2011.pdf and the Deltares Magazine 3 (2010), http://www.deltares.nl/media/views/2010/3/content/collect_pdf.pdf. A 2009 GIZ (previously GTZ) report notes a shift in agricultural trade policies from a relatively closed international market to more open trade, which may in the longer term lead to relaxation in food security policies; see S. Smets, "Draft: Baseline Water Sector Report", GTZ Modernization of the Syrian Water Sector Support to Sector Planning and Coordination and State Planning Commission, Damascus (June 2009), 14-32.

[211] J. Selby, "Oil and Water: The Contrasting Anatomies of Resource Conflict", *Government and Opposition Ltd* (2005), 222-223.

> areas, can also place heavy demands on the state, can exacerbate tensions between local communities and hence can aid and abet processes of state collapse.[212]

Water management can thus be rendered a tool for development and state building, but mismanagement renders water a potential tool for conflict, vulnerability, and risk. Consequently, national and local water management can also be gathered under the encompassing paradigm of conflict or cooperation. In the case of Syria, mismanagement of water resources was nationally driven by the importance attached to agriculture and by the desire for food security. This resulted in policies without sustainable outlooks.

The British geographer J.A. Allan wrote in 2003 that in the Middle East 'water policy is made behind a veil of ignorance on the basis of unsustainable economic and environmental assumptions.'[213] Lifting this veil would result in serious political instability and jeopardize security. Therefore, nationally and internationally, agricultural policies, water resources and water management are highly sensitive topics and "red lines".[214] Static water management is a result of this. The SDWC documents pose that the challenge of water management is political rather than technical. They estimate that their proposals for IWRM in the Orontes basin could result in diminishing the required amount of water for irrigation up to fifty percent. But their counterpart, the Syrian Ministry of Irrigation, insisted in its focus on development and infrastructure rather than sustainable management. This shows the connectedness between the relative availability of water and its management: relative availability is negatively impacted by mismanagement. But it indicates more than that: it also shows conflicting paradigms of thinking and reference between the Syrian state on the one hand, and international experts on the other hand. While the Syrian state politicized water management through emphasizing ecological boundaries and difficulties, international experts politicize water via a thorough technical message. In the next chapter I will further analyze this technical politicizing.

[212] Ibid.
[213] J.A. Allan, "Water Security in the Middle East: The Hydro-Politics of Global Solutions", Analysis by SOAS / King's College London Water Research Group 2003.
[214] Ibid.

Chapter 5. Water as a tool for democracy – global water management[215]

In the previous chapters the political functions of water in Syria have been examined at the international and the national and (partly) local level. The different functions of water as a tool for diplomacy and development, but also as a military tool as analyzed in the introduction to this thesis have confirmed the reigning paradigm that water can be either a tool for cooperation or conflict. In Syria, water is surrounded by political sensitivities that underlie pragmatic strategies in both international and national water management. Water is presented through a prism of power asymmetry, security, and a neo-Malthusianist notion of water scarcity, and combined with a more liberal-technical and pragmatic approach to the resource and its restraints and possibilities.

In this final chapter, the research question of water as a political tool in Syria will be deepened by extending its scope to different actors involved in politicizing water. In the introduction to the thesis military water usage by both the Syrian regime and opposition parties was examined, but in the analysis of diplomatic and developmental water usage the Syrian state figured as the most important actor. In the previous chapter on water as a tool for development and the politicizing of water management at the national and local level I identified cooperation with international experts as one of the pragmatic strategies the Syrian state used. But turned around, these international experts may as well have their own political agenda or goals. Hence, if analyzing how water can be politicized in different ways, the question of the actor must be taken into account. In this chapter, the global agenda of international players will be problematized through analyzing the potential of water as a tool for democracy.[216]

5.1 Research on global water management

Throughout this thesis the "international community"[217] has featured in several ways. With regard to Syria, the international community comprises the collective of countries assembled in the UN Security Council that cannot agree on a solution for the Syrian conflict. It comprises the coalition of countries that in September 2014 vowed to jointly combat ISIS. But projects like the SDWC can also be regarded as a part of the agenda or sphere of influence of the international community.

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[215] "Global" refers here to the worldwide level; a level at which players from all around the globe are involved.

[216] "Democracy" is here understood to be the (ultimate) dominant political aim or goal of the international (global) agenda of worldwide players like the UN, World Bank, but also individual (Western) governments.

[217] The term "international community" is borrowed from International Relations, and used interchangeably with the term "international players". There is debate about the meaning of the term and the actors it encompasses. In this thesis it is used as an overarching term to indicate international organizations like the UN, international financial institutions like the World Bank, and all foreign governments that choose to participate in global discussions and decision-making. Although this definition includes non-Western institutions and governments from non-Western countries, it is heavily influenced by Western thinking. See, for example the op-ed by Michel Rocard, former prime minister of France, "What is the International Community?", 30 May 2013, available via http://www.project-syndicate.org/commentary/defining-the-international-community-s-role-and-responsibility-by-michel-rocard, or the provocative Guardian piece by journalist Martin Jacques, "What the Hell is the International Community?", 24 August 2006, available via http://www.theguardian.com/commentisfree/2006/aug/24/whatthehellistheinternationalcommunity. Accessed 25 May 2015.

Whereas the Syrian state politically and economically officially propagated a socialist-oriented message, scholars argue that the international community has historically managed a capitalist neoliberal agenda for the MENA region – including its water sector.[218] In a highly interesting 2013 book, political scientist Adam Hanieh (severely) criticizes this neoliberal agenda from a Marxist political-economic perspective.[219] He argues that the Arab Spring uprisings were in fact protests against the "free market" economic policies that Western institutions in the MENA region long championed. But international financial institutions (IFIs) framed the uprisings as essentially political rather than economic in nature, protesting the authoritarian state. According to Hanieh, however, 'the authoritarian guise of the Middle Eastern state is not anomalous and antagonistic to capitalism, but is rather a particular form or appearance of capitalism in the Middle Eastern context.'[220]

From the second half of the twentieth century onwards, the MENA region has been pushed towards a neoliberal and capitalist transformation. Financial tools, interdependency policies, privatization, and the consolidation of authoritarian regimes or even dictatorships were the most important instruments employed, according to Hanieh.[221] Reforming the water and energy sectors was an important goal. In the 2000s a wave of privatization took place, but governments across the region continued to provide many essential services, like water. Hydrological infrastructural networks generally remained state-owned, and neoliberal governments from 2005 onwards realized the potential profits if these service provisions were privatized. Public-Private Partnerships (PPPs) were set up, in which a private company provides a service in contract with the government. In the water sector, different tasks such as water distribution, treatment, and storage were contracted to different providers.[222] In agriculture, liberalization policies in the 1990s and 2000s have throughout the region resulted in domination and ownership by key families, foreign agribusiness, and the state on the one hand, and dispossession and proletarianization of large parts of the rural population on the other hand.[223] Hanieh emphasizes that IFIs like the World Bank claim to have a neutral agenda to:

> […]obscure the relations of power that structure neoliberal reform. [They] naturalize the global system as an external, inevitable, and almost irresistible force. [By framing] in this manner these institutions conceal the relations of power that hide behind capitalism, portraying policy as simply a technocratic and necessary response to changing external circumstances. Their own role as architects of these relations of power is hidden […].[224]

In Syria, as could already be seen in chapter two, a gradual liberalization of the economy took place since the mid-1980s, and Bashar al-Assad embarked from 2005 onwards on a neoliberal reform

[218] See for example the work of Bassam Haddad or Adam Hanieh.
[219] A. Hanieh, *Lineages of Revolt. Issues of Contemporary Capitalism in the Middle East* (Chicago: Haymarket Books 2013).
[220] Ibid., 9, 2-5.
[221] Ibid., 15-67.
[222] Ibid., 54-55.
[223] Ibid., 77-95.
[224] Ibid., 96.

program. Policies of privatization, opening up to foreign investment, and removing state control in some key industrial sectors were part of the program. Hanieh argues that the (already-mentioned) reversal of agrarian reforms led to private farms appropriating a lot of underground water. According to him, this was an important factor behind the developing water crisis through the mid-2000s. Coupled with the drought and the large internal displacements, the 'roots of the Syrian uprising lie in an attempt to overthrow an autocratic regime presiding over a highly polarized neoliberal economy.'[225]

This is a different side of the coin. Analyzed in this vein, any technical hydrological improvement is not neutral but must be seen as part of an international agenda, as Hanieh claims. Consequently, technical water management can be regarded as politicization of water via the technical discourse. In the previous chapter, scholarly critique on international cooperation was mentioned. The criticism mainly focused on how the Syrian state presented water scarcity through a certain framework to international experts. If this is turned around as well, criticism on international water cooperation of international actors with nation states has come mainly from the angle of water governance. The American geographer Michele-Lee Moore argues that global organizations in water management are practitioner-centric and consequently favor a technical approach that is driven towards building infrastructure for water services for irrigation, industrial, and domestic use.[226] She dubs this a "hydraulic mission" – the same term that was earlier used for the developmental policies of the Syrian state, but then employed from a different angle. This hydraulic mission approach, that has '[…] long fitted within the dominant culture for Western, scientific, rational thinking'[227], has resulted in a rigidity in water management due to the institutionalization of the technical approach. Moreover, Moore argues that the technical approach has led to a depoliticization of water governance and water management. Because the political aspect is ignored in favor of the prioritizing of the technical side, the social, political, and institutional dimensions to decisions about water remain underexposed and are neutralized.[228]

Next to neutralizing political agendas, Moore argues that the actors behind water management are obscured. While the state is the first official authority in water management – as was outlined earlier – global institutions like UN branches proliferate. Moore criticizes this shift, arguing that between these institutions there is little debate on water management and water governance; merely, experiences are shared.[229]

5.2 Politicizing global water management in Syria

Following these arguments and combining them with Hanieh's critique, global institutions, IFIs, and foreign governments seem to act along two political-economic lines in the MENA region. First, they present a move towards neoliberalism and capitalism as a somewhat inevitable drive towards globalization and modernization. Moves in desirable directions are rewarded via financial funding

[225] Ibid., 160-161.
[226] M.-L. Moore, "Perspectives of Complexity in Water Governance: Local Experiences of Global Trends", *Water Alternatives* 6.3 (2013), 489.
[227] Ibid., 492.
[228] Ibid., 492-493.
[229] Ibid., 495-499.

and aid, while moves in different directions are discouraged via debts and rising interest rates. And second, this neoliberal agenda is neutralized through concealing less-celebratory parts of that agenda: the erosion of social security and subsidies, the dynamics it gave to authoritarian regimes, of which Hanieh says that '[…] these essential facts of history remain an inconvenient truth for those who today attempt to link neoliberal reform with "democracy".'[230]

Two questions arise. How do these ideas relate to the practices of (globally-inspired) developments in the Syrian water sector? And what instruments does the international community have to politicize water via their neoliberal agenda? A reflection on changes in Syrian water management and an analysis of current Syria policies of the Dutch government and the UN serve to compare these ideas to the Syrian practice.

➢ Developments in the Syrian water sector

To what extent is the outlined critique applicable to the Syrian water sector? This political-economic agenda would have three consequences for Syrian water management. First, the Syrian state would have to jump on the bandwagon of privatization in the agricultural and water sector if it was to stay on board in today's modernized and globalized world – and indeed it has been doing so since the mid-1980s. Second, Hanieh also argued that the water sector would be divided across different providers via the construction of Public-Private Partnerships. As the examination of the SDWC showed, the Syrian water sector was embedded in a dense bureaucracy with a range of different – sometimes competing rather than cooperating – ministries involved. The Syrian government was receptive towards PPPs. For example, a Syrian-German project between Syrian ministries and the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) resulted in PPPs on wastewater treatment in the Syrian village of Jdeidet Yabous at the end of 2009.[231] Earlier that year, a large conference in Damascus was organized, outlining possibilities for PPPs in key infrastructural sectors, and sponsored by national and international banks, organizations, and ministries. The conference was organized at the request of the Deputy Prime Minister of Economic Affairs, Abdullah al-Dardari.[232]

Furthermore, following Hanieh's critique, cooperation with international experts (and moneylenders) would be largely dependent on their terms, meaning a technical approach to water management, disconnecting it from its political ties. Here again, the SDWC offers some insights that cannot solely be derived from scholarly literature. It sheds light on the cooperation between a Middle Eastern state on the one hand, and technical international experts on the other hand. An examination of the SDWC showed how the Syrian state presented its water problems to international experts and how the state displayed a willingness to alter water policies to a certain extent – if "red lines" were not crossed. The SDWC cooperation fits within the general economic

[230] Hanieh, *Lineages of Revolt*, 65; see also 15, 65-69.
[231] GTZ and German Federal Ministry for Economic Cooperation and Development, "Managing Water for Sustainable Development. Modernisation of the Syrian Water Sector" (April 2010), 14.
[232] The three-day conference, accurately termed "Public Private Partnerships. Financing Syria's Infrastructure", was held 30 October-1 November 2009, see http://www.syrianpppconference.org/ (accessed 27 May 2015). Al-Dardari is classified by Haddad as a reformer that embodied the Syrian business and "market" interests through his appointment in the government; see Haddad, *Business Networks*, 75.

liberalization pattern in Syria as described by Haddad. In the cooperation between the parties, conflicting paradigms were at work as the two parties presented and interpreted the difficulties of the Syrian water sector in different ways. On the one hand, through cooperation with international technical experts the veil of ignorance surrounding Syrian water policymaking could be (partly) lifted. The SDWC created awareness of Syria's most pressing water problems and provided possible technical solutions for it. They handed the Syrian officials the tools and instruments that would lead to more sustainable water management. At the same time, the SDWC indeed strengthened a technical approach to water governance and management; their documents point to political challenges rather than technical ones in advices for a future water sector. Besides, a neoliberal whiff can be seen in their aim of strategic policy development at the national level, and more clearly in their open optimism on Syria's move towards market liberalization.[233]

Consequently, neoliberalism has not been lost on the Syrian water sector. Cutting agricultural and fuel subsidies, introducing (and increasing) average prices for water – rather than providing water at highly subsidized rates, as the Syrian state until the 2000s did[234] – and encouraging private sector commitment all fit within the international neoliberal agenda Hanieh outlined. Equally, the predominantly technical approach that the international community employs in cooperation within the Syrian water sector, criticized by Moore, can be seen. But, importantly, Haddad argues that:

> Syria's liberalization experience has been an affair of the regime that has not been determined or guided from abroad [...]. This is significant since much of the available literature on reform experiences in [...] the Arab world emphasizes the leverage of IFIs over indebted countries: "Indebtedness has given international actors a stick with which to push these countries towards policies of economic reform".[235]

Syria has had a low level of long-term foreign debt compared to other Arab countries. Accordingly, Haddad speaks of an empirical absence of IFIs in the Syrian experience: 'the absence of such conditionalities has stripped from the state the opportunity to lay blame on external factors for the failure of economic reforms.'[236] This indicates that Hanieh's broad Marxist account of the policies of capitalism and neoliberalism in the MENA region becomes too general if individual countries are examined. But more importantly, it also means that the international players would have had less leverage in Syria because one of its (financial) instruments – funding and debts – would have had less impact on Syrian policies. This may have deepened Syrian – political and economic – opposition against the regime as the regime did not have a clear scapegoat for deteriorating economic conditions. Subsequently, the Syrian revolution, in a perhaps ironical twist, may in its turn have

[233] See the update of Partners voor Water (January 2011), http://www.partnersvoorwater.nl/wp-content/uploads/2012/06/PvWNieuwsbrief1-2011.pdf and the Deltares Magazine 3 (2010), http://www.deltares.nl/media/views/2010/3/content/collect_pdf.pdf, Bouma and Roest, "Application and Introduction IWRM", 1; Bouma, De Sonneville, and Roest, "Water en Bodem",14.
[234] See the GTZ report, "Managing Water", 12.
[235] Haddad, *Business Networks*, 32. Quoting V. Perthes, *The Political Economy of Syria Under Asad* (London: I.B. Tauris 1995).
[236] Ibid., 175, 32.

strengthened the position of international players vis-à-vis Syria, as the current conflict drags on. This is speculation to some degree, but it is in this regard interesting to briefly examine what instruments the international players have or may employ in the current conflict to politicize water.

➢ Politicizing water in the current Syrian conflict

As this thesis opened with a window on the current conflict in Syria, its empirical part closes with a reference to the conflict as well: first, an analysis of the Syria policies of the Netherlands, and second, an analysis of current UN policies on Syria.

Dutch policies on Syria and the larger MENA region are interesting to examine for a practically-grounded analysis of the above-outlined neoliberal agenda and the tools the international community can employ to politicize water. The Netherlands is keen on profiling itself on the niche of water and water management. In October 2014 the president of the World Bank Kim and the Dutch minister of International Trade and Development Cooperation Ploumen signed a covenant that assigned the Netherlands a prominent role in worldwide water questions. Moreover, recently – 12 March 2015 – the Netherlands named a special water envoy who will further develop and advance the Dutch international water ambitions. Thus far this envoy is unique in his sort.[237]

The Dutch integrated approach to Syria, as outlined by the Ministry of Foreign Affairs in September 2014[238], is based on four tracks: politics, development, security, and accountability.[239] The developmental track consists of several parts. First, one million euro is placed at the disposal of the Dutch special Syria envoy each year. With this budget the special envoy, based in Gaziantep in Turkey, can locally initiate small "quick impact projects". This can be employed at the terrain of water supply. Second, two million euro is explicitly reserved for the sustainable reconstruction of the water supply. And third, the Netherlands plays an active role in the working group of the Friends of Syria[240] concerning Economic Recovery and Development.[241] Part of the Dutch policy regarding Syria is thus specifically dedicated to financial support to the water sector.

The Dutch water strategy in the MENA region is built upon the notion of water as a possible instrument for renewed stability.[242] On a global level, it focuses on a contribution to the policy dialogue regarding water, agriculture, and food security in order to prevent conflict and stimulate

[237] See http://www.rijksoverheid.nl/nieuws/2014/10/11/nederland-en-wereldbank-pakken-waterproblemen-aan.html and http://nos.nl/nieuwsuur/artikel/2024314-wereldprimeur-nederland-benoemt-watergezant.html (accessed 24 March 2015).

[238] This information is based on an unpublished factsheet of the Ministry of Foreign Affairs retrieved in September 2014, and therefore represents Dutch policy lines rather than actively propagated factual policies. The Syria policy is currently (March 2015) under revision due to developments in the past six months. The same applies to the Dutch water strategy that will be explained in the next paragraph.

[239] Dutch Ministry of Foreign Affairs, "Factsheet: Nederlandse geintegreerde benadering t.a.v. Syrië (stavaza september 2014)" (Factsheet: Dutch integrated approach to Syria; update September 2014). Unpublished policy document.

[240] The Friends of Syria (FoS) is an international diplomatic assembly of countries and bodies, which was set up in early 2012 as a reaction to the vetoes of China and Russia to resolutions condemning the Assad regime in the UN Security Council.

[241] MFA, "Factsheet".

[242] Dutch Ministry of Foreign Affairs, "Water in de DAM-regio: de Nederlandse inzet 2011-2020" (Water in the MENA region: the Dutch approach 2011-2020). Written in 2011. Unpublished policy document.

economic development. On a macro-level, it emphasizes the importance of hydro-diplomacy. On a meso- and micro-level, capacity-building in the water- and agricultural sector and the support of water and irrigation projects within regional development are key to the strategy. Dutch companies and knowledge institutions in the water- and agricultural sector need to be actively engaged at the local level. The Syrian-Dutch Water Cooperation (SDWC) is considered to be exemplary for this strategy.[243] Generally, water is designated as a theme that can bring about a possible positive political spin-off.[244] In this regard, Track II initiatives via companies and knowledge institutions can serve as possible instruments.

Track II initiatives are informal and non-binding dialogues that can form an initial rapprochement between different parties.[245] In this vein, water could be used to employ Track II initiatives, if its mediating and reconstructing possibilities are recognized. In the Euphrates-Tigris River basin, a Track II initiative came into being in 2005: the Euphrates-Tigris Initiative for Cooperation (ETIC) – a cooperation between academics from Syria, Iraq, Turkey, and the United States aimed at sustainable collaboration and regional development.[246] Its underlying idea was that in international relations, nongovernmental experts can influence governmental decision-making, and in this case ETIC could 'pave the way for the resumption of official discussions over shared water resources.'[247] Technical cooperation over water between experts, then, was seen as an initial step towards international cooperation at the governmental level. This way, Track II initiatives can serve as an instrument for the international community to first enter a certain (conflict) situation and subsequently promote a technical, neoliberal path as a way to a solution. Such non-governmental initiatives are not only supported but also promoted by (Western) governments, as the investigation into Dutch policies showed.

The United Nations has since the beginning of the crisis acted in various ways. Most important for our argument here, are brief analyses of the work of their Food and Agricultural Organization (UN-FAO), and of the earlier-mentioned UN-ESCWA (Economic and Social Commission for Western Asia). The FAO has focused on agriculture and food access and availability in Syria in the current crisis. The 2014 Syria Humanitarian Assistance Response Plan that is outlined in the report reserves 900.000 US dollar for the rehabilitation of damaged on-farm irrigation canals.[248]

UN-ESCWA has in 2013 initiated the National Agenda for the Future of Syria. In partnership with Syrian national institutions, civil society, the Syrian private sector, and UN and international organizations, the program is meant to indicate concrete development needs for Syria that underlie

[243] MFA, "Water in de DAM-regio".
[244] Adviesraad voor Internationale Vraagstukken, "Nederland en de Arabische regio: principieel en pragmatisch?", November 2014 ("The Netherlands and the Arab Region: Principles and Pragmatism?"). Available (in Dutch) via http://www.rijksoverheid.nl/documenten-en-publicaties/publicaties/2015/03/06/advies-nederland-en-de-arabische-regio-principieel-en-pragmatisch.html (accessed 21 March 2015).
[245] Kibaroglu describes Track II diplomacy as voluntary, unofficial, non-binding, non-profit seeking and nongovernmental. See Kibaroglu, "Epistemic Communities", 192.
[246] Ibid., 191.
[247] Ibid., Daoudy, "Asymmetric Power", 379.
[248] FAO, "Syria Crisis Executive Brief", September 2014; available online via http://www.fao.org/fileadmin/user_upload/emergencies/docs/FAO_Syria%20crisis_ExecutiveBrief_15%2009%202014.pdf (accessed 9 April 2015).

the National Agenda, and to promote democracy and development in the wider MENA region.[249] Within the National Agenda, a specific Work Group Water headed by the Syrian Dr. Wael Seif, who was previously resident project manager of the SDWC, formulated a National Water Agenda for Syria in December 2014.[250] Their most important long-term (ten years) considerations are developing a vision on sustainable water-management, creating the enabling conditions to implement National IWRM, developing and implementing a National Drought Strategy, and optimizing the Syrian share of Euphrates-Tigris basin waters. If water policies adhere to these principles, this will result in fulfilling the water vision ESCWA formulated for Syria: 'Syria's water resources are sustainably and equitably managed to contribute to achieving socio-economic development and resilience.'[251]

Next to Track II initiatives that emphasize the merits of a technical approach, funding and a democratic development agenda are two other instruments that can be used by the international community to technically politicize water management in pursuit of their agenda in the current Syrian crisis. In this regard, funding may be labeled a pragmatic strategy as well, often responding to acute needs. Track II initiatives and the promotion of a democratic development agenda for Syria and its water sector breathe a longer-term view. The fact that a former Syrian co-operator of the SDWC presides over the Work Group Water for the National Water Agenda for Syria is interesting; it shows something of the attitude that (educated) Syrians may have towards a neoliberal agenda for their country. While De Châtel argued that the local Syrian residents she interviewed were mostly skeptical to the neoliberal changes as it meant increased taxation and payments[252], this shows that there are two sides to every story.

The same can be concluded with regard to the question of the actor. This last chapter showed that the political dynamics of water can be used by several parties. Consequently, water can be regarded not only as a tool that the Syrian state can use vis-à-vis its riparian neighbors or its own citizens; non-state actors like opposition or rebel parties, but also "external" forces like global institutions and international players can employ water to pursue their own political or economic agendas or "hydraulic missions". This can happen in either a crisis situation – like the current military water use showed – or more gradually – like this chapter indicated. This last case can again be related to the security prism: true to the technical discourse water is often regarded as a tool for possible cooperation.

5.3 Conclusions

This brings us effectively to the last questions of this thesis. After having criticized Syrian (historical) water management and national and international political agendas vis-à-vis the Syrian water sector, the question stands out on what course Syrian water management should then

[249] See for the summary of the program http://www.escwa.un.org/sites/ESAR/project.asp?ProjectTitle=The%20National%20Agenda%20for%20the%20Future%20of%20Syria .

[250] UN-ESCWA Work Group Water, "Framework Water Sector Input. National Agenda for the Future of Syria" (December 2014), 7.

[251] Ibid., 14, 10-14.

[252] See for example her article on Wadi Barada: F. de Châtel and M. Raba'a, "Waterless Wadi Barada. Manufacturing Scarcity in a Syrian River Valley", *Middle East Report* 271 (2014) 10-17.

embark. What plausible alternatives are there to either the socialist or the liberalization course that the state has taken since the advent of the Ba'th party? What is acceptable sustainable water management for all parties, and how could it be reached despite conflicting political agendas? How does the theory of these agendas relate to the practice? To what extent does a neoliberal agenda in the current Syrian crisis matter, if it is aimed at alleviating Syrian suffering in the short run? But also: what consequences would this have in the long run? And: how do the consequences of the political dynamics of water influence actual water management "on the ground"?

Although the SDWC did shed some light on water management at the smaller-scale local level, the theorizing of the politicization of water has largely been confined to the broader levels for two reasons. First, the documents of the SDWC, alongside smaller-scale research like De Châtel conducted in Syria, indicate that at the Syrian village level political dynamics around water were rather ad-hoc dynamics, dependent on everyday developments and individual alliances. Thus, pragmatic attitudes rather than pragmatic strategies. But, second, knowledge on water management at the local level is simply not that developed with regard to Syria. The here-conducted research has been aimed at providing a historically-based account of the political dynamics involved in water management. Most smaller-scale basin-focused research on Syrian water management has been conducted and written by international organizations and partnerships like GTZ or the SDWC. But compact, ethnographic research of local Syrian water management has not been undertaken.

In a highly interesting 2005 article, Jan Selby compares oil and water and their potential for resource conflicts from an economic perspective, questioning 'whether the political economy of water is such that water could one day become as great a cause of friction and violence as oil.'[253] This, he argues, is contrary to the water-wars-thesis not the case. Possible water conflicts would have a local character, in contrast to intra-state oil conflicts. But the oil-water analogy with an emphasis on conflict and destruction results in international neglect of the actual, smaller-scale local situation on the ground.[254] Equally, the SDWC warned in 2010 that 'current, human-induced water practices will seriously, and negatively, affect the country's socio-economic development in the near future.'[255] These practices included first and foremost the drilling of (illegal) wells by the rural Syrian population. Local level research would thus not only advance scholarly knowledge on (the politics surrounding) Syrian water management; it would also be highly useful in a practical vein to disclose actual practices that may lead to increased stress over water resources.

[253] Selby, "Oil and Water", 203.
[254] Ibid., 221-224.
[255] De Sonneville and Seif, "IWRM", 1-8.

Conclusions: pragmatic strategies, political sensitivities, local dynamics

In 1995 a World Bank Report spelled disaster for the water resources in the Middle East and North Africa. If regional agreements and international cooperation were not acutely established, the vicious downward spiral of water availability would have dire consequences.[256] At present, twenty years past this report, the MENA region faces a period of possibly unprecedented crises, animosity, and instability. This thesis opened with the alarming messages of the military use of water in Syria and Iraq. In Syria the Assad regime as well as rebel forces and the Islamic State (ISIS) have attacked hydrological infrastructures and have cut water supplies. In Iraq, fighting has concentrated around dams. Yemen is 'tearing itself apart' over its chronic water shortages, which Al-Qaeda on the Arabian Peninsula (AQAP) is ready to exploit.[257] Libya's aquatic reserves 'will be a large prize for whoever gets the upper hand'[258] in the continuous struggles. But also in ostensibly more stable countries, water resources are under threat. In Egypt, for example, the extremist group *Wilayat al-Sinai*, believed to be allied to ISIS, has recently carried out attacks on water stations.[259] Terrorists, rebel groups, and shifty states all seem to endanger the water resources and obstruct regional and international cooperation over water.

A deeper research into these messages of water as a weapon in Syria formed the initial foundation to this thesis. Upon a closer examination of the military use of water and the academic discourse on water in the MENA region and Syria, however, two interesting matters came to the fore. First, the use of water as a weapon fitted within an academic discourse in which water is regarded as a political commodity rather than as a natural resource. If water is regarded as a political commodity, it can be employed as a tool to pursue political goals via the use of certain instruments. And second – related to this – it turned out that ISIS or rebel forces were not the principal impellent behind using water as a weapon. Rather, the Syrian state has an interesting history of political water use in various ways. Equally, non-state actors have politicized water for their own agendas, and ISIS' and other groups' military water use is in this regard not unique.

These findings led to a restructuring of the research. The overarching research question remained the same: how can water be regarded as a political tool in Syria? From the existing literature, the principal paradigm of water as a tool for conflict or cooperation was adopted. Within this paradigm, three discourses exist through which water can be politicized. An integrative historical approach to the topic was adopted, and the role of human agency in water management as well as the "relative availability" of water were emphasized. The abundant literature on international water negotiations led to the first designation of and a chapter on water as a tool for diplomacy at the international level. However, water management at the national and local level with the second designation of water as a tool for development proved to be a less-trodden but equally if not more important subject for research. Historical and practical research in the form of a case study indicated that the national and – related – the local level are highly important to take

[256] World Bank Report, "From Scarcity to Security", 1-32.
[257] Newsweek, "Yemen Is Tearing Itself Apart Over Water", 20 January 2015. Available via http://www.newsweek.com/2015/01/30/al-qaida-plans-its-next-move-yemen-300782.html .
[258] The Guardian, "Libya: Water Emerges As Hidden Weapon", 27 May 2011. Available via http://www.theguardian.com/environment/2011/may/27/libya-water-hidden-weapon .
[259] See ISW Update on the Sinai of 12 March 2015.

into account when researching political water use. This more empirical and practical chapter subsequently led to the final chapter, in which the question of water as a tool for democracy was posed. While the Syrian state – government, regime – initially figured as the central actor, the international community was designated as the subject of the last chapter.

- ***Reflections on the research***

Water and water management have proven to be dense and complicated topics wherein a multitude of factors and various scholarly disciplines play a role. I chose history as the leading discipline in my research, with a historical approach based on the integrative, total history of Fernand Braudel and the Annales School. An integrative historical approach to issues that are to a certain extent highly topical is quite novel, but satisfactorily served the purposes here. It showed the inherent shortcomings in solely researching the highly visible military use of water: because of its focus on *histoire événementielle*, the wider political background of narratives and actors is obscured. A predominantly historical approach also meant partly ruling out other disciplines. Political science, environmental sciences, and international relations are leading angles from which much research on water resources and water management has been conducted. While I partly incorporated these disciplines into the historical approach by researching geographical and ecological characteristics of river basins as well as different possibilities of diplomacy, they remained subordinate to the overarching historical account. Furthermore, because of this novel approach to the topic, the nation-state (Syria before the current crisis) appeared as the most important space of inquiry. In scholarly literature, basin-wide research has often been favored, but those examinations mostly do not include the national or local level. Vice versa, research focused on these smaller levels often excludes international basin-wide (geo)politics. Selecting the national context as the dominant focus allowed for the inclusions of different scalar levels of analysis. At the same time, this resulted in the exclusion of regional and larger international political dynamics. Comparative research on water management in the larger MENA region must be conducted more extensively, as I argued earlier in the thesis. Comparisons with, for example, the interesting politics of water management in Saudi Arabia, or with the hydrological challenges in the Israeli-Palestinian context, may serve to advance future research on hydrological matters amongst different backgrounds.

Methodologically, the political orientation and topicality of the subject presented some challenges regarding source material. By undertaking a case study based on the documents of the SDWC, I was able to get access to primary materials and compare and contrast academic arguments to practical, technically-oriented research "on the ground". Combined with the documents of the Dutch Ministry of Foreign Affairs I gathered, I could compose a reasonable assessment of the views and agendas of the international community vis-à-vis Syrian water management. Additionally, talks to a Dutch expert of the SDWC and to a journalist who had spent many years in Syria allowed me to partly overcome the hindrance of being unable to do fieldwork. Using a broad variety of sources also – again – resulted in the incorporation of different levels of analysis (international, national, local, global) in this thesis. It also served the purpose of the broader historical, partly theoretical research that was conducted here, rather than, for example, small-scale, ethnographical research. Consequently, cultural, religious, or ethical connotations of water were left out. But these dynamics

of water must not be cast aside. Research that focuses more exclusively on citizens or populations and their relation to water must be sure to take these connotations into account.

- ***Water as a political tool?***

These evaluations bring us to back to the larger research question of water as a political tool in Syria. The dominant, discourse-transcending paradigm of water resources stimulating either conflict or cooperation remained upright at the different levels of analysis, and was intimately tied to questions of security for the different actors. The research meant to deepen this paradigm through a thorough exploration of the politicizing of water in relation to a specific country. The focus on human agency assigned an important role to water management. In relation to Syrian water management, consequently, the terms "relative availability" and "pragmatic strategies" were coined. Relative availability was central in my plea for a political approach to the subject. Although geographical history and ecological realities cannot be simply swept aside, they must not be regarded as predefined facts and truths. Because of relative availability, water management has more than one truth.

Water can be regarded as a political tool in Syria in various ways. First, the state can employ water as a tool for diplomacy vis-à-vis its riparian neighbors. It can use water as a tool for development in its hydraulic mission linked to state-building and power consolidation. And in the current Syrian conflict, water can be a military tool. These political possibilities can be exerted through water management by the Syrian state. Pragmatic strategies appeared to be central in water management, and must be taken into account in debates on human agency vis-à-vis water. The most important strategies were issue linkage and strategic alliances at the international level, and developmental centralization and development cooperation with international partners at the national (and local) level. Besides, water can also be politicized through the diverse discourses. By presenting water through a distributional or ecological frame, Syria's natural water scarcity and increasing stresses to water resources due to a combination of population-growth, power asymmetry, and climate change could be propagated. Scholars like De Châtel, who has spent years of doing research in Syria and spoke to a number of high Syrian officials and ministers, emphasized the extreme political sensitivity that surrounded Syrian water management. Agriculture and food self-sufficiency were national pride and consequently regarded from a security prism as red lines that should not be fumbled with. The cover of this thesis quite literally illustrates this, showing agricultural and hydrological practices as pictured on a five hundred and thousand Syrian pound bill.

Despite the here-central national context, water may also be politicized by forces external to the state to serve their agendas. Water can be regarded as a possible political tool for the international community as well; to pursue a neoliberal agenda aimed at democracy. A heavy emphasis on the technical aspects of water management, sometimes coupled with diplomatic instruments like Track II initiatives – that strengthen the hegemony of technocrats – or plain funding, can in this regard serve as the instruments of the international community. In Syria, however, IFIs and other global institutions seem to have had a more limited influence and leverage than has been the case in other Middle Eastern countries. *Pace* Hanieh, the deplorable state of the Syrian water sector cannot be entirely contributed to neoliberal pressures and agendas.

Nonetheless, the current crisis does attract initiatives from the international community that promote capitalism and democracy through proposed reforms that can be labeled as neoliberalist, as the last chapter showed. This also applies to the Syrian water sector.

A question that remains, is who would be responsible for the questionable condition of the Syrian water sector. Is it the Syrian government with its domestic economic policies, the international community with its capitalist pressures, or the Syrian population with its environmentally harmful practices the past fifty years. Or, perhaps, one should rather ask whether it is necessary to express value judgments on behalf of the here-examined actors and their agendas. Haddad's critique on the Syrian government's liberalization is thoroughly grounded in his years of research and own experiences in the country. But Hanieh's criticizing of the international community's neoliberal agenda already is more abstract. This thesis balanced the theoretical and the practical, the abstract and the concrete. The question how water can be *regarded as* rather than *used as* a political tool means installing a somewhat theoretical approach to political water management. More abstract ideas on and examples of the politicization of water at different scalar levels were matched to more concrete Syrian politics and economic developments. Hence, the documents of the SDWC, that provided highly-interesting and much-needed practical insights into Syrian water management on the one hand, could on the other hand be regarded as propagating a more theoretical, technical, neoliberal agenda. But does that render their mapping of bottlenecks and environmental challenges in the Orontes basin less valuable? To what extent has the SDWC benefitted some Syrian people in the basin, even if the technical experts were immersed in a neoliberal frame of reference? In a different vein, would Syria have been any better off if it had not sought to embed itself in the global economy in 2005 but had adhered to original Ba'thist policies? And how should we regard the policies of the Dutch government or the UN in the current Syrian crisis? If some Syrians are helped in the deplorable current situation, for example through funding of clean drinking water projects, should we express judgment on that?

Most importantly, this thesis has pointed out that there are many possible political dynamics to water – it cannot merely be regarded as a natural resource. A sustainable Syrian water sector is consequently in the first place a political challenge. Once again, scalar levels are important. The local level – the level of Syrian towns and villages, of everyday life, of individual Syrian men and women – has been touched upon in the SDWC examination, but has not been theoretically analyzed like the national, international, and global level. That is also perhaps unnecessary. Both the SDWC and De Châtel have indicated that at the Syrian local level there is mostly no conscious political water (mis)management; management policies seem to be more ad hoc decisions partly made under Allan's "veil of ignorance". There seem to be no particular pragmatic strategies or narratives surrounding water in place.[260] But this is not to underestimate the importance of everyday practical water management "on the ground". Selby warned in 2005 that conflicts over water were most likely to occur at the local level. Haddad wrote recently (March 2015) that 'the road ahead in these bleak times in Syria is one of modest and relatively limited initiatives that are often isolated from one another but nonetheless cumulative.'[261] Hence, the answer to the question posed by Selby in the

[260] Information based upon talks with Jos de Sonneville (SDWC) on 13 February 2015 and Francesca de Châtel on 5 March 2015 as well as derived from information in earlier chapters.

[261] Haddad, "No Easy Answers", http://www.jadaliyya.com/pages/index/21237/four-years-on_no-easy-answers-in-syria-(part-ii) .

beginning of this research – whether water can shape, or help to reshape geopolitics in the Middle East – can perhaps best be answered by ongoing research into Syrian water management at the local level – into past as well as present times.

- ***A brief concluding side note***

That said, it seems unlikely that small-scale, on-the-ground research in Syria is possible or plausible in the near future. I have refrained from predictions on possible outcomes of the Syrian conflict, nor have I wished to pose the current conflict as the dominant context or setting of this thesis. In the beginning of this thesis I quoted Ranke who argued that the historian must take oneself and one's knowledge into account in one's writings. From hindsight it is perhaps easy to point to the Syrian regime's agricultural policy mistakes and water mismanagement, or its neoliberal policies as incentives to the present situation. These arguments may or may not or may partly be true. What is more important, however, is to use one's comfortable position of sitting at the end of history to further explore the political dynamics surrounding water resources and water management in Syria as well as in the larger MENA region. I mentioned the built-in bias of my predominantly European and American source material. Additional studies into political water management in the Middle East – particularly from different angles than the one employed here – are needed to avoid such biases. Haddad argued that the relationship between the state and the private sector in Middle Eastern countries is fraught with contingencies and constraints; consequently political-economic developments in key infrastructural sectors like the water sector must be examined on a case-by-case basis.[262] The roles of different possible actors must be further problematized. Equally, other angles and topics, like the water-energy nexus, or the oil-water analogy, which I could unfortunately not sufficiently take into account here, need to be researched. Pushing research on the (theoretical) political dynamics of water forwards will perhaps contribute to reaching sustainable water management at a practical level, that benefits all parties involved.

[262] Haddad, *Business Networks*, 62.

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- ***Maps and figures***

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