

BUILDING OR BURNING BRIDGES?

שיתוף - תְּעוּן

EXAMINING COOPERATION
BETWEEN PALESTINIANS AND ISRAELIS
OVER WATER SCARCITY
AT THE JORDAN RIVER BASIN



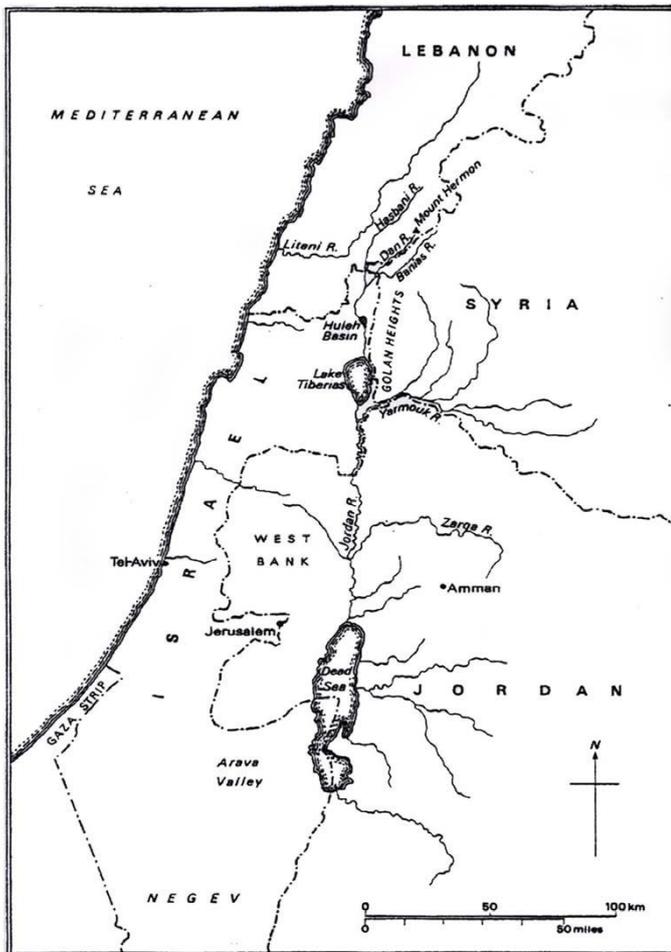
And Isaac's servants digged in the creek
and found there a well of living water.

But the herdsmen of Gerar quarreled with

Isaac's herdsmen saying: "The
water is ours!" ... and they digged
another well, and they contested
over that one also: and he called
the name of it Sitnah (hatred)

(Genesis 26: 19-21)

(Livnat 1994: 275)



Abstract

Water scarcity is an important and complex issue to study. However, in an era when the world faces climate change, migration and globalization, cooperation is increasingly important. Water scarcity is especially noticeable in the Middle East in general and at Jordan River Basin in particular. This dissertation is a case study of the possibilities and obstacles of cooperation over Jordan River Basin between Palestinians and Israelis. The theoretical framework is a construction of a three-level negotiation theory of hydro politics. The three levels are *international*, *national* and *regional/local*, all essential for presenting a broad comprehension of the issue of water scarcity. The biggest obstacles between the two parties seem to appear at national level due to national security and national sovereignty. However, increased cooperation at the other levels might lead to improved trust and understanding which might also influence the national level. The dissertation aim to isolate the water conflict from the overall conflict as well as discussing if a substantial cooperation over water at all levels could have positive repercussion on the historical conflict between the Palestinians and Israelis.

Keywords: water scarcity, hydro politics, Israel, Palestinians, Jordan River Basin, negotiation theory

Number of words: 180

Abbreviations

EU – European Union

IGO – intergovernmental organization

IO – International Organization

JWC – Joint Water Committee

NGO – nongovernmental organization

OPT – Occupied Palestinian Territory

PWA – Palestinian Water Authority

UN- United Nations

UNRWA – United Nations Relief and Works Administration

US – United States of America

Table of contents

1	INTRODUCTION	1
1.1	AIM AND QUESTION FORMULATION	2
1.2	METHOD, LIMITATIONS AND MATERIAL.....	3
1.3	THEORETICAL FRAMEWORK	4
1.4	OUTLINE.....	4
2	HYDRO POLITICS – A THEORETICAL FRAMEWORK.....	5
2.1	WATER SCARCITY	5
2.1.1	HYDRO POLITICS	6
2.2	THREE-LEVEL NEGOTIATION THEORY	6
2.2.1	NEGOTIATION THEORY	7
2.2.2	INTERNATIONAL LEVEL.....	8
2.2.3	NATIONAL LEVEL.....	9
2.2.4	LOCAL AND REGIONAL LEVEL.....	12
2.2.5	COMPREHENSIVE THEORETICAL MODEL.....	13
3	THE JORDAN RIVER BASIN	14
3.1	THE JORDAN RIVER BASIN – HISTORY AND WATER SCARCITY	14
3.1.1	HISTORY OF THE PALESTINE/ISRAEL CONFLICT.....	15
3.1.2	WATER SCARCITY OVER JORDAN RIVER BASIN	16
4	THREE-LEVELS OF HYDRO POLITICS OVER JORDAN RIVER.....	18
4.1	THREE-LEVEL NEGOTIATION THEORY OF HYDRO POLITICS OVER JORDAN RIVER.....	18
4.1.1	INTERNATIONAL LEVEL.....	19
4.1.2	NATIONAL LEVEL.....	21
4.1.3	LOCAL AND REGIONAL LEVEL.....	24
4.1.4	THE THREE-LEVEL NEGOTIATION MODEL OVER JORDAN RIVER BASIN	26
4.1.5	WATER SCARCITY AS PART OF THE OVERALL CONFLICT	27
5	CONCLUSION	28
6	BIBLIOGRAPHY	30

1 INTRODUCTION

This first chapter will expose the reader to the complex area of cooperation over scarce natural resources and provide the reader with an introduction of the context of the dissertation. An introduction to background, aim and question formulation, methodological choice, limitations and material, theoretical framework and a brief presentation of the outline is presented.

"Many of the wars of the 20th century were about oil, but wars of the 21st century will be over water".

World Bank vice president Ismail Serageldin

(Morissette & Borrer 2004: 86)

As this quote indicates, there is a wide conviction among politicians, scientists, researchers and others that the increasing water scarcity will be a source of conflict for next generations. However, whether transboundary waters will lead to increased risk of conflict or improved dialogue and cooperation is a wide and topical source of debate.

Since the Cold War the world order has changed in many ways. Today globalization, climate threat, decreased nation power, migration and increased world population make bilateral and multilateral cooperation and negotiations, especially over scarce natural resources, essential and fundamental for the future. Natural resources are neither limited to national territories nor people, and therefore require cooperation. Natural resources are often scarce, non-refundable and without substitution, a unique set of challenges for multilateral and bilateral negotiations. Oil is one natural resource, water is another. Unlike oil, there is no substitute to water and is the source of life for all living creatures. Whilst searching for life on planet Mars, one was searching for water (Gleick 2002: xv). To some religions water is sacred. A gift from God, however, a limited gift. Since as much as three quarters of the surface of earth is covered by water, people tend to think of it as abundant, however, drinkable water is a scarce good. Today, internationally shared river basins provide water to more than 45% of the world's population. With increasing population growth, urbanisation, and other demographic changes, the demand for water is increasing. Predictions show that *water stress*, when the demand for good quality water exceeds the supply, will only increase (Ritzl 2005: 1, Natural resources, conflict, and

conflict resolution 2007: 4). Clean water is necessary for most basic duties and when deprived of this basic need, people are placed in a vulnerable position, leading to fierce competition for survival (UN Water Report 2008: 3). The increasing severity engages leaders of international institutions, national governments and local and regional organizations, of which all three levels are fundamental. A lot of research focuses on the risk of conflict, while this dissertation aims at highlighting the possibility of cooperation (Spector 2000: 223). Technology shows that there is enough water – if we cooperate (Priscoli 1998: 635).

In order to solve water-related problems we need to understand its complexity. Water issues are related to political, economic, cultural and environmental importance, all which need to be included to present a complete picture of reality (Gleick 2002: xv). When cooperation and negotiations over water scarcity is achieved, cooperation tend to be highly resilient over time and survives when conflicts rage over other issues between the parties. Water has, historically, often acted as a catalyst to cooperation (Wolf 2002: xviii).

One case of water scarcity where this complexity is clear is in the Middle East in general and The Jordan River in particular. The tense scarcity is especially apparent between Palestinians and Israelis where water scarcity is one of five disputes. However, it is probably the only aspect where incentives exist from both sides to cooperate, since the water scarcity is severe for both parties. This is therefore a fundamental case of water scarcity, since future sustainable cooperation over water is recognized as necessary within the region and might even lead to positive repercussions for the conflict as a whole (Jägerskog 2003: 13; Allan 2000: iv).

1.1 AIM AND QUESTION FORMULATION

The aim of this study is to examine, based on the theoretical framework, the possibilities and obstacles for cooperation between Palestinians and Israelis over water scarcity. The question for the dissertation is therefore formulated as:

- What are the possibilities and obstacles for cooperation between Palestinians and Israelis over the Jordan River Basin, if the three-level negotiation theory of hydro politics is applied?

1.2 METHOD, LIMITATIONS AND MATERIAL

The methodological choice is a case study of a qualitative nature. Since the choice of research strategy depends on the purpose of the dissertation, my methodological decision is due to closer examining cooperation and negotiations over water scarcity, particularly the *problématique* over Jordan River Basin, between Palestinians and Israelis. A complex and essential case of water scarcity.

This method is most appropriate when examining and analyzing a contemporary incident or procedure, for example water negotiations (Jägerskog 2003: 24). When using the qualitative method in general, and the case study in particular, one has the opportunity to closer investigate the chosen case. The qualitative method also involves interpretation, both of material of a primary and secondary nature, in this dissertation of secondary character. Usually the qualitative method is preferable when attempting to develop the dynamics behind political or social processes and it is also often used when having empirical studies involving for example context-dependent contemporary events, like my case (Yin 2000: 23).

One of the most frequently used criticisms of the qualitative method is regarding generalizations. There is an obvious trade-off, what the qualitative method gains in detail, it loses in generalization and vice versa (Svensson & Teorell 2007: 268). Since the context is vital for understanding water scarcity and water negotiations the qualitative method was an obvious choice.

There are a few limitations. The case of water scarcity is the Jordan River basin between Israelis and Palestinians. Although there are five parts dependent of the river, my limitation is due to time and space constraints which do not permit a detailed presentation of all additional cases. Therefore focus is on bilateral negotiations. Earlier research shows that multilateral basins are, nearly without exception, administered by bilateral negotiations, which are believed to be easier accomplished (Spector 2002: 223). Many earlier studies focus on Israel, Palestinians and Jordan, however, my focus on Palestinians and Israelis is partly because there already is a sustainable agreement between Jordan and Israel and partly because of the belief that increased dialogue over water scarcity can result in improved understanding and positive repercussions for the historical conflict.

The material used is mainly of secondary character. Most of the material is scientific articles but also a few published books. Whilst being well aware of the flaw of not including any material of primary character material like for example interviews were difficult to conduct. Nevertheless I have discussed the topic with diplomat Jan Eliasson,

who opened my eyes to the issue, and have been in mail correspondence with expert Dr. Anders Jägerskog, both of who have contributed with inspiration for my dissertation.

1.3 THEORETICAL FRAMEWORK

Water scarcity may be discussed from many angles since water is crossing disciplinary boundaries as it is crossing territorial boundaries of nations. Coming from a political science background the theoretical framework will be within this discipline. However, even within political science there are many useful theories, for example this issue is happily analyzed by realists and liberalists. Believing that they do not present a clear-cut picture, the theoretical framework is sprung out of negotiation theory, since negotiations are necessary when developing cooperation. Yet, throughout the research I realized that complements from other disciplines were needed and that all three levels, *international*, *national* and *regional/local* were necessary. I thereby broadened the theoretical framework to a three-level negotiation theory of hydro politics, which draws on different disciplines and acts as a bridge between disciplines, levels and the two parties.

1.4 OUTLINE

After this introductory chapter, the dissertation is divided into five chapters. Chapter two provides the reader with a broad three-level negotiation theory of hydro politics and an introduction to the complexity of hydro politics. Chapter three presents the empirical description of Jordan River basin, including a brief history. Chapter four consists of the analysis, based on the three-level negotiation theory with discussion of possibilities and obstacles. Finally, the fifth chapter provides a conclusion, including final remarks and suggestions for future research and last, but not least, the bibliography.



'We want peace' on the wall on the West Bank.
Picture taken close to Hebron, the West Bank, June 2009.

2 HYDRO POLITICS – A THEORETICAL FRAMEWORK

It has been shown to be risky to tie water resources to disciplines such as political science. When dealing with a subject of interdisciplinary nature, like water, there is a need for the theoretical framework to be broad and include different elements such as political economy, society and technology (Allan 2005: 181). During the research I came to the conclusion that negotiation theory, by itself, would not provide this necessary breadth. Whereby I expanded the theoretical framework to include other aspects and levels. This section will begin with a brief introduction, followed by a presentation of hydro politics, thereafter a comprehensive description of the three-level negotiation theory of hydro politics created for this dissertation and summarized in the end by a theoretical model.

2.1 WATER SCARCITY

“thou canst not stir a flower without troubling a star”

Poet Francis Thompson

(Hempel 1996: 154)

This quote captures the complexity regarding political ecology. A complexity witnessed within all disciplines where politics and environment are united and interdependence is a key word (Hempel 1996: 154). This complexity can be witnessed at over 260 river basins, which are today shared by two or more states and involve arrangements that usually lack legally sufficient agreements. However, perhaps because of the importance of water, most are solved peacefully. Today there exist at least 3 800 water declarations and conventions, which imply that there is optimism for peaceful arrangements. (Natural resources, conflict, and conflict resolution 2007: 5; UN Water Report 2007: 2f) In accordance with the complexity surrounding the interdisciplinary area hydro politics has been developed.

2.1.1 HYDRO POLITICS

The definition of the fairly new hydro politics can be explained as a systematic study of the behaviour of cooperation and conflict between states over transboundary water resources (Elhance 2000: 3).

States sharing transboundary rivers are confronted with the choice of getting involved with costly and prolonged conflict or develop cooperation and share the benefits of water (Elhance 2000: 202). These two options present the two scholars within the discipline. The school of discipline, represented by Peter Gleick, argues that water scarcity can result in social disruption for resource-dependent nations involving risk of conflict (Amery 2002: 313). Whereas the other school of discipline, represented by Aaron Wolf, argues that instead of conflict, water scarcity triggers diplomatic and technological innovations. A database compiled by Aaron Wolf's institution at Oregon State University, containing all water agreements on international watercourses, shows that states tend to find ways to reach agreement rather than engaging in conflict over shared water resources. It is therefore necessary to understand *why* and under *what conditions* cooperation occurs (Jägerskog 2003: 13f).

This dissertation is based on the conception of converting zero-sum confrontations to win-win scenarios, the core of sustainable development, which is one of the most important features and incentives for resolving disagreements (Tronsdalen & Munasinghe 2004: 9). Incentives for both parties are essential for negotiations to occur, which in turn are essential for cooperation to develop, this is elaborated in the next section.

2.2 THREE-LEVEL NEGOTIATION THEORY

Based on cooperation the theoretical framework focuses on negotiation theory and six aspects, from different disciplines, each important concerning water negotiations. The theoretical framework is an expansion of Putnam's two-level negotiation game of international and national level. In addition to these levels there is a need to expand this, due to the complex features of hydro politics, to also involve the regional and local level. The national level may be considered the central level, where international pressure can be evident through international regimes or third-party involvement and influence from regional and local level by NGOs, media and civil society. Since the levels interplay, cooperation on one level might generate cooperation on other levels due to the increased dialogue, trust and understanding. Each level is introduced with their belonging aspects but first an introduction to negotiation theory, which impacts all levels.

2.2.1 NEGOTIATION THEORY

Negotiations are not uncommonly linked to hydro politics and are considered to be an important tool regarding for example water regimes. In many countries, competition over water is the *status quo* and negotiations are considered a positive-sum exercise with gains for both parties, unattainable without cooperation. Creating the incentives to develop the necessary motivation from both parties to evolve in negotiations leading to cooperation (Jägerskog 2003: 39; Carraro 2007: 333). Therefore negotiations can be identified as the path to cooperation between two parties.

Negotiations regarding water scarcity include incentives like economic and environmental gains. Four benefits from cooperation can be presented *benefits to the river*, which include administration of ecosystems, *benefits from the river*, involving for example improved production of food and energy, *benefit of reduction costs because of the river*, due to less tension between states and the last, *benefits beyond the river*, positive results, for example economic integration (Jägerskog 2005: 2f). Nations usually do not negotiate unless both agree that cooperation is better than the status quo and when joint action means benefits for all involved parties (Dinar 2009: 353). The timing is also essential for nations to negotiate. Timing needs to be ripe. Ripeness is often linked to a situation where both parties are jointly suffering from a stalemate and can also include features such as both parties have institutional capacity to overcome the stress, a strong civil society and the technology required (Spector 2002: 216f; Spector 2000: 224).

Inequality between parties might be considered a seed for conflict, but research shows that inequality in physical share of water, safe water access, economic wealth, industrial use of water and human development (political, social and economic) and the smaller size of the river, yield agreement. These findings do, however, oppose earlier negotiation theories and should therefore be considered with caution. The motive for cooperation is considered to be driven by situation and it is therefore important to observe the context of a conflict. A stabilizing factor is access to technological capacity (Spector 2000: 230f, 233). Another element of cooperation is what negotiation experts call *superordinate values*, values beyond immediate utilitarian values, which parties can identify (Priscoli 1998: 635).

Negotiation theory also includes important elements of expertise and the importance of third-party, for example world power, involvement. For a comprehensive understanding of cooperation and negotiations the presence of actors and structures is important. The theoretical framework does therefore briefly contain a structure and actor perspective for a dynamic theoretical perspective. Within water negotiations structures are for instance international water law and domestic and international interest groups,

and can be defined as social practice, generating norms and rules. Actors are for example negotiators and experts but can also be states (Jägerskog 2003: 39-42; 57, 63, 65ff). Actors and structures are present on all three levels and interplay and influence one another, whereby negotiations are essential on all levels, elaborated in the next section.

2.2.2 INTERNATIONAL LEVEL

The international level is important concerning the complex nature of negotiations over water scarcity, international pressure is usually necessary since the issues often are tense between neighbouring states. Two aspects have been chosen, *international law and regimes* and *third-party involvement*, both fundamental regarding water scarcity and cooperation.

International regimes – international law

Regimes are important to include when discussing cooperation possibilities concerning water conflicts. Regimes are created to reduce risk and solve problems and foster social interaction and junction in value orientation, which generates incentives for increased institutionalisation of cooperation (Jägerskog 2005: 3). Regimes can be created through shock or crisis or by communities that share same knowledge. Unlike other regimes the resource regimes also include a technical component (Deshazo 1996: 60; Jägerskog 2003: 51).

Regarding water it is common to create institutions like treaties between parties. Water regimes can be viewed as confidence and security-building and might offer the necessary link between cooperation and interdependence. Within some areas regional regimes between riparian states have occurred, adopting shared norms and rules (Kibaroglu & Olcaunver 2000: 320; Jägerskog 2003: 53).

The United Nations General Assembly adopted 1997 the convention of Law of Non-Navigational Uses of International Water courses, which is a general water regime (Jägerskog 2003: 49). This convention presents the rights and obligations for states and lays out mechanisms and reservations for water disagreement. The rapid adoption of the convention indicates the international agreement of the urgency of collective and peaceful resolutions to these transboundary disputes. This principle of equitable and reasonable use is, however, diffuse and can easily grow to be subjective. More and more states are signing this convention, but eighteen more states need to ratify it before it enters into force. It is, therefore essential to spread these international norms of equitable and reasonable use (Elhance 2000: 218; Inside story 1; Sign for it 2009: 4). According to

international law and human rights, the right to clean water is an essential basic right, regardless of disputes over transboundary rivers (Amnesty International).

Third-party involvement

Concerning conflict, cooperation and negotiations the impact of a third party can be crucial. Third parties can be states, super powers, IOs, NGOs or individuals. The importance of mediation from a third party is usually fundamental when negotiations reach an impasse and mediators are believed to reduce the risk entailed with the compromise and protecting the parties' interests and reputation (Dinar 2000: 395). Third party involvement can help governments neutralize domestic political pressure by moving the issue to the international forum (Stinnett & Tir 2009: 234).

As part of the process there is usually a need for *carrots* and *sticks* to convince states and make them overcome their reluctance and view cooperation as a win-win situation. However, third party involvement is only valuable if consisting of deep understanding of the complexity concerning hydro politics and the restrictions of interstate dialogue over scarce natural resources like water (Elhance 2000: 220f). Timing is also crucial concerning mediation (Evans & Newnham 1998: 319f). Unwilling states can also be forced or persuaded to cooperate by the international structures like world opinions or superpower influence (Elhance 2000: 216; Jägerskog 2003: 41).

2.2.3 NATIONAL LEVEL

The national level is the central level since it is on the national level that states sign agreements, negotiations are sealed and boundaries are set for policies. How cooperation over water is established varies but some argue that the domestic influences play an essential role (Dinar 2009: 330; Jägerskog 2003: 135). To understand the decisions of nations on the international agenda, one must understand and study the domestic political context, since they are usually closely connected (Jägerskog 2003: 4). Therefore this section presents *governmental hydro politics*, including *national security*, *sovereignty* and *intergovernmental bodies* and also takes into account *economic development*.

Governmental hydro politics

There is a wide debate concerning whether hydro politics is a high-political issue or an issue of low-politics and thus not prioritized within the domestic political agenda. However, due to increasing scarcity, the water issue is considered a high-political nature more often (Stinnett & Tir 2009: 230).

- *National security*

Water is more and more often considered a security issue and is therefore a fundamental consideration. Ecological and environmental security has become a controversial issue within international security studies, where water can be both the tool and target of war (Gleick 1993: 80, 86). Power is an important concept at the national level, as well as for military, economic and political power. Even though power within negotiation theory is first and foremost connected to situational and behavioural features and is multidimensional, rather than economic and military power, these need to be considered regarding hydro politics (Jägerskog 2003: 41).

The risk of water scarcity is a security dilemma. A scenario where one state's pursuit of security threatens the other and is therefore often associated with realism, zero-sum games and water wars. However, according to Douglas Stinnett and Jaroslav Tir security concerns and power asymmetry do not necessarily act as an obstacle against institutionalized cooperation (Stinnett & Tir 2009: 248f; Amery 2002: 322).

Another aspect is the fear of becoming dependent on another state for water supply, a problem for downstream riparian states (Elhance 2000: 207). Upstream and downstream situations are linked to power asymmetry and geographical distribution of natural resources is an element of national power within negotiations, which is leading into national sovereignty (Dinar 2009: 334; Kempkey et al 2009: 257).

- *National sovereignty*

One theory within hydro politics and the legal right to water is the Harmon doctrine or, as it is also known, the theory of absolute territorial sovereignty. This declares that the river within state borders can be used without regards to any other riparian state (Amer 1997: 382). This allocation idea has been criticized by international lawyers bearing their arguments on *sic utere tuo ut alienum non laedas*, the principle of using your own as not to cause injury to others (Amer 1997: 382). A softer approach is the theory of limited territorial integrity, which implies that each state is free to consume its territorial water as long as consumption does not discriminate the right and consumption of other states (Amer 1997: 383).

Sovereignty of states has, historically, been interpreted as the grant of the right to all natural resources within geographical state borders. Some states continue to live by this concept even though it is more often questioned due to the increasingly interdependent international system (Elhance 2000: 207). In line with this development are treaties between states for example intergovernmental bodies.

- *Intergovernmental bodies (IGOs)*

Intergovernmental bodies are of importance. They can sustain cooperation and serve as a forum for diplomacy and dialogue and can take the form of informal mediation. The IGOs may also encourage cooperation between individuals by possessing technical and scientific knowledge, called epistemic communities. Governments usually rely and depend on these experts because of the complexity of transboundary rivers. The governmental dependence of information from these communities might result in international intersection of state interests as well as increased cooperation due to acceptance of common policies. For those lacking technical data and expertise and the economic ability, these communities can reduce costs and share techniques between nations. In a few cases the World Bank has funded such projects (Stinnett & Tir 2009: 235f).

Economic development

It is important to include economic aspects, not only since water is essential for economic activity in many countries but also because it is important in attracting foreign investment. Mutual economic interest is a strong incitement for states to cooperate (Elhance 2000: 211; Spiegel et al 2004: 13).

One labour sector where the importance of water is significant is the agricultural sector, a crucial sector for many countries. Even if it is difficult to calculate economic trade-offs due to different allocation of water resources, for countries with a high dependency on water dependent sectors, such as agriculture, these trade-offs could be substantial (Elhance 2000: 211).

It is sometimes said that water flows uphill to money and power. States with economic advantage will often be hegemony in power towards poorer nations. This is also because water is an expensive good and difficult to transport, making it difficult if not impossible to import (Inside story 1; McCoy & Zachary 1997; Postel 1999: 128).

Water, which is often compared to other natural resources such as oil is unlike oil and other natural resources, per se not traded on any domestic or international market. Therefore it is difficult to deal with the economics of *common pool* resources like water in a rational and scientific way. Consequently water is often handled by political considerations leading to huge subsidies, indirectly and directly, for the favoured sectors and groups (Elhance 2000: 212).

Few of the countries that share international river basins have the military and economic capacity to engage in conflict over water. A full-scale war with a neighbour over water can be very expansive, especially in the long-run (Elhance 2000: 214).

2.2.4 LOCAL AND REGIONAL LEVEL

For most people the international and national levels might be considered the most important levels for sustainable negotiations and cooperation to occur. However, it is on the local and regional level that the direct impact of water scarcity is witnessed. It is on this level that conflicts take place due to severe living conditions from water scarcity. Some argue that due to competition over water this level is where the highest risk of conflicts occurs. These regional problems have been considered to be solved most efficiently by regional organizations. Regional management is, however, dependent on the national level (Trondalen 1992: 91; Carraro et al 2007: 331). The chosen aspects, which mostly take place on this level, are *technological information, data and expertise* and *the importance of NGOs*.

Technological information, data and expertise

A fundamental part of negotiations and mediation concerning transboundary water resources is access to reliable and accurate data for both parties. When negotiations concerning sharing and planning of water dams, reservoirs and for example irrigation systems there is a requirement for historical information about for example climate variation. Reliable data is necessary as part of the negotiation process when deciding between different options. Such frequent data is currently only present at a few transboundary rivers and the quality of the data is rarely good enough for comprehensive analysis. Because of the complexity concerning these issues there is a substantial need for data and technical expertise. The technologies and hardware like for example geographical information systems is for many countries not available. Since this data is valuable in negotiations it has become a national security concern. Therefore some countries do not share this information with their neighbours or with the international community since the data is considered a national secret. These countries have been accused of withholding significant information and have therefore postponed or broken negotiations (Elhance 2000: 208, 212f). Even according to international law, data and technological information ought to be shared between riparian states (Amer 1997: 386).

The importance of NGOs

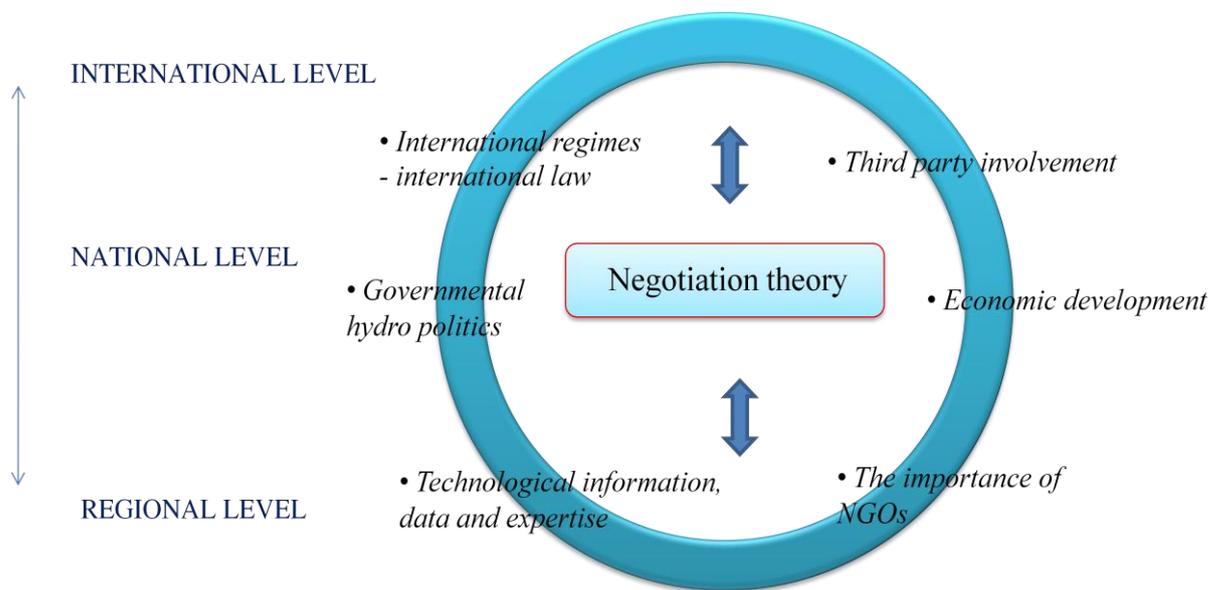
Since water scarcity is first and foremost a problem at the local level NGOs are of essential importance. NGOs can function as a link between people and government and they seem to play an increasingly fundamental role in influencing the national governments to assert to different programmes and institutions (Trondalen 1992: 91). NGOs can also influence the media and thereby keep the issue in the public eye, which

might force governments to action (Spector 2002: 222). Projects raising water scarcity from local to national level are of importance. Cooperation and dialogue ought to start from the bottom, with the citizens at a local level influencing cooperation on national level (Green Cross). The intention is for interest groups to influence the government and their decisions within negotiations, however, applicable only for a democratic society (Kempkey et al 2009: 257).

2.2.5 COMPREHENSIVE THEORETICAL MODEL

The theoretical model facilitates the understanding of the complex relationship and interplay between the three levels, all impregnated by negotiation theory. As seen from the model all levels are fundamental for reaching sustainable cooperation over water scarcity as well as actors and structures within each level. Each level has been motivated and described in their theoretical presentation above and will be further analyzed following the study of the Jordan River Basin in section three.

Figure 1. The Theoretical model of the three-level negotiation theory over water scarcity.



3 THE JORDAN RIVER BASIN

This descriptive chapter presents the water scarcity between Palestinians and Israelis over the river. Since this dissertation focuses on Israelis and Palestinians it is impossible to not include the underlying conflict of many years, which is affecting the everyday life of both Palestinians and Israelis. Therefore a brief historical flashback will be introduced, followed by a comprehensive presentation of the water scarcity.

3.1 THE JORDAN RIVER BASIN – HISTORY AND WATER SCARCITY

The case of water scarcity prevailing between Palestinians and Israelis over the river is unique in many ways. The water scarcity is simply one of five disputes between the parties and the water scarcity is so severe that even if one party possess all the water, there would still be water scarcity for that single actor. In such a situation, cooperation is necessary to a larger extent than ever. Therefore, I have chosen to focus on the idea of cooperation by Wolf over water scarcity between Palestinians and Israelis, in line with the argument that water is “humanity’s great learning ground for building community”. (Wolf 1998: 261) Factors which contribute to the assumption that the river is a case of cooperation over water rather than a case of conflict include that water has never been *the* reason for conflict between the parties, the cost of a war over water would be substantial and treaties over water are efficient and long lasting (Jägerskog 2003: 13; Ward 2008: 16). The following sections will briefly introduce the reader to the history between Palestinians and Israelis and the hydrological situation.

3.1.1 HISTORY OF THE PALESTINE/ISRAEL CONFLICT

The past is the key to the future

A research regarding the Israelis and the Palestinians, no matter what object or topic, without including the historical dispute, would be incomplete. The historical and cultural heritage is too important. Therefore, before continuing, a brief historical flashback is necessary.

The essence of the conflict between Israelis and Palestinians (Palestinian Arabs) is the claim of the same territory. For the Jews - the land of Israel and for the Palestinians - Palestine. Before 1920 when the land became British mandate under the League of Nations (LON) the land was called Palestine and was mostly populated by Arabs – Palestinians, between 1920-1948 the Jews, a minority, increased through immigration and spread Zionism, Jewish nationalism. The Zionist movement realized the importance of water for a future Jewish state in Palestine. Some claim that water was an ideological characteristic for Zionism, due to its importance for agriculture, which is an ideological feature of the movement. The British tried to develop a general agricultural policy in Palestine, but met obstacles like for example own customary water laws within each Arabic village. Thus the water and the Palestinian's deep discontent with the British mandate, led to the partition plan by the UN in 1947. The UN proposed an Israeli state (55%) and one Palestinian state (44%), united by an economic union and a Jerusalem under UN trusteeship (NE, Jägerskog 2003: 77ff). The Palestinians did not accept the solution and the first Arab-Israeli war followed, which ended in favour of Israel 1948, whereby Jewish leaders proclaimed the state Israel. A result of for example a fundamental Jewish hydraulic network. The defeat was a great for Palestinians including for example loss of 77% of their land, resulting in large Palestinian refugee streams. More conflicts followed, the second and in 1967, the Six-days-war, due to for example water. This resulted in Israeli occupation of the Palestinian territory, including the West Bank and the Gaza strip. Israel enhanced its military-strategic and hydro-strategic position, controlling over 80% of the surface and groundwater resources it uses. At this point Russia, USA and the UN were involved in peace negotiations, which included negotiations regarded water settlements. Many attempts at peace negotiations followed. In Geneva (1974), Camp-David (1978), Madrid (1991) and in Oslo (1993), the negotiations took place which resulted in two agreements between Israelis and Palestinians. However, agreements concerning the fundamental issues of Palestinian refugees, the border of Palestine/Israel, Jerusalem and Jewish settlements have not yet been settled. Towards the end of 2000 a

new intifada (Palestinian riot) began, bringing an end to the Oslo peace process (NE Israel-Palestina; Säkerhetspolitik; Jägerskog 2003: 85).

Despite their historical differences Palestinians and Israelis do share the opinion that water is a sacred resource that belongs to the people and that perceptions of water are affected by political ideology (Jägerskog 2003: 77). Today there is no sustainable cooperation or allocation over the river, there is an interim agreement which is supposed to be replaced by a permanent peace agreement between the two parties, which is still in progress. The important allocation of water rights is still pending (Ritzl 2005: 2; Zahra 2001: 95).

3.1.2 WATER SCARCITY OVER JORDAN RIVER BASIN

Most of us take supply of water for granted, we wake up, take a shower, brush our teeth or simply have a glass of water. This is, however, a nonexistent reality for people living in the area of the river.

The Middle East essentially ran out of water in the 1970s and is one of the worst affected areas in the world. The scarcity is especially severe in the area. Along with the river there is also the ground water which include the two aquifers, the mountain and the coastal, however this dissertation focus on the river (Jägeskog 2003: 15; Amery & Wolf 2000:192).

The river originates in mountainous Lebanon, along the border between Syria, Lebanon and Israel and continues down to the Dead Sea, the lowest part of the surface of Earth. Its total length is 350 kilometres, the sources in the



(Reference: United Nation Environment Programme)

northern part of the river are the three springs, the Hasbani, the Dan and the Banias. The river is often compared to the Nile, but the Nile's velocity, however, is 74 times as fast, The Jordan River is said to be 2% of the annual flow of the Nile! The climate in the area is Mediterranean, semi-arid in the north and an arid in the south and the rainfall approximately 200mm/year (Lowi 1995: 29; Phillips et al 2006: 41).

In years of drought the quality of the water is badly affected, decline in the flow leads to risk of saline water, which might infiltrate and salinize the water. The quality of water is something Palestinians on the West bank complain about, as is allocation. Amnesty published a report concerning the skewed allocation of water on the West Bank in October 2009 (Amery & Wolf 2000: 9; Jägerskog 2003: 72).

A general measure of lack of water is if an individual has less than 1000 m³ renewable water per year (Ritzl 2005: 1). Israel is assumed to have approximately 400 m³ per individual and year, while the Palestinians are assumed to have less than 100 m³ per individual and year. These numbers can be compared to Sweden, where the same number is measured to be 20 000 m³ renewable water per individual and year (Ritzl 2005: 1; Deshazo & Sutherlin 1996: 6).

Since this dissertation is focused on the area of the river it is mostly concerned with Palestinians living on the West Bank, this is important to bear in mind since the water conditions are different on for example the Gaza strip, however cooperation would affect all Palestinians.

4 THREE-LEVELS OF HYDRO POLITICS OVER JORDAN RIVER

Based on the three-level negotiation theory of hydro politics this section will present an analysis of all six essential areas for cooperation over water scarcity between Israelis and Palestinians over the river, including the fundamental actors and structures of each level. In the end of each level a discussion regarding obstacles and possibilities is presented. Thereafter the empirical model summarizes the actors, aspects and levels. Last but not least a discussion regarding the possibility of positive repercussions on the overall conflict between the parties is presented.

4.1 THREE-LEVEL NEGOTIATION THEORY OF HYDRO POLITICS OVER JORDAN RIVER

As mentioned in negotiation theory, negotiations are considered a positive-sum exercise with incentives of gains due to cooperation from both parties. Of the four benefits presented above the essential gains for Palestinians and Israelis are *benefits to the river*, which lead to protection of the ecosystems, and *benefits from the river*, which is for example improved production of food etc. Concerning *benefits from reduction costs* and *benefits beyond the river* these benefits have not, to the same extent occurred, yet. One example where *benefits to the river* is taking place is on regional level, between Emeq Hefer and Tulkarem. These two cities are separated by the green line but are still engaged in water cooperation and are both part of an ambitious programme (Jägerskog 2005: 12).

According to Spector, inequality between the riparian states within share and access of water, economy, industrial use and human development, increase cooperation possibilities. All these inequalities are evident between Israel and Palestinians and are considered by some to be an obstacle rather than a possibility to cooperation. Smaller rivers tend also to increase cooperation possibilities, which also should increase the possibilities of cooperation for the Jordan River considering that the river is regarded to be a small river (Spector 2000: 230f).

Also mentioned regarding negotiation theory is the important element of *superordinate values* to cooperation, which is present between Palestinians and Israelis since both consider water a sacred good, a gift from God, and thereby facilitate the cooperation debate at a higher level (Priscoli 1998: 635). The next section presents the features of cooperation based on the theoretical framework and presents the obstacles and possibilities of cooperation from all three levels *international*, *national* and *local/regional*.

4.1.1 INTERNATIONAL LEVEL

International regimes – international law

The general water regime - the UN convention on water utilization is gaining importance in line with more and more states signing the convention. At the fifth world water forum in Istanbul 2009 many states highlighted the importance of a clearer and more sustainable global treaty regarding transboundary rivers. At the forum the head of the Palestinian Water Authority (PWA), which was created in the mid-1990s due to Israel's failure to meet their obligation as an occupying state, announced that they would join the convention upon becoming a state. The PWA draw on the importance of more states ratifying the convention. With the PWA accepting the convention, four of the five parties dependent on the river have agreed upon the convention. The last part being Israel. However, many scientists agree that this international law of equitable and reasonable use is too diffuse and often end up with subjective interpretations, and state the need for expanded global respected norms (Kempkey et al 2009: 262; Inside story 1; Amnesty International). Therefore there is a need for a better context-specific and profound understanding of hydro politics by the international community, which currently does not exist (Elhance 2000: 202). Professor Aaron Wolf argues that these norms need to be diffuse and opened to interpretation to be able to be a mean of solving conflicts (Jägerskog 2003: 90). Another problem regarding the international law is that it concerns rights and responsibilities of *states* and the Palestinians are therefore not strictly juridical objects of the convention (Wolf 1998: 253).

Regarding the human right to water Amnesty recently published a report regarding the misallocation of water between Palestinians and Israelis. According to the report the Israeli Authority, which is controlling and restricting the water in the occupied Palestinian territory (OPT) is violating international law (B'Tselem; Amnesty International).

Despite this the Israeli Authority did recognize water rights to Palestinians in 1995 in the interim agreement in Taba. The human right is essential from the Palestinian perspective and therefore needs to be included early in the negotiation process, since this is embedded deeply in the history of the conflict. Concerning the difficulty embedded in this the final allocation was postponed to be included in the permanent status negotiations. However, the recognition of Palestinians rights to water is one step in the right direction. Equitable use does not necessarily need to mean equal use but an allocation based upon factors such as population and geography. This allocation agreement is however dependent on reliable data and quantifying the equitable allocation of water would be an essential step towards reducing tension between the parties (Jägerskog 2003: 101, 110; Gleick 1993: 107; Jägerskog 2005: 8).

Third-party involvement

As written earlier the impact of a third-party can be crucial. This is obvious in this case since no water dispute between Arabs and Israelis ever has been solved without interference of a third-party (most often US). This implies that there is a need for third-party involvement for cooperation to be adapted between the parties (Wolf 1995: 84).

One historical example concerning mediation is the individual mediation in 1953 by the American ambassador Johnston. These negotiations proved to be key elements in the dialogue between Arabs and Israelis over water sharing. The negotiations proceeded despite the belief that an impasse was inevitable. A few negotiators have reported that the best way to handle Israel is by using the method of *carrots* and *sticks* along with economic pressure on Israel. However, the Johnston case of mediation shows how the mediator can be restrained by the political, both international and regional, environment. The political climate was far from conducive during the time period of the negotiations, which had negative effects on the negotiations. This along with the high transactions costs of the negotiations contributed to its failure (Dinar 2000: 396; Wishart 1990: 542, 536f). This mediation was of multilateral character while the ones considered here between Israelis and Palestinians are of bilateral character and is therefore considered to be less complex, however, less achievable politically (Wishart 1990: 544). Some argue it was a pity that the US turned their back on the Johnston plan and that it could be further negotiated (Haddadin 2002: 330).

Considering the overall sensitive relationship between Palestinians and Israelis the need for a third-party facilitator is evident. Moving the issue from national to international level can neutralize their domestic political pressures and protect their national reputation. Who this third-party would be is more difficult. International

organizations have the advantage of being impartial, which is important in this conflict, such an impartial and important actor is the UN (Evans & Newnham 1998: 320).

Concerning possibilities and obstacles of cooperation on international level the concluding remarks are that there are a few essential obstacles embedded with cooperation. The importance of respecting Palestinians rights to water needs to be part of the starting point of negotiations, where also precise allocation measures need to be put forward. There is also a need for international norms to be respected and when states violate these norms the violator needs to be punished, if this was achieved it would hamper hegemony states like Israel to justify their actions. Despite this the Israeli recognition of Palestinians right to water is one step in the right direction.

Mediation is a possibility of cooperation and should rather be seen as a necessary tool for establishing water cooperation between the parties. As described above there are many different actors that probably would like to function mediator regarding cooperation over the water scarcity, however, which actor is preferable is discussable. With the new American administration there is sure a possibility for increased international pressure and mediation to occur, however, with a necessary understanding of the complexity of hydro politics.

4.1.2 NATIONAL LEVEL

Governmental hydro politics

Historically the water issue has never been considered an issue of high-politics but rather a low-political issue for both parties (Jägerskog 2002: 81). This priority seems to be changing within the Middle East and today some argue that water actually is considered a high-political question. This development is probably due to for example water as an economic and national security issue, both considered within the national level along with national sovereignty (Gleick 1993: 80).

- National security

It is important to include this aspect since the political atmosphere between the riparian parties is tense and water might in a large extent be considered a power and military issue. As seen in the historical presentation water has been a cause of war between the two parties and its possession is considered a strategic advantage. Some argue that the way Israel and Zionists observe and control water and their unwillingness to share the resource is influenced by the water scarcity and water security (Zeitoun et al 2009: 149).

As of today Palestinians are highly dependent on Israel for water supply, making Israel hegemony in security. Israel is also the most powerful state within the Middle East. Therefore, regarding national security issue, it might appear that there are great incentives for Palestinians to cooperate with the Israelis over water.

However, in the long-run incentives should unfold from both sides since increased interdependence and infrastructure networks over water between Palestinians and Israelis can decrease the vulnerability of droughts and prepare the parties for climate changes and therefore increase both nations' security (Priscoli 1998: 623).

- *State sovereignty*

State sovereignty is a sensitive and difficult area due to the dispute between the parties over the territory and because of the Israeli occupation of the West Bank. In line with the already mentioned Harmon theory Palestinians argue that the water, on the West Bank belongs to the Palestinians, since they consider the land to belong to them (Jägerskog 2002: 91). However, in an Israeli perspective and due to the Israeli occupation of the West Bank, the Israelis consider the land belonging to them and therefore also the water.

Due to the complex territorial situation, state sovereignty is very difficult to discuss and difficult to present an objective right to the water, in accordance to these theories. However regarding the theory of limited territorial integrity, where one state's consumption should not prejudice others, there is a violation of this principle due to Israel's overconsumption, which does prejudice the Palestinians right to water.

Despite the difficulty unfolded with state sovereignty this aspect is important to highlight.

- *Intergovernmental bodies*

Both the State of Israel and the Palestinian National Authority have agreed upon establishing a Joint Water Committee (JWC), which is supposed to implement and put the conditions of water into practise and fertilizer the interim agreement. The parties both agree that cooperation over water is necessary. It is essential that the JWC focuses on the technical side and do not let political reasons influence its decisions. The Israelis have been accused of postponing and not accepting projects due to political arguments. The cooperation remained and survived despite of the last intifada and the JWC has declared to try to do what is necessary for water to be kept out of the conflict and protect the water infrastructure. This could be considered a *tipping point* (on the technical side at least) to cooperation which has generated a mutual trust between the parties (Haddadin 2002: 328; Jägerskog 2005: 2, 10; Jägerskog 2003: 139).

The “picnic table talks”, arranged by UNRWA, where Jordan and Israel discussed issues related to the water allocation, is an example where intergovernmental talks reduced tension and promoted implicit understanding between the parties (Jägerskog 2003: 84). This could be seen as template up on which Palestinians and Israelis could base future negotiations.

Economic development

The connection between water and economy is clear, labour sectors like the agriculture sector is highly dependent of water, as are other sectors. The economies of the two parties have both been highly dependent on agriculture, however, today Israel is a contemporary political economy, which is dependent on highly technological industry rather than agriculture. The agriculture sector employs fewer and fewer and the share of its gross national product is today 2-3% but still holds large political power. Israel is today one of the world’s best producer of advanced irrigation techniques, which is helpful for water efficiency within the agriculture, Israeli agriculture is considered the most water efficient in the world. This would, however, not be achievable without the large farmer subsidies for irrigation water. Compared to the Palestinians, their economy has not transformed and is still highly dependent on the agricultural sector, approximately 15 per cent of their GDP, and endures poor management and technique. The OPT is dependent on donors for the water development and their interference is fundamental because of the lack of reliable Palestinian institutions for the management. Therefore it is easier for the Israelis to adapt to less water than it is for Palestinians (Jägerskog 2003: 93ff; Elhance 2000: 212; Jägerskog 2005: 6). In line with increased unemployment and poverty last years the salaries of Palestinians in OPT have decreased resulting in higher percentage of the salaries being focused on water (Amnesty International). Israel is therefore hegemony in power regarding economic features.

The long-run economic gains from cooperation would be substantial while the economic costs of a war over water scarcity would be high. A lower riparian state, military strong, could annex or occupy an upper riparian state to control the water, which some scientists mean is what Israel has done. However, even Israel, with its strong military capacity, do experience the high costs in human lives, politically and economically, domestic, international and regional, which do rise with time (Elhance 2000: 214). The decreasing dependence of agriculture does make the Israeli government less dependent on water, which could be seen as an opening for higher distribution to the Palestinians.

One possibility of cooperation is broader economic agreement, making nations interdependent of one another, over water, which is based on the idea of sharing the

economic benefits of water. Rather than sharing the water itself this would involve the sharing of hydroelectricity and food. One default of this idea, however, is one of the regional approach, namely that if states can not share the water equitably why would they share the benefits. The risk is that the benefits would end up in the hegemony state, in this case Israel (Inside story 1).

Concerning possibilities and obstacles of cooperation on national level it is evident that this level includes a few essential limitations and obstacles to cooperation, especially concerning the governmental hydro politics. However, security issues might be exaggerated and could be overcome through interdependence and the sovereignty problems could perhaps be overseen by intergovernmental bodies. Regarding economic development there are both constraints and possibilities. The importance of economy is crucial and if economic incentives from both parts would be achieved that would be a breakthrough for a future sustainable cooperation and, as written in negotiation theory, economic differences does not need to yield conflict but cooperation.

4.1.3 LOCAL AND REGIONAL LEVEL

Technological information, data and expertise

For negotiations and cooperation to occur it is important to build trust, trust is a two-way street, meaning that it is necessary from both sides. This is a concern regarding technological information, where trustworthy data from both parties are essential at the negotiation tables. The Palestinians lack water data for the West Bank and has therefore difficulty making predictions of quality and quantity during negotiations. For a long time there has not existed a measuring system for the Palestinians, making them dependent on 'raw data' from Israel (Jägerskog 2003: 110, 113). Beside this there have also been accusations of Israel withholding the necessary water data, since Israel consider this information as a national security (Elhance 2000: 208).

Concerning water expertise, which is an important factor within negotiations regarding water scarcity there exists an asymmetry between the Israelis and Palestinians. Israelis expertise has been involved in many negotiations and outdoes the Palestinians by far. This is due to for example the OPT where Israelis control most water supply and due to the culture of lack of transparency within the Palestinian political culture (Jägerskog 2003: 123f).

Increasing awareness and information is essential, both to increase the awareness of scarcity on the regional and local level to the national and international level but also to increase the knowledge of better allocation and saving of water. The international

organizations should actively encourage the sharing of data (Gleick 1993: 108). Seminars and work-shops, where academic expertise meets regional representatives are examples of this (Jägerskog 2003: 106). Regarding awareness and spreading of information the NGOs play a fundamental role.

The importance of NGOs

NGOs play a central part concerning increasing information and raise political and public awareness. Between the Palestinians and Israelis regarding water scarcity there do exist regional and local cooperation. Important NGOs are for example Friends of the Earth Middle East, Green Cross, the Israel/Palestine Centre for research and information and Palestinian Consultancy Group all of which work towards increasing water cooperation for a sustainable future within the river. These NGOs create work-shops and seminars to raise awareness. One example is GWN (The Good Water Neighbours), which aims at increasing cooperation and dialogue between neighbouring communities. GWN includes Palestinians, Israel and also Jordan. The project intends to provide communities with education and assistance and thereby serve as a bridge between people through trust-building and communication (Good Water Neighbours; Jägerskog 2003: 106f; Inside story 1).

Another example is the Executive Action Team (EXACT), a group which has functioned as forum and has discusses water challenges without disruption since 1992 and involves Israelis, Palestinians and Jordanians. Focus has primary been technical issues and the dialogue has improved the trust between the parties. This cooperation has generated *benefits from the river* (Jägerskog 2005: 7).

Concerning possibilities and obstacles of cooperation on local and regional level there are a few obstacles, mainly associated with sharing of information and data. This is a fundamental part for the allocation measures, necessary in the negotiation process and which needs to be reliable. However, there are possibilities concerning NGOs sense there seems to be a will between the people to solve the problem of water scarcity at a regional and local level. This dialogue might lead to increased understanding between the parties. Perhaps these NGOs can in a larger extent raise the awareness of sharing information and influence their governments.

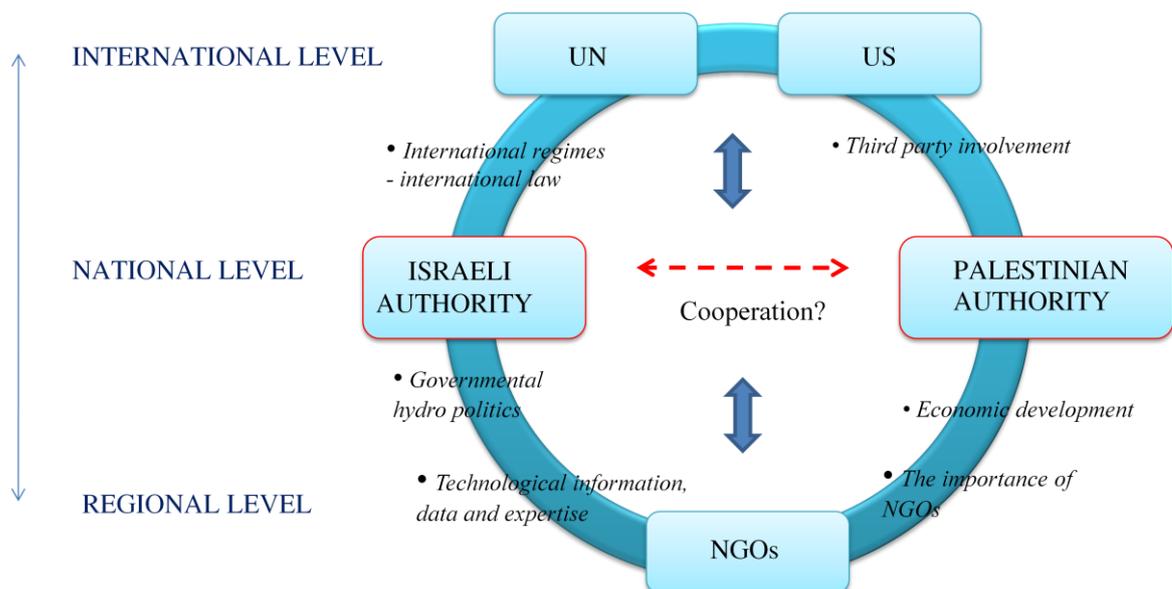
The final conclusion made from this chapter is that despite the obstacles presented within each level there are incentives from both sides to cooperate. Regarding cooperation on national level there are nevertheless obstacles and since the national level is fundamental for any sustainable cooperation between Israelis and Palestinians to occur these are obstacles of priority. However, some of these obstacles might be overcome by achieving cooperation on the other two levels. As mentioned, many of the different

aspects and levels interplay and achieving cooperation regarding one of the aspects could result in cooperation in another. With international pressure through international water regimes and third-party involvement and pressure from the regional and local level through NGOs and media these two levels might be able to affect the national level. Conclusion can be drawn that all three levels are fundamental regarding possibilities and obstacles with cooperation over water.

4.1.4 THE THREE-LEVEL NEGOTIATION MODEL OVER JORDAN RIVER BASIN

To facilitate the understanding of this complex research the model shows how the actors, structures and levels interplay and create the complex reality of today. The empirical model shows the five important actors, UN, US, Israeli Authority, Palestinian Authority and NGOs, all covering the three levels *international*, *national* and *regional/local* level.

Figure II. The Empirical model – The three-level negotiation model of Jordan River Basin.



4.1.5 WATER SCARCITY AS PART OF THE OVERALL CONFLICT

As this dissertation has been an attempt to isolate the water scarcity, as a separate conflict within the overall conflict I would like to finish by briefly discussing the possibilities of positive repercussions that cooperation over water may generate on the overall conflict between Palestinians and Israelis. This is what makes this case of water scarcity unique and especially important to highlight. There are obviously many similarities between problems concerning water scarcity and problems connected to the other parts of the conflict namely Jerusalem, Palestinian refugees, state borders and Israeli settlers. One example, as seen above, is the problematic aspect concerning state sovereignty. However, it is my belief that if cooperation between the parties over water would progress on all three levels that would generate positive repercussions on other parts of the conflict. It is confirmed that even though sustainable water cooperation takes time they usually have high survival rate and states disagreeing on other matters seem to be able to maintain cooperation regarding scarce natural resources, resulting in increased dialogue and understanding. One might question my optimism after presenting obstacles on each level, however, the incentives and over-all conclusions and the will shown on regional and local level indicate that with a broad understanding for each element within hydro politics and encouragement regarding negotiations on each level this could be a window of opportunity for cooperation between Palestinians and Israelis.

5 CONCLUSION

Possibilities and obstacles connected with cooperation over water scarcity on three levels have been presented between Palestinians and Israelis over the Jordan River. Since hydro politics is a breadth and complex discipline the most essential possibilities and obstacles have been discussed, however, there are surely aspects on each level which have not been included. The negotiation theory seemed like an obvious choice of theory but other theories could have been useful too, for example regime theory. Also worth mentioning is that one event could be portrayed differently depending on the origin of the author, Palestinian or Israeli. To minimize the risk of subjectivity I have tried to avoid material from either side, however, there might still be a risk of some of the material not being fully independent.

As water is simply one natural resource, water issues should not be considered in isolation and the theoretical framework and conclusions could perhaps be applied on other natural resources as well. Furthermore they are probably not area specific for the Jordan River Basin, but could be relevant for other areas of water scarcity. It is also important to acknowledge the importance of interdependence between science and politics and the three levels of negotiations, and not handle them separately. However, as this dissertation is an attempt of this, there is a need to expand this research, where each negotiation level could be elaborated. Another example is a comparative study including all five riparian states of the river.

My dissertation shows that while there are obstacles to cooperation there are also possibilities. One important possibility is that it appears to be a will to cooperate between people on the regional and local level. By encouraging this will through awareness and information along with increased pressure from third-party involvement and international water regimes this might generate and increase cooperation at national level as well.

The wish is that a sophisticated and breadth understanding of hydro politics and its three negotiation levels will help tackle the complex problems unfolding with water scarcity in a place like the Jordan River Basin. The future does not need to look like the past and since beginning this dissertation with a quote regarding water as a possible risk of conflict I would like to finish with a quote regarding the possibilities to cooperation and the building of bridges between the two parties.

“..water, more so than land, is often believed to hold the key to peace in the region. (Middle East)”

(Spector 2001: 209)

שיתוף ≈ تعاون

6 BIBLIOGRAPHY

Allan, J.A 2005. *Water in the Environment/Socio-Economic Development Discourse: Sustainability, Changing Management Paradigms and Policy Responses in a Global System*. Government and opposition Ltd.

Amer, Salah El-Din 1997. *The law of water – historical record*. Options Méditerranéennes, Sér. A /n031. 2009-11-15
<http://ressources.ciheam.org/om/pdf/a31/CI971551.pdf>

Amery, Hussein A; Wolf, T. Aaron 2000. *Water in the middle east. A geography of peace*. The University of Texas Press: Austin

Amery, Hussein A. 2002. *Water wars in the Middle East: a looming threat*. The Geographical Journal. Vol: 168 No: 4 Pages: 313-323

Allan, Tony 1999. *Middle Eastern hydropolitics: interpreting constructed knowledge*. 2009-11-25
<http://www.soas.ac.uk/waterissues/papers/file38361.pdf>

Amnesty International – *Thirsting for justice Palestinian access to water restricted. Water is a human right*. October 2009.

B'Tselem The Israeli Information Centre for Human Rights in the occupied territories. 2009-12-20
http://www.btselem.org/english/Water/International_Law.asp

Carraro, Carlo; Marchiori, Carmen; Sgobbi, Alessandra 2007. *Negotiation on water: insights from non-cooperative bargain theory*. Environment and development economics. Issue: 12 Pages: 329-349. Cambridge University Press.

Deshazo Randy; Sutherlin John W 1996. *Building Bridges: Diplomacy and Regime Formation in the Jordan River Valley*. University Press of America: Lanham

Dinar, Shlomi 2000. *Negotiations and International Relations: A Framework for Hydropolitics*. International Negotiation. Issue: 5 Pages: 375-407.

- Dinar, Shlomi 2009. *Power asymmetry and negotiations in international river basins*. International negotiations. Issue: 14. Pages: 329-360
- Elhance, Arun P. 2000. *Hydropolitics: Grounds for Despair, Reasons for Hope*. International Negotiation. Issue: 5. Pages: 201-222
- Evans, Graham; Newnham, Jeffrey 1998. *The Penguin dictionary of international relations*. Penguin: London.
- Gleick, Peter H. 2002. *The world's water 2004-2005. The biennial report on freshwater resources*. Island Press: Washington D.C.
- Gleick, Peter H 1993. *Water and conflict: Fresh water resources and international security* in Wolf, Aaron T 2002. Conflict prevention and resolution in water systems. Edward Elgar Publishing Limited: Cheltenham
- Good Water Neighbors, 2009-12-24
http://www.foeme.org/index_images/dinamicas/publications/publ19_1.pdf
- Green Cross Italia, *Water for peace – the Joran River Basin*. 2009-12-13
http://www.greencrossitalia.it/ita/acqua/wfp/jordan_wfp_001.htm
- Hempel, Lamont C 1996. *Environmental governance: the global challenge*. Island Press: Washington.
- Inside story 1. *Running out of water*. Al Jazeera. 2009-12-12
<http://english.aljazeera.net/programmes/insidestory/2009/03/200931812544756872.html>
- Jägerskog, Anders 2003. *Why states cooperate over shared water: The water negotiations over in the Jordan River Basin*. Department of water and environmental studies, Linköping.
- Jägerskog, Anders 2005. *Functional water cooperation in the Jordan River Basin: Spillover or Spillback for political security?*
- Kirschbaum, Max 1997. *Water resources: security impacts in the Jordan River basin*.
- Kempkey, Natalie; Pinard, Margaret; Pochat, Victor; Dinar, Ariel 2009. *Negotiations over water and other natural resources in the La Plata River Basin: A model for other transboundary basins?* International Negotiations. Issue: 14. Pages: 253-279

- Kibaroglu, Asegül; Olcay Unver I H 2000. *An Institutional Framework for Facilitating Cooperation in the Euphrates-Tigris River Basin*. International negotiation. Vol: 5 Issue: 2 Pages: 311-313 Ebsco.
- Lowi, Miriam R 1995. *Rivers of conflict, rivers of peace*. Journal of International Affairs. Volume: 49 Issue: 1. Pages: 123-145 Proquest
- Livnat, Alexander 1994. *Desalination in Israel: Emerging key component in the regional water balance formula*. Desalination. Vol: 99 Issue: 2-3 Pages: 299-327. Elsevier.
- McCoy, Charles; Zachary, G. Pascal 1997. *A Bass Play in Water May Presage Big Shift in its Distribution*. Wall Street Journal. Volume: 230 Issue: 8 Pages: A1-0
- Morrisette, Jason J; Borer, Douglas A 2004. *Where Oil and Water Do Mix: Environmental Scarcity and Future Conflict in the Middle East and North Africa*. Parameters: US Army War College. Vol: 34 Issue: 4 Pages: 86-102
- Munther, J. Haddadin 2002. *Water in the Middle East process*. The Geographical Journal. Vol: 168 No: 4 Pages: 324-340
- Natural resources, conflict, and conflict resolution*. United States institute for peace – education and training center: Domestic Programs. First published: September 14, 2007. Washington D.C.
- Nationalencyklopedin – *Isreal-Palestina frågan*. 2009-11-23.
http://www.ne.se.ludwig.lub.lu.se/lang/israel-palestina-fr%C3%A5gan?i_whole_article=true
- Priscoli, Jerome Delli 1998. *Water and civilization: using history to reframe water policy debates and to build a new ecological realism* in Wolf, Aaron T 2002. Conflict prevention and resolution in water systems. Edward Elgar Publishing Limited: Cheltenham
- Postel, Sandra 1999. *Water wars I: Farms versus cities and nature* in Wolf, Aaron T 2002. Conflict prevention and resolution in water systems. Edward Elgar Publishing Limited: Cheltenham
- Phillips, David; Daoudy, Marwa; McCaffrey, Stephen; Öjendal, Joakim; Turton, Anthony 2006. *Trans-boundary water cooperation as a tool for conflict prevention and for broader benefit-sharing*. Prepared for the ministry for foreign affairs, Sweden. Edita: Stockholm.

- Ritzl, Christina 2005. *Jordanfloden*. 2009-10-30
<http://www.ourego.se/sites/worldwater/www/worldwater/pdf/jordan.pdf>
- Stinnett, Douglas M; Tir, Jaroslav 2009. *The institutionalization of river treaties*. International Negotiation. Issue: 14 Pages: 229-251.
- Sign for it: sharing water for the people and the planet* 2009. United Nations Secretary General's Advisory Board on Water and Sanitation. 2009-12-12
http://assets.panda.org/downloads/side_event_briefing_paper_follow_up_june09_2.pdf
- Spector, Bertram 2001. *Transboundary disputes: keeping backyards clean* in Wolf, Aaron T 2002. Conflict prevention and resolution in water systems. Edward Elgar Publishing Limited: Cheltenham
- Spector, Bertram 2000. *Motivating water diplomacy: Finding the situational incentives to negotiate*. International negotiation. Vol: 5 Issue: 2 Pages: 223-236 Brill.
- Svensson, Torsten; Teorell, Jan 2007. *Att fråga och att svara. Samhällsvetenskaplig metod*. Liber: Malmö
- Säkerhetspolitik.se – *Israel-Palestina* 2009-11-13
<http://www.sakerhetspolitik.se/templates/Conflict.aspx?id=271>
- Spiegel, Steven L; Morrison Taw Jennifer; Wehling, Fred L; Williams, Kristen P 2004. *World Politics in a new era*. Third edition. Thomson wadsworth: London
- Trondalen, Jon Martin; Munasinghe, Mohan 2004. *Water and ethics. Ethics and water resources conflicts*.
- Trondalen, Jon Martin 1992. *International River system* in Wolf, Aaron T 2002. Conflict prevention and resolution in water systems. Edward Elgar Publishing Limited.
- Yin, Robert K. 2009. *Case study research. Design and methods*. Sage: London.
- United Nations Environment Programme (map) 2009-11-20
http://www.grid.unep.ch/product/map/index.php?region=west_asia
- UNEP Jordan River Basin, Picture - 2009-12-10
<http://www.grid.unep.ch/product/map/images/jordanb.gif>
- United Nations Water Report 2008. *Status report on integrated water resources management and water efficiency plans*. May 2008.

- United Nations Water Report – *Status report on integrated water resources management and water efficiency plans. Prepared for the 16th session of the commission on sustainable development – May 2008.*
- Wishart, David M. 1990. *The Breakdown of the Johnston Negotiations over the Jordan Waters*. Middle Eastern Studies. Vol: 26. Issue: 4 Pages: 536-546. Taylor and Francis Ltd.
- Wolf, Aaron T 1998. *Conflict and cooperation along international waterways in* Wolf, Aaron T 2002. *Conflict prevention and resolution in water systems*. Edward Elgar Publishing Limited.
- Ward, Teagan 2008. *Water scarcity and the Jordan River Basin – a case for conflict or cooperation?* PPT. 2009-12-01
<http://www.ucowr.siu.edu/proceedings/2008%20Proceedings/Ward.pdf>
- Zeitoun, Mark; Messerschmid, Clemens; Shaddad Attali, Shaddad 2009. *Asymmetric Abstraction and Allocation: The Israeli-Palestinian Water Pumping Record*. Ground Water. Vol: 47 Issue: 1 Pages: 146-160. Blackwell
- Zahra, Abu 2001. *Water crisis in Palestine*. Desalination: Vol: 136, Issue: 1-3, Pages: 93-99. Elsevier.