

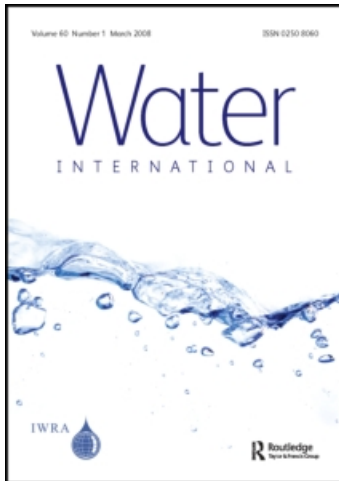
This article was downloaded by: [Radboud University Nijmegen]

On: 10 November 2009

Access details: Access Details: [subscription number 907171856]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Water International

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t792815876>

### The Conflict vs. Cooperation Paradox: Fighting Over or Sharing of Palestinian-Israeli Groundwater?

Mark Zeitoun<sup>a</sup>

<sup>a</sup> Center for Environmental Policy and Governance, London School of Economics and Political Science, London, UK

**To cite this Article** Zeitoun, Mark 'The Conflict vs. Cooperation Paradox: Fighting Over or Sharing of Palestinian-Israeli Groundwater?', *Water International*, 32: 1, 105 – 120

**To link to this Article:** DOI: 10.1080/02508060708691968

**URL:** <http://dx.doi.org/10.1080/02508060708691968>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

# The Conflict vs. Cooperation Paradox: Fighting Over or Sharing of Palestinian-Israeli Groundwater?

Mark Zeitoun, *Center for Environmental Policy and Governance, London*  
*School of Economics and Political Science, London, UK*

**Abstract:** *While there has been practically no evidence offered of a causal link between water and armed conflict, the real benefits of inter-state cooperation over water issues tend to be over-emphasized. Along the west bank of the Jordan River there is ample evidence of both cooperation and conflict occurring simultaneously – an apparent contradiction referred to as the conflict vs. cooperation paradox. This paper attempts to explain the paradox by examination of two features not commonly considered by water conflict analysts: a) an under-consideration of the dynamics and levels of conflict, and, b) a narrow focus on the very broad, complex and nuanced political context within which the competition for water exists.*

*Through examination of the different levels of conflict, this paper shows that the absence of war does not mean the absence of conflict, nor does it mean that competing riparians are cooperating. The political context is explored through two theories from international relations. Regime theory is employed to show that far from one of its intended goals of allowing for proper water resources management, the structure of the Israeli-Palestinian Joint Water Committee allows Israel to maintain an ‘Imposed-Order regime’ while maintaining a veil over the conflict. Application of Security theory shows how water issues are readily ‘securitized’ and how the asymmetric power relations between the two sides results in the conflict being contained, and lingering unresolved. By adding insight and clarity into the Palestinian-Israeli water conflict, this paper intends to add nuance to our understanding of transboundary water conflicts in general.*

**Keywords:** *water, Palestine, Israel, conflict, security, cooperation, regime theory, hegemony, hydro hegemony, coercion, joint water committee.*

## Introduction

‘The next war in the Middle East will be fought over water’ or ‘the transboundary nature of water creates an interdependency between states that obliges cooperation’. These conflicting cries have been associated for decades with the Jordan River basin, which may be paradoxical than it is predictable. Its dry climate and political instability regularly lead the media and politicians to raise the specter of “water-wars”, led or followed by academia in attempts at demonstrating an environment-conflict causal link<sup>1</sup>. Donor agencies

and other branches of academia, on the other hand, have been exploring the potential of cooperation over shared water-resources as a catalyst for broader peace agreements, or at least for friendlier relations.

In light of the cautious optimism of an enduring political agreement between Israel and the Palestinians inspired by the mid-1990’s process known as the ‘Oslo Accords’, the theories on water-cooperation and its benefits grew (e.g. Lonergan and Brooks 1994, Wolf 2000a, Allan 2001, Jagerskög 2003a). With the eventual demise of the accords and the resumption of an Israeli occupation of the Palestinian Territories from roughly 2000 onwards, analysis of a graver tone is emerging while older works highlighting the negative aspects

1 See especially the concise discussion on the subject in Wolf 2002.

of the Palestinian-Israeli water conflict are gaining currency (see Lowi 1993, el Musa 1997, Daibes 2003, Selby 2003a, Selby 2005).

Similar paradigm-shifts are occurring on the ground in Palestine and Israel, where an observer routinely witnesses conflicting dynamics, analytical approaches and outcomes. Amidst what is often a very violent conflict that has little to do with water one witnesses - simultaneously - the extensive destruction of water infrastructure, a relatively cooperative water professional community, and loudly-contested views about who controls the water. This paper attempts to explain how the conflicting dynamics and interpretations of Palestinian-Israeli interaction over water exist simultaneously – referred to as the *conflict vs. cooperation paradox*.

It is hypothesized that the paradox may be understood at least in part by the exploration of two factors: a) an under-consideration of the dynamics and levels of conflict, and, b) a narrow focus on the very complex and nuanced political context within which the competition for water exists. The political context is characterized by significantly asymmetrical power relations, dissimilar levels of development, and a highly politicized and securitized environment. It may be the difficulty of dealing with the sophistication and breadth of this complexity that leads an observer to default to a general impression of either conflict *or* cooperation. Put another way, a narrow analytical focus on this very broad subject polarizes the analysis – and effectively obscures the paradox.

Contributing to the confusion is a weak understanding of the dynamics of conflict, particularly misunderstandings over the meaning of the term ‘conflict’, and the methods through which non-violent conflict is waged. This paper suggests that the absence of war does not mean the absence of conflict, and attempts to show how consideration of the varying degrees of intensity and methods of conducting conflict tend to mask a conflict’s existence. As Tony Allan has stated, “those analyzing conflict confuse themselves, if they do not distinguish between the intensity of the conflictual relationship being discussed and the power relations of the entities in question.” (Allan 2004c: 2).

This paper does not support the argument of a causal link between water and conflict. As such, the

paper supports the first part of one of Aaron Wolf’s conclusions drawn following extensive exploration into water conflict and water systems: “The causal argument... seems both more complex and more subtle in water systems than has been argued... The real lessons of history turn out to be that, while water can act as an irritant, making good relations bad, and bad relations worse, it rarely induces acute violence and often acts as a catalyst to cooperation, even between bitter enemies” (Wolf 2002). This study challenges the second part of Wolf’s statement, arguing that while a water conflict may fall short of “acute violence”, it still has very negative consequences that may be hidden under an apparent air of cooperation. Nuances may thus be made available to those analysts studying transboundary water conflicts.

## **Conflict**

This section will show how considering the dynamics of conflict can inform the analysis of water conflicts. A definition for conflict is first proposed, followed by a brief discussion on various methods of conducting conflict, and identification of frameworks to classify the different intensities of conflict. This insight may supplement the game theories applied to water conflicts (e.g. Kaufman, et al. 1997) which “seem more useful for dealing with conflict resolution than with conflict formation or processes” (Frey 1993: 58). In fact, it is expected herein that a better understanding of conflict formation and processes can also lead to resolution.

### The Meaning of Conflict

War is only the most violent form of conflict. War’s dramatic images of misery, suffering and cruelty reflect a chaotic and tragic sequence of events that has great impact on the future of all involved. The effects of war on all types of people – from the victims to the businessmen to military strategists - are as important as they may be repulsive. Starting or supporting a war, whether eventually won or lost, requires mobilization of a considerable amount of resources that invariably makes or breaks political careers. Yet wars are apparently not fought solely by armies, if one considers the terms *war of words, cold war, battles, skirmishes,*

*fight*s and *clashes*.

These indistinct uses of the term 'war' are distinct from the word most commonly substituted for it: 'conflict', or 'armed conflict'. Apart from the military interpretation of the term, 'conflict' can more generally refer to "a disagreement or clash between ideas, principles or people" (Encarta 2006). The term 'conflict' thus elicits concepts of marking-out territory, of establishing limits, of a victor, and – on the flip side – a loser, and perhaps most importantly, the term elicits the negative aspects of unresolved issues.

### Methods of Conducting Conflict

Different forms of conflict can allow stronger actors ways to achieve war-like spoils much more efficiently. *Coercive means* are a particularly useful tactic in following the path of least resistance to achieve a goal, as noted by Edward Said when he cites Robinson and Gallagher distinguishing the British Empire's motives from its objectives: "the British would expand by trade and influence if they could, but by imperial rule if they must" (Said 1994: 73). In his examination of the real and perceived military and political benefits aerial bombardment, Pape defines coercion as "efforts to change the behaviour of a state by manipulating costs and benefits" (Pape 1996: 3). Coercion can be particularly efficient when it spares the party wielding it the necessity of compromise, and when the political fall-out of its coercive methods are minimal, which may be the situation in cases of extreme imbalance in power between states. Methods of coercion exist in each of a state's security sectors (military, economic, political, societal, environmental), as well as in recourse to moral and legal norms. Together, these can form what Robert Keohane refers to as "coercive resources" (Keohane 1982: 344), and include such tactics as the *trade embargo* and *diplomatic isolation*<sup>2</sup>.

Forms of military coercion include *threats* and

<sup>2</sup> A variant of political coercion exists when a weaker state claims the *moral high ground* against its oppressor. Through recourse to international legal instruments and by manipulating the international community's appeal to a sense of justice, the weaker party may bring to bear upon the stronger the pressure of being labeled a 'pariah' itself, thereby obliging the stronger state to concessions it would otherwise not give in to. This is an example of what Steven Lukes calls the 'second dimension' of power (Lukes 2005a), and is applied to the water sector in (Zeitoun and Warner in press).

*violence*. Threats either of using any of the methods of coercion mentioned above, or of a full-out war may well induce a state to align its policies with those of its more powerful competitor. Here we are touching on the power of deterrence, and into the world so ably theorised by Gramsci (2003) and Lustick (2002). These thinkers point out that there are techniques to gain a competitor's compliance that are far less costly than coercion. Such techniques include the use of incentives, the establishment of norms and the creation of a state of hegemony whereby non-compliance with the stronger competitors' demands is not even considered. For the sake of the water conflict at hand, however, this paper limits its discussion primarily to the use of coercive methods.

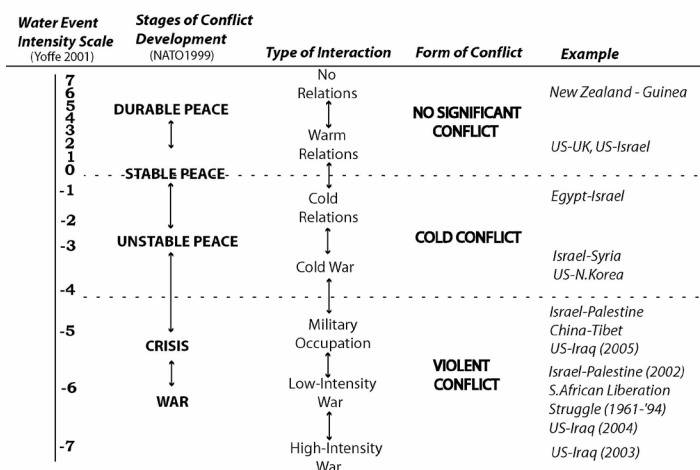
### Intensities of Conflict

At the international level, it is ultimately the relations between states or nations and their respective interests that define the methods, form and intensity of the conflict that exists between them. Considerable effort has been expended attempting to define and categorize the different types of conflictual relationships that can exist between states (e.g. Nembrini 1995: 30). Violent conflicts related to the acquisition of control over natural resources, for example, have been classified by Homer-Dixon as: Simple-Scarcity; Group-Identity; Insurgencies; Coups detest; Banditry and Gang Violence (Homer-Dixon 1999). Ohlsson and Turton have given us the link between water management paradigms (supply-side and demand-side management) and first and second-order conflicts (Ohlsson and Turton 1999). An insightful view elaborating upon different intensities of conflict (though not resource-related) is offered by the NATO conflict development scale, which identifies five stages (Lund (1996) in NATO 1999: 98):

*Durable Peace*: situations characterized by shared common purpose, harmony, and not-incompatible interests

*Stable Peace*: situations of significant cooperation, but with the recognition of incompatible interests that are regulated by peaceful mechanisms that reduce, manage or resolve disputes and prevent violence





**Figure 1: Conflict Framework: Dynamics, Forms and Relations**

*Unstable Peace*: situations of tension and suspicion that avoid violence by mutual deterrence, balance of power or government repression

*Crisis*: situations of tense confrontation between armed forces, engaging in threats and possible skirmishes, but without significant and sustained force

*War*: situations of sustained and systemic use of armed force.

Yet further elaboration upon conflict intensity in the water sector is provided by Shira Yoffe under Aaron Wolf's Basin at Risk project. Developed from conflict classification work carried out by Edward Azar on the Conflict and Peace Databank, the resultant Water Event Intensity Scale (see Table 1) defines a very specific and broad range of intensities, and is a useful tool for water conflict analysts.

The Conflict Intensity Frame reveals not simply that different conflicts vary in intensity, but that the same conflict can undergo various degrees of intensity through time, as in the case of US and Iraqi relations since the 1970s. While the NATO scale is particularly useful for studying international *violent* conflicts, Yoffe's Water Event Intensity Scale provides strong definition and detail of *non-violent* events associated with conflict. The scale is particularly relevant to conflict analysis at a global scale, predicting conflict

potential and perhaps identifying global or regional trends (see Yoffe, *et al.* 2001). What these scales cannot show or account for are the effects of power asymmetries in determining the intensity of the conflict – effects which should not be taken for granted, as we shall see. Furthermore, in seeking to understand how varying intensities of conflict can inform the conflict vs. cooperation paradox, the scope of their classification begs broadening to consider both the various methods of conflict previously discussed and the political context within which the water conflict takes place. An attempt to do so is provided in Figure 1.

A difficulty inherent in Figure 1 is the attempt to directly relate singular water conflict events (Yoffe's scale) with a more general state of relations. The point will later be made that highly conflictual-type 'events' can actually take place during periods of official 'cooperation'. Analysis of the empirical data offered through Wolf's Freshwater Transboundary Dispute Database (see Wolf (2004)) would draw similar conclusions.

"No Significant Conflict" in Figure 1 is taken as a situation where there is currently an absence of conflicting interests between two actors, or else where they are regularly resolved through non-violent mechanisms (as in the above definitions of "Durable Peace" and "Stable Peace", and corresponding to the "cooperation" event intensities of Table 1).

"Cold Conflict" describes a situation where conflicting interests are normally fought over through negotiations or non-violent coercive methods. States normally engaged in cold relations or a cold war tend to generate some form of "Cold Conflict". Examples include the cold war between the US and USSR or Egyptian-Israeli relations post-1979. Exceptionally the conflict takes a quasi-military form in the manifestations of assassinations and covert operations.

"Violent Conflict" describes a situation where conflicting interests are normally fought over through violent and coercive military means. This is typical between actors habitually intertwined in some form of antagonistic struggle for supremacy. Interactions include high-intensity wars (US/UK – Iraq 2003, Israel-

scale	event description
7	Voluntary Unification into one nation
6	Major Strategic Alliance (International Freshwater Treaty)
5	Military, Economic or Strategic Support
4	Non-military Economic, Technological or Industrial Agreement
3	Cultural or Scientific Support (non-strategic)
2	Official Verbal Support of goals, values, or regime
1	Minor Official Exchanges, Talks or Policy Expressions
0	Neutral or non-significant acts for the inter-nation situation
-1	Mild Verbal Expressions displaying discord in interaction
-2	Strong Verbal Expressions displaying hostility in interaction
-3	Diplomatic-Economic Hostile Actions
-4	Political-Military Hostile Actions
-5	Small Scale Military Acts
-6	Extensive War Acts causing deaths, dislocation or high strategic costs
-7	Formal Declaration of War

**Table 1: The Water Event Intensity Scale (Yoffe, et al. 2001)**



**Figure 2: Regional Transboundary Water Resources (surface and groundwater). Adapted from PASSIA (2002) and CESR (2003).**

Lebanon 1982), low-intensity wars (Israel-Palestine 2002, Lebanon 1978-1990), colonial conquests (France-Algeria, Belgium-Congo) or military occupations (China-Tibet, Israel-Palestine). “Violent” conflictual issues are fought out by military means and/or any of the coercive measures previously discussed. The use of negotiations at different phases of violent conflict is

also common, demonstrating that there are non-violent aspects to violent conflicts.

### Both Conflict and Cooperation between Palestine and Israel

Along the Jordan River (Figure 2), interactions over water issues between Palestinians in the West Bank and Gaza and Israelis shift repeatedly, subjugated as they are to the constantly-changing political climate. Interaction between the unborn state of Palestine and Israel have changed in form from military occupation from 1967-1994 to cold relations as partners in the Oslo political process from 1994 until roughly 2000. From 2000 onwards the interaction has varied from a full-out (and usually low-intensity) war to the return of a military occupation. The general form of conflict in this case is chiefly characterized, according to Figure 1, as ‘violent’ or ‘cold’, changing regularly from ‘war’ to ‘unstable peace’ on the NATO scale. The corresponding values on the Water Event Intensity Scale range from -6 to -2.

If a causal relation between the Water Event Intensity Scale and the other conflict classifications were hypothesized, one would expect to find water-related ‘events’ along the Jordan River ranging in intensity from “extensive war acts causing deaths, dislocation or high strategic costs” to “strong verbal expressions displaying hostility in interaction”. Certainly there is enough evidence to support this claim. The Palestinian Hydrology Group (PHG), for instance, has documented the effects of 2000-2004 Israeli military activity and less-intense levels of violence on water resources and water infrastructure. Their report reveals that over the four-year period, approximately 137 communities throughout Palestine suffered indiscriminate or deliberate damages to their water networks, primarily due to Israel Defense Forces armoured personnel carriers, tanks and bulldozers (PHG 2004: 55). Israeli settlers in the West Bank, as non-state actors, have intentionally damaged traditional Palestinian springs near Yanun in October 2002 (PHG 2004: 60) and Madama on several occasions (Oxfam 2003b, Haas 2004). The extent of the damages to the water sector has been estimated by various international organisations at between 50 and 200 million dollars (EWOC 2002, World Bank 2002,

Selby 2003a: 2, World Bank 2003a, IMG 2004).

Those analysts focused on the co-operative aspects of relations between Palestinians and Israelis, however, remind us that there is more to the water-related conflicts than this destruction. Indeed, during the very same period as the destructive military action, professionals in both water communities continued to meet as the Joint Water Committee (Jagerskög 2003a, Shamir 2004) as their representatives issued official expressions of cooperation and a desire to keep water infrastructure out of the conflict (JWC 2001). These events would be classified as +1 to +3 on the Water Event Intensity Scale, contradicting the violent aspects of the conflict recently discussed and revealing just how cooperation and conflict can exist simultaneously. The confusion enables a trap which analysts are forewarned to avoid – that of over-emphasizing the cooperation at the expense of negating the harmful effects of the conflict.

Both the nature of this cooperation and the paradox itself are discussed in detail in the following sections. Attention will now be turned to explore the second aspect of the conflict vs. cooperation paradox: the political context within which the competition for the water takes place.

### **The Political Context**

This section will show how the political environment between Palestinians and Israel informs the conflict vs. cooperation paradox. Through the lens of Regime Theory it is evident that what appears to be cooperation is much closer to coercion. Consideration of Security theory will show how conflictual issues can either be hyped-up, contained or downplayed within the political process. A brief, and certainly not comprehensive, discussion on the international relations theories are provided as background following.

Figure 3 is an attempt to integrate various theoretical constructs and the effect of the political context under the conflict framework provided by Figure 1. Politics has been shown to greatly influence every level of water-related issues in Palestine-Israel (Allan 2001, Jagerskög 2003a), revealed in Figure 3 as the overlapping areas of various aspects within a particular construct. Considering, for example, the “Interactions”

construct, we observe that the “cooperation” bar extends to states involved in a low-intensity war, a situation that is at first somewhat contrary to expectations (i.e. one would not normally expect that any cooperation was occurring between parties involved in a low-intensity war). Similarly, the “Conflict” bar extends leftwards to states involved in cold relations – another counter-intuitive placement. Discussion of the other constructs of Figure 3 follow within the rest of the text of this paper.

The utility of the second construct - ‘methods of conflict’ - for example, helps to understand why there has been relatively little violent conflict along the Nile or Tigris and Euphrates River basins. The absence of war in these cases is at least in part due to regional superpowers’ (Turkey and Egypt in this example) significant political and military coercive capacity over their riparian neighbours (Syria, Iraq, Sudan, Ethiopia, *etc.*) as it is an inability to work out equitable allocations or benefits (Allan 2001: 224, Waterbury 2002: 167). Coercive methods, then, may be used between states that are officially at peace with each other, pre-empting the need either for physical violence or the concessions that might be obliged through negotiations. This is clearly not to say that there is not a serious conflict on these rivers, as shown e.g. by Ethiopian or Iraqi concerns over the actions of their dominant riparian neighbours (Swain 2002, Daoudy 2005b). Study done through an international relations perspective on such hegemonic behaviour has led to the development of Regime Theory, which is now considered.

### Brief Overview of Regime Theory

An international regime is understood to mean the “set of implicit or explicit principles, norms, rules and decision-making procedures around which actor explanations converge” (Keohane 1982: 325). A main appeal of regime theory is that the existence of regimes may permit the entrenchment of patterns of cooperation, calling and allowing for regional or international institutions to develop. These institutions would regulate and preside over issues of trade, transboundary pollution, resources, research, *etc.* A well-functioning institution could be expected to cultivate an environment that reduces transaction costs, increases information-flow and fosters peaceful relations, in part through reducing

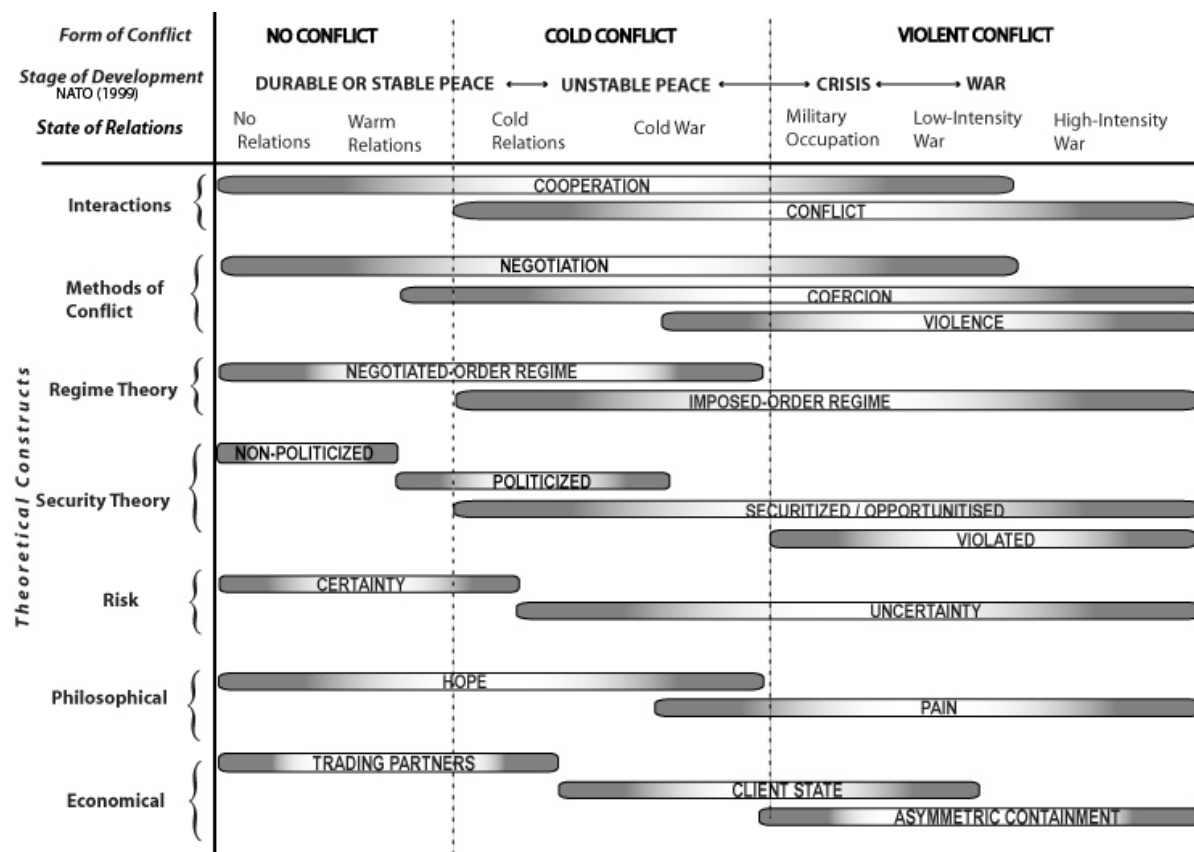


Figure 3: Theory and Conflict Framework

risk and providing stability - known as “hegemonic stability” theory (Keohane 1980, Dinar 1999).

Regime theory states that regimes between actors can develop in three manners: a ‘Spontaneous Order Regime’ refers to a regime that develops spontaneously; an ‘Imposed Order Regime’ develops through the imposition of the hegemon; and a ‘Negotiated Order Regime’ forms as a response to crisis, through bargaining and epistemic communities (Kibaroglu 2002: 233). The positive aspects behind the potential “institutionalized cooperation” of Negotiated Order regimes is alluring: “the process by which egoists learn to co-operate is at the same time a process of reconstructing their interests in terms of shared commitments to social norms. Over time, this will tend to transform a positive interdependence of outcomes into a positive interdependence of utilities or collective interest organized around the norm in question” (Wendt (1994) in Jagerskög 2001). An Imposed Order regime, on the other hand, may develop from a realist approach that “explains the formation of imposed regimes... [that] rests on the assumption of the power of one

nation, namely a hegemon, which creates and maintains [the] order so as to further its own interests” (Kibaroglu 2002: 49). Figure 3 suggests that each of these regimes can exist within various intensities of conflict.

Criticism of regime theory is led by Susan Strange who sees it as faddish, imprecise, distortive in that it ignores the dynamics of world politics and narrow-viewed in that it is state-centric (Strange 1982: 479)<sup>3</sup>. The debate moves to question whether regimes even matter at all. Delfef Sprinz points us to research concluding most significant pressure-points and pressures resulting in change have not been institutions (Sprinz 2000: 14). Sprinz notes, among many reasons given for the over-emphasis on the contributions of regimes, that “in practice, too little attention is placed on distinguishing between the existence of a discernible effect and its magnitude” (Sprinz 2000: 5).

3 The debate on the utility of Regime Theory is wide-ranging and long, and is not done justice here. Examination of the writing of Susan Strange and Robert Keohane and the annals of *International Organisation* should be consulted for further exploration.



This may be part of the case in the competition over water resources between Palestinians and Israelis. In his application of regime theory, Dinar points out the ever-pervasive effect of politics: “despite many institutional frameworks that have been offered, Israelis and Palestinians have been faced with many different issues that have made cooperation and accommodation under the Labor government, and even more so under the Likud government, difficult” (Dinar 1999: 6). We now turn to give more attention to this case.

#### An Imposed-Order Regime - the Israeli-Palestinian Joint Water Committee

The apparent ‘Negotiated-Order’ regime enabled by the political process of the Oslo Accords partly manifested itself with the creation of the Joint Water Committee (JWC) in 1996 between Israeli water authorities and the newly-created Palestinian Water Authority (PWA). True to its intent as a court for joint management of that portion of the aquifer water located within the Palestinian borders of the transboundary resource<sup>4</sup>, the JWC has continued to meet throughout the worst of the last years of violence, and has maintained a certain level of technical cooperation (Jagerskög 2003a, Shamir 2004). Several critics note, however, the limited effectiveness of efforts of the JWC towards joint management (Dinar 1999, Kliot 2000, Selby 2003b, Daibes 2004, Selby 2005). As Jochen Renger concludes in his study into the obstacles preventing cooperation between the sides, “despite the fact that Israel and the Palestinian Authority are working together in some areas of water management, this does not mean that they are cooperating” (Renger 1998: 49). There are at least three reasons for this: the actual structure of the JWC, power asymmetries and domestic politics.

Firstly, the interim nature of the Oslo Accords’ commitment on agreements in other unresolved issues (the status of refugees and of Jerusalem, the future of

Israeli settlements inside the West Bank and Gaza, *etc.*) was reflected in the JWC’s licensing-procedure, as shown in Figure 4. Quite distinct from the largely technical staff from the Israeli and Palestinian water authorities that compose the JWC, the Civil Administration of the Israel Defense Forces (IDF) plays a key role part in the licensing procedure for all permits for Areas “C”. Under the Oslo II accords, Areas “C” are areas outside the urban centers set to remain for an interim period under full Israeli control, comprising roughly 72% of West Bank territory (NSU 2004). Furthermore, an estimated 6.8% of the West Bank essentially confiscated by illegal Israeli settlements does not fall under the JWC’s jurisdiction<sup>5</sup> (PASSIA 2004: 281). Subsequently, less than one-quarter of the land within the Palestinian political boundary of the West Bank is subject to equal Palestinian-Israeli joint management, with the rest subject to an approval mechanism that would – and does – prioritize Israeli military objectives over Palestinian developmental or environmental objectives.

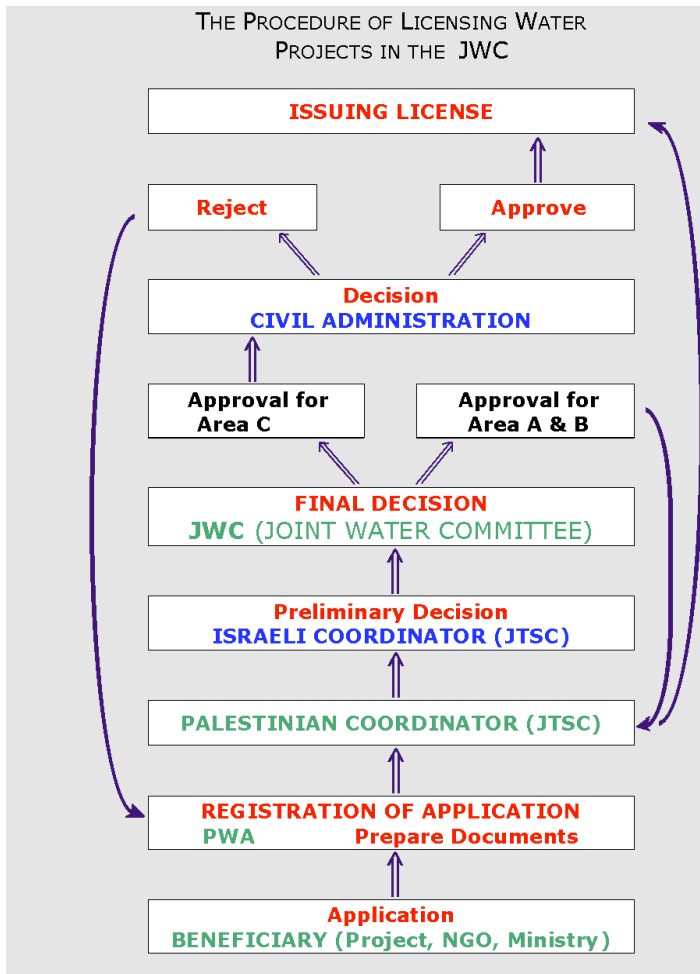
Dozens of water-development projects, particularly those in areas outside of urban centres (logical locations for new wells or wastewater treatment plants<sup>6</sup>), are thus subject to militarily strategic interests, which are in turn subject to larger political interests (Daibes 2003: 35, Selby 2003a). Such an overtly-structured mix of political and military interests with technical ones is as rare as any public acknowledgement of it. Obstruction of proper water resource development is one inevitable result in what Jan Selby has labeled a “license for environmental destruction” (Selby 2005: 12). Consider, for example, the experience of a senior hydrogeologist who has been working on such projects for seven years:

Obtaining a license for a German well-drilling project in the Eastern Aquifer took almost three

4 Distribution of shared Palestinian-Israeli water resources was institutionalized according to actual use in 1994, *i.e.* for the shared aquifers Israel would continue with what amounted to roughly 80% of the estimated allowable recharge, the Palestinians, 20% (Oslo II, Annex 10, Article 40). Use of the transboundary Jordan River is even more skewed at 100% for Israel (and Jordan), 0% for the riparian Palestinians.

5 Normally apolitical technical information such as water-consumption, wastage, *etc.* for the settlements is not shared by the Israeli side (Selby 2003a: 111).

6 The German-funded wastewater plant for the Palestinian town of Salfeet, for example, was intended to be built in Area “C”, just outside the municipal boundaries. While the project was originally accepted by the technicians at the JWC, settler or military interests intervened, resulting in a reversal of the approval (Messerschmid 2003).



**Figure 4: Licensing Procedure and Structure of the Joint Water Committee (showing Civil Administration approval required for Areas “C”)**

years (from 1995 to 1998), due to the heavy bureaucracy and lack of good-will to promote such projects. Suitable well locations were not accepted by the Israeli partner in the Joint Water Committee (JWC), sometimes even openly reasoning that this location was already earmarked for drilling a new settlement well (which of course is strictly illegal according to International Law). And even after having changed the location under application several times and after having obtained approval from the Joint Water Committee (that is, the Israeli side of the JWC) it took another year until the responsible representatives from the Civil Administration were willing to sign the license (Messerschmid 2003).

Second, the deficiencies of the potential Negotiated-Order regime that resulted in the creation of the JWC became evident in the ineffectual enforcement

of the licensing procedure. Considering the PWA's relatively little actual 'authority' (actual control over only 7% of water produced in the West Bank (WBWD 2003)) and persistent threat of becoming irrelevant, it is essentially 'caught' in an asymmetrical relationship that is very sensitive to Israeli threats of reducing cooperation at the JWC. The resultant coercive *modus vivendi* manifests itself for instance when the Israeli side intends to dig new wells for Israeli settlers within the West Bank in the Eastern Aquifer, which was intended reserved for Palestinian development (Selby 2003a: 11), or when holding-back on approval for Palestinian wells in the same aquifer, against the stated intentions of the Oslo accords (Selby 2005).

Third, the *internal* conflicts faced by each actor in turn affect how the conflict between the two actors is conducted, particularly at the JWC meetings. The previously-discussed cold conflict between the various water-users on the Israeli side puts pressure on the Israeli water professionals and negotiators to be "tough" on the Palestinian side, especially if it is perceived that the Palestinians may demand more of their share of the resource or else may pollute it (Soffer 2002). Evidence of a tough Israeli stance is given by considering the number of projects proposed by the PWA that are 'on-hold' (142 of 227 projects tabled at the JWC by 1999 were held-up for various unstated reasons (Daibes 2004)). The PWA, in part held back by the JWC from meeting its customers' requirements, as well as constrained by its own narrow set of interests and historical conflicts with traditional Palestinian water-providers (Trottier 1999, Selby 2005), is often unable to 'deliver'. One result is an intensification of the internal cold-conflict with its population.

Consideration of these dynamics leads one to conclude that it is less cooperation over shared water resources than an inequitable water distribution that was institutionalized by the Oslo Accords and the formation of the JWC. As Jan Selby (2003a) puts it, this may be a case of 'dressing up domination as cooperation':

To speak of Israeli-Palestinian 'co-operation' in the water sector is to use no less than a misnomer. This is not, however, simply because 'the outcome of co-operation between an elephant and a fly is not hard to predict,' as Chomsky so pithily writes, ... but because under Oslo,

<i>Jordan River basin riparians</i>	<b>A p p r o x . w a t e r   s e l f - s u f f i c i e n c y</b>	<b>E c o n o m i c C a p a c i t y</b>	<b>H e g e m o n i c P o w e r</b>	<b>A c c e s s   t o G l o b a l S u p p o r t</b>
<b>Syria</b>	70%	moderate	weak	little
<b>Lebanon</b>	100%	moderate	very weak	little
<b>Israel</b>	25%	strong & diverse	strong	very significant
<b>Palestine</b>	20%	very weak	very weak	very little
<b>Jordan</b>	25%	weak	weak	little

**Table 2: Factors Affecting International Relations on Water Issues. (Allan, 2001: 224)**

‘co-operation’ has often been only minimally different from the occupation and domination that went before it (Selby 2003a: 118).

A classification of the existing set of protocols as an ‘Imposed-Order regime’ thus seems apt. In this case, hegemonic Israel - intentionally or not - “creates and maintains [the] order to further its own interests”, to return to Kibaroglu’s definition. All methods of conflict (coercion, negotiation, violence, *etc.*) under such a regime remain available to Israel. Actors on the Palestinian side find options available to them narrowed, essentially contained as they are in some ‘hydraulically subject’ form under Israeli ‘hydro-hegemony’<sup>7</sup>.

Apart from complicating life for the un-served rural Palestinian communities and Palestinian water-professionals intent on proper water sector development, the cooperation *vs.* conflict paradox active at the JWC clouds the issues for the analyst. Despite the power dynamics, domination and internal conflicts, there is actually a minimum level of cooperation going on. The analyst narrowly focused on the official versions of the issue may see only what the authorities may wish to emphasize – i.e. the cooperation. The observer with a broader scope and varying perspectives considering the official, unofficial and internal aspects of the conflict will see that the significance of the cooperation pales in comparison with the extent of the effects of the cold-conflict dynamics. This may be a case – as Sprinz noted earlier - of too much attention on the existence of

cooperation and too little on its effect.

### Brief Overview of Security Studies Theory

A prevailing misperception of the competition over transboundary water is that the upstream riparian has a great edge over its competitors, by sole virtue of its geographic position. The very real limits of this physical advantage are best illustrated by Tony Allan (2001) when he reveals how it is that Egypt – downstream on the Nile of so many states – maintains an effective control over the water, at the expense of its upstream neighbours (Allan 2001). A similar explanation is also provided for Israel in the Jordan River basin: “Economic strength combined more or less with hegemonic advantage explains the privileged outcome for a mid-stream riparian, Israel” (Allan 2001: 222), as shown in Table 2. Although the resource under discussion in the analysis of this paper is groundwater (in the form of shared aquifers), the relative political economic positions of Israel and Palestine remain valid, and a deeper examination of the “hegemonic advantage” is warranted.

Various components of Security theory underpin Allan’s thinking. Amidst a rich and varied theoretical field, at least one useful framework for analysis is provided by the ‘Copenhagen School’ of Buzan, Waever, Ole and others who have reframed our understanding of security from the traditional ‘narrow’ military understanding of security. They identify the importance of considering security (or stability) in five sectors – political, military, economic, societal and environmental. Each of these sectors can be analyzed at any or all of four levels: international, regional, national and sub-national. Our earlier discussion on the methods of conflict showed the methods of coercion

7 The term ‘hydro-hegemony’ refers to hegemony operational at the river-basin level, and was originally used by Warner (1992). Hydro-hegemony as a tool for water conflict analysis has been thoroughly conceptualized in Zeitoun and Warner (2006).

Security Sectors	Israel	Palestine
<b>Military</b>	Large and capable army, air force, navy, intelligence.	No army, air force or navy. Numerous poorly-armed police units. Para-police units. Weak intelligence.
<b>Political</b>	Warm relations with US, cold or antagonistic relations with Arab states, some support from EU.	Weak support from EU, weak support from Arab states, cold relations with US, no control over borders.
<b>Economic</b>	Robust, diverse economy.	Economy asymmetrically contained by Israel's (Khan 2004c), no control over imports.
<b>Environmental</b>	Control over water resources, risk of contamination from Palestinian side of shared aquifers.	No access to Jordan River, risk of contamination from Israeli side of shared aquifers (in Gaza, and from settlements in West Bank).
<b>Societal</b>	Strong attachment to the land (Zionism).	Traditional attachment to the land (agriculture, nationalism).

**Table 3. Israel-Palestine Security Complex**

available in each of these sectors.

The concept of 'securitization' and 'security complexes' sets a more robust frame. Defined as "a set of states whose major security perceptions and concerns are so interlinked that their national security problems cannot reasonably be analyzed or resolved apart from one another" (Buzan, et al. 1998: 12), the concept of a security complex helps to partly explain inter-state dynamics. Within a given security complex, poorly-understood conflictual issues can become politicized and act as puppets and puppet-masters of politicians and public alike.

An issue is understood to have become 'politicized' when "the issue is part of public policy, requiring government decision and resource allocation" (Buzan, et al. 1998: 23), for instance, downtown traffic congestion an example from municipal politics. Such issues may be played-up or down by politicians in processes commonly known as 'politicization' or 'depoliticization'. A more extreme version of politicization is 'securitization', which frames the issue in terms of security usually through 'speech-acts' drawing on perceptions of national, local or individual (in)security. According to Buzan, a 'securitized' issue is one that is "presented as an existential threat, requiring emergency measures and justifying actions outside the normal bounds of political procedure" (Buzan, et al. 1998: 23). Securitization partly "functions as a

technique of government which retrieves the ordering force of the fear of violent death by a mythical replay of the variations of the Hobbesian state of nature. It manufactures a sudden rupture in the routinised, everyday life by fabricating an existential threat which provokes experiences of the real possibility of violent death" (Aradau 2001a: quoting Husmans 1992). This form of 'sabre-rattling' applies not only to military issues but to dynamics in the other four security sectors of politics, economy, environment and society.

In his application to the water sector, Buzan highlights the importance of perception and the link between water issues and issues of higher politics:

[B]eyond the factors that generally influence how dramatic the issue appears is often the perception of some actors connected to the problem. A water dependency on another country may be unpleasant and may cause one to be concerned about that country's pollution and overuse of water, but if one has a conflict with that country for other reasons, one is much more likely to define the water problem as a security problem. Thus, through the attachment of the security label, sectors insert themselves into each other (Buzan, et al. 1998: 170).

From Figure 3 we see the wide range of relations over which the tactic of 'securitization' may be used. To



this we can add the effects of power asymmetry. As Allan (2004c) notes: “conflict can exist as a result of minor irritation between neighbours of equal power and economic competence. Conflict can also be the result of major irritations ‘contained’ within what political analysts call asymmetric power relations... the ability to express or project conflict depends on power relations as well as the capacity to contain the resentments of neighbours”. One can readily imagine the same sort of dynamic applied to riparians in militarily- or economically- subordinate positions. We turn now to test the relevance of these theories along the Jordan River basin.

#### Securitization and Power Asymmetry active in Palestine and Israel

That water in Palestine and Israel is a highly politicized – or securitized – issue hardly needs mentioning. A quick review of the media shows hundreds of articles and expressions of interest, usually during a drought period or following a high-profile incident. Consider briefly the Wazzani Springs dispute in 2002 which resulted in Israeli war drum-beating and official threats of intervention to counter a small Lebanese drinking-water project along a tributary to the Hasbani river (IMFA 2002a, IMFA 2002c, IMFA 2002d). Under the banner of national security, the Israeli public’s attention was effectively diverted away from much more serious internal water-management issues (Luft 2002, Newman 2002, Zisser 2002).

Consideration of the Israel - Palestine security complex is also instructive. Referring to Table 3, one notes that the power-balance is greatly tilted in favour of the regional hegemon, and that Israel enjoys a position of dominance in four of the sectors.<sup>8</sup>

Examination of Table 3 in light of Allan’s previous comments leads one to consider the possibility of the existence of a ‘contained’ conflict. Just such

8 The fifth sector – societal security – is fervently contested by two ideologies: Israeli Zionism on the one hand, Palestinian nationalism on the other. Deeply-held religious beliefs (Jewish, Muslim or Christian) strongly influence both of these ideologies. No domination from either side could be expected in this sector, as historical events worldwide have clearly proven that beliefs are much easier to retain than land.

a case may be the conflict between Palestinian municipalities and the Palestinian Water Authority in the face of destruction of municipal water infrastructure by the Israeli military, as previously discussed. Having had one or two of its main transmission lines cut and unable to provide its customers with a reliable supply of water for several weeks (EWOC 2002, World Bank 2003a), the head engineer of the municipality’s Water Department would be justified in his consideration of the issue as beyond ‘politicized’, perhaps even beyond ‘securitized’. He may, however, find himself at odds with the Palestinian Water Authority (PWA) on how to deal with the situation. For reasons previously discussed dealing with the coercive *modus vivendi* active at the JWC, the PWA may not want to jeopardize the actual national-level technical cooperation enjoyed with their Israeli counterparts, and preserve their subordinate position in the relationship. The official discourse, from both the Palestinian and Israeli sides, would therefore be one of continued cooperation, and not of conflict.

This hypothesis is supported by consideration of the joint statement of protection of water infrastructure made at the resumption of armed conflict between the sides in 2000. The head of the PWA and the Israeli representative at the JWC called on the “general public not to damage in any way the water infrastructure”<sup>9</sup> (JWC 2001). Notwithstanding the good intentions of all involved at the event organized by the United States Agency for International Development, and as our previous examination of the extent of the Israeli destruction by military and para-military settler groups has shown, water infrastructure and issues evidently remained tied to other political goals and very little evidence of any form of protection against damages can be found.

This application of elements of Security theory reveals that it is in part the perspective of the observer that results in a failure to identify the cooperation vs. conflict paradox. As with the conclusions reached from application of Regime theory, we find here that a narrow focus on the official Palestinian or Israeli stance on these issues may lead the observer to describe solely

9 It is unclear whether the call is really for the “general public” and not for the combatants not to damage the infrastructure, or if the apparently misguided declaration is due to a poor translation.

the persistent cooperation of the Joint Water Committee. Analysis conducted from the Palestinian municipality's perspective, on the other hand, would reveal violent conflict. Referring back to Figure 3, it is revealed that issues going beyond politicized into the realm of 'securitized' may occur in a 'cold' or 'violent' form of conflict. Thus as the conflict may be contained from becoming violent (and even when possessing violent aspects), it may generally be perceived as 'cold'. In cases of more extreme mis-perception, the existence of the conflict is downplayed or neglected, and replaced by a focus on the less-important 'cooperation' aspects.

## Conclusion

This paper has attempted to explain the paradox of how cooperation and conflict exist simultaneously in the water conflict between Palestinians and Israel. A partial explanation for the paradox is given by consideration of a) an under-consideration by water conflict analysts of the dynamics of conflict, and b) a narrow focus on a very broad and complex political context.

Consideration of the dynamics of conflict has been given by defining the term 'conflict', by classifying the different intensities of conflict and by discussion on the methods through which conflict is conducted. It has been shown that within the (non water-related) violent conflict between Palestinians and Israel, conflict over water issues exists. This has been shown to be particularly in the form of destroyed Palestinian water infrastructure and in damaged relations. It has also been shown that a minimal degree of cooperation at the technical level occurred at the same time as the damaging aspects of the conflict.

The political context is shaped by consideration of Regime theory and Security theory. It has been shown that despite the creation of the Joint Water Committee (JWC) created through the negotiated political agreement of the Oslo Accords, the level and benefits of cooperation at the JWC are shown to benefit the Israeli side at the expense of Palestinian water infrastructure and resources, in what may be considered an Imposed-Order regime. Through procedures structured into the JWC, a harmful dynamic of trade-offs occur with the stronger side readily employing coercive methods

of conflict to impose its will and gain compliance. A narrow focus on the official character and declarations of the institution emphasizes the cooperation, and the conflict remains veiled.

Security theory fleshes out the political context revealing how the vastly asymmetrical power relations shape the conflict between Palestinians and Israel. The issue of water is easily 'securitized' by politicians thereby legitimizing actions normally outside the boundaries of diplomacy. The effects of the water-related conflictual issues on different elements of Palestinian society are effectively downplayed or ignored. Thus is the conflict contained from becoming violent, but lingers on unresolved.

Resolution of a conflict requires clear understanding of all of the issues it touches. It is hoped that this paper has contributed to the otherwise muddy world of transboundary water analysis through its examination of the influence of politics. The nature of power, hegemony and dominance should be borne in mind as further research continues on apparently paradoxical situations of conflict and cooperation.

**Mark Zeitoun, P.Eng, PhD**, Center for Environmental Policy and Governance, London School of Economics and Political Science, London, UK.  
Email: m.zeitoun@lse.ack.uk

## References

- Allan, J. A. 2004c. *Water in the Middle East - Understanding Conflict*. Oxford: Oxford Analytica.
- Allan, J. A. 2001. *The Middle East Water Question - Hydropolitics and the Global Economy*. London, UK: I.B. Tauris.
- Aradau, C. 2001a. "Beyond good and evil: ethics and securitization/desecuritization techniques." *Rubikon E-Journal*. [Online] URL: <http://venus.ci.uw.edu.pl/~rubikon/forum/claudia2.htm> [accessed February 2004.]
- Buzan, B., O. Waever and J. de Wilde. 1998. *Security - A new Framework for Analysis*. London, UK: Lynne Rienner Publishers, Inc.
- CESR (Center for Economic and Social Rights). 2003. *Thirsting for Justice - Israeli Violation of the Human Right to Water in the Occupied Palestinian Territories*. CESR in cooperation

- with the Palestine Hydrology Group: New York, USA. Daibes, F. (Ed.) 2003. *Water in Palestine: Problems - Politics - Prospects*. Jerusalem: PASSIA.
- Daibes, F. 2004. "On the efficiency of the JWC." Personal communication, Ramallah. 15 March 2004.
- Daoudy, M. 2005b. *Le partage des eaux entre la Syrie, l'Irak et la Turquie - Negociation, securite, et asymetrie des pouvoirs*. Paris: CNRS Editions.
- Dinar, S. 1999. *The Israeli-Palestinian Water Conflict and its Resolution: A View Through International Relations Theory*. Presented at the International Studies Association 40th Annual Convention: Washington, D.C., USA.
- el Musa, S. 1997. *Water Conflict - Economics, Politics, Law and Palestinian-Israeli Water Resources*. Washington DC, USA: Institute for Palestine Studies.
- Encarta. 2006. *Encarta World English Dictionary*. Microsoft Corporation.
- EWOC (2002). *Water and Wastewater Situation in the West Bank Governorates During and Following the IDF Re-occupation March, April 2002 - Draft Interim Report*. Jerusalem: Emergency Water Operations Centre (USAID, UNDP, Oxfam).
- Frey, F. W. 1993. "The Political Context of Conflict and Cooperation Over International River Basins." *Water International* 18(1): 54-68.
- Gramsci, A. 2003. *Selections from the Prison Notebooks*. London: Lawrence and Wishart.
- Haas, A. 2004. *Poisoning the Village Wells*. Tel Aviv, Israel: Ha'aretz Newspaper On-line. [Online.] URL: <http://www.palestine-pmc.com> [accessed November 2004].
- Homer-Dixon, T. 1999. *Environment, Scarcity, and Violence*. Princeton: Princeton University Press.
- IMFA. 2002a. *Cabinet Communique - 16 September 2002*. Tel Aviv, Israel: Israel Ministry of Foreign Affairs Cabinet Secretariat. [Online.] URL: <http://www.mfa.gov.il/MFA/MFAArchive> [accessed April 2004].
- IMFA. 2002c. *Cabinet Communique - 13 October 2002*. Tel Aviv, Israel: Israel Ministry of Foreign Affairs Cabinet Secretariat. [Online.] URL: <http://www.mfa.gov.il/MFA/MFAArchive> [accessed April 2004].
- IMFA. 2002d. *Cabinet Communique - 23 October 2002*. Tel Aviv, Israel: Israel Ministry of Foreign Affairs Cabinet Secretariat. [Online.] URL: <http://www.mfa.gov.il/MFA/MFAArchive> [accessed April 2004].
- IMG. 2004. *IMG Damage Assessment and Reconstruction Management in the West Bank and Gaza Strip Database*. Jerusalem: International Management Group, European Commission Representative Office in the West Bank and Gaza Strip. [Online.] URL: <http://www.ecwbg.info/first.asp>.
- Jagerskög, A. 2001. "The Jordan River Basin: Explaining Interstate Water Cooperation Through Regime Theory." *SOAS Water Issues Study Group, School of Oriental and African Studies / King's College - London*. Occasional Paper 31. [Online.] URL: <http://www.soas.ac.uk/waterissues/occasional.html>.
- Jagerskög, A. 2003a. *Why States Cooperate Over Shared Water: The Water Negotiations in the Jordan River Basin*. Linköping, Sweden: Linköping University.
- JWC. 2001. *Joint Declaration for Keeping the Water Infrastructure out of the Cycle of Violence*. Erez Crossing, Gaza. [Online.] URL: <http://www.jewishvirtuallibrary.org/jsourc/Peace/jtwater.html> [accessed November 2004].
- Kaufman, E., J. Oppenheimer, A. Wolf and A. Dinar. 1997. "Transboundary fresh water disputes and conflict resolution: Planning an integrated approach." *Water International*, 22(1): 37-48.
- Keohane, R. O. 1980. "The theory of hegemonic stability and changes in international economic regimes, 1967-1977." in Holsti, O. R., R. M. Siverson and A. L. George (Eds.). *Change in the International System*. Boulder, CO, USA: Westview Press, pp. 131-161.
- Keohane, R. O. 1982. "The demand for international regimes." *International Organization*, 36(2): 325-355.
- Khan, M.(Ed.). 2004c. *State Formation in Palestine*. London, UK: Routledge Curzon.



- Kibaroglu, A. 2002. *Building a Regime for the Rivers of the Euphrates-Tigris Rivers Basin*. Brill, Netherlands: Brill Academic Publishers.
- Kliot, N. 2000. "A Cooperative Framework for Sharing Scarce Water Resources." in Amery, H. and A. Wolf (Ed.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.
- Lonergan, S. and D. Brooks. 1994. *Watershed: The Role of Fresh Water in the Israeli-Palestinian Conflict*. Ottawa, Canada: International Development Research Council.
- Lowi, M. 1993. *Water and Power - The Politics of a Scarce Resource in the Jordan River Basin*. Cambridge, USA: Cambridge University Press.
- Luft, G. 2002. "The Wazzani River Dispute: More Tension Along the Israel-Lebanon Border." *Peace Watch (electronic)*, 397. [Online.] URL: <http://www.washingtoninstitute.org/watch/peacewatch/peacewatch2002/397> [accessed April 2004].
- Lukes, S. 2005a. *Power: A Radical View - 2nd edition*. Hampshire, UK: Palgrave MacMillan.
- Lustick, I. S. 2002. "Hegemony and the riddle of nationalism: The dialectics of nationalism and religion in the Middle East." *Logos* 1(3): 18-44.
- Messerschmid, C. 2003. *Protecting the Mountain Aquifer - A Missed Opportunity*. Open Letter to Friends of the Earth Middle East in response to their conference: "Protecting the Mountain Aquifer", Israel 2003.
- NATO. 1999. *Environment & Security in an International Context - Final Report March 1999*. Committee on the Challenges of Modern Society Report No. 232. Berlin, Germany: North Atlantic Treaty Organization.
- Nembrini, P. G. 1995. *Do Water Production and Treatment Facilities Need Greater Protection in Armed Conflicts?* Water and War - Symposium on Water in Armed Conflicts. Geneva, Switzerland: International Committee of the Red Cross.
- Newman, D. 2002. *The Wazzani and Our Water Problem*. The Jerusalem Post. Jerusalem.
- NSU. 2004. *Negotiations and the Peace Process - Borders*. Ramallah, West Bank, Negotiations Affairs Department, Palestine Liberation Organisation. [Online.] URL: [http://www.nad-plo.org/inner.php?view=nego\\_permanent\\_borders\\_hbordersp](http://www.nad-plo.org/inner.php?view=nego_permanent_borders_hbordersp).
- Ohlsson, L. and A. Turton. 1999. "The Turning of a Screw: Social Resource Scarcity as a Bottleneck in Adaption to Water Scarcity." *SOAS Water Issues Study Group, School of Oriental and African Studies / King's College - London*. Occasional Paper 19. [Online.] URL: <http://www.soas.ac.uk/waterissues/occasional.html>.
- Oxfam. 2003b. *Palestine village encases spring in concrete to thwart further settler attack*. Oxford, UK: Oxfam Great Britain. [Online.] URL: [http://www.oxfam.org.uk/what\\_we\\_do/where\\_we\\_work/israel\\_palterr/springconcrete.htm](http://www.oxfam.org.uk/what_we_do/where_we_work/israel_palterr/springconcrete.htm) [accessed August 2004].
- Pape, R. 1996. *Bombing to Win - Power and Coercion in War*. Ithaca, NY, USA: Cornell University Press.
- PASSIA. 2002. *Water: The Blue Gold of the Middle East (Special Bulletin)*. Jerusalem: Palestinian Academic Society for the Study of International Affairs.
- PASSIA. 2004. *Diary 2004*. Jerusalem: Palestinian Academic Society for the Study of International Affairs.
- PHG. 2004. *Water for Life - Israeli Assault on Palestinian Water, Sanitation and Hygiene During the Intifada*. Ramallah, West Bank, Palestinian Hydrology Group, European Community Humanitarian Office, Oxfam-Great Britain.
- Renger, J. 1998. "The Middle East peace process: Obstacles to cooperation over shared resources." in Scheumann and Schiffler (Eds.). *Water in the Middle East: Potential for Conflicts and Prospects for Cooperation*. Heidelberg, Germany: Springer.
- Said, E. 1994. *Culture and Imperialism*. New York, USA: Vintage Books.
- Selby, J. 2003a. *Water, Power and Politics in the Middle East - The Other Israeli-Palestinian Conflict*. London, UK: I.B. Tauris.
- Selby, J. 2003b. "Dressing up domination as 'co-



- operation': The case of Israeli-Palestinian water relations." *Review of International Studies*, 29(1): 121-138.
- Selby, J. 2005. *Joint Mismanagement: Reappraising the Oslo Water Regime*. Water for Life in the Middle East: 2nd Israeli-Palestinian International Conference, Antalya, Turkey, 20-12 October 2004, Israel/Palestine Center for Research and Information. [Online.] URL: <http://www.ipcri.org/index1.html> [accessed June 2005].
- Shamir, U. 2004. *Water Scarcity in the Middle East - Regional Cooperation as a Mechanism Towards Peace*. Presentation made to the Committee on International Relations, Congress of the United States House of Representatives. Washington, DC, USA.
- Soffer, A. 2002. *Mapping Special Interest Groups in Israel's Water Policy*. Efficient Use of Limited Water Resources: Making Israel a Model State. Ramat Gan, Israel, Begin-Sadat Center for Strategic Studies, Bar Ilan University Department of Political Science. [Online.] URL: <http://www.biu.ac.il/Besa/waterarticle7.html> [accessed February 2004].
- Sprinz, D. F. 2000. *Research on the Effectiveness of International Environmental Regimes: A Review of the State of the Art*. Paper prepared for the Final Conference on the EU Concerted Action on Regime Effectiveness, 9-12 November 2000, Barcelona, Spain, Institut D'educacio Continue (IDEC).
- Strange, S. 1982. "Cave! Hic Dragones: A critique of regime analysis." *International Organization*, 36(2): 479-496.
- Swain, A. 2002. "The Nile River Basin Initiative: Too many cooks, too little broth." *SAIS Review* XXII, 2: 293-308.
- Trottier, J. 1999. *Hydropolitics in the West Bank and Gaza Strip*. Jerusalem: PASSIA - Palestinian Academic Society for the Study of International Affairs.
- Warner, J. 1992. *The Politics of Diversion - Bridging troubled water in the Middle East*. Master's Thesis submitted to the Department of International Relations. University of Amsterdam, Amsterdam, Netherlands.
- Waterbury, J. 2002. *The Nile: National Determinants of Collective Action*. Ann Arbor, MI, USA: Yale University Press.
- WBWD. 2003. *Water Facilities for WBWD Water System*. Department, W. B. W. Ramallah, West Bank, West Bank Water Department: Palestinian and Israeli Water Networks and Wells.
- Wolf, A. T. 2000a. "Hydrostrategic territory in the Jordan Basin: Water, war, and Arab-Israeli peace negotiations." in Wolf, A. and H. Amery (Eds.). *Water in the Middle East: A Geography of Peace*. Austin, USA: University of Texas Press.
- Wolf, A. T. 2002. "Introduction." in Wolf, A.T. (Ed.). *Conflict Prevention and Resolution in Water Systems*. Cheltenham, UK: Elgar.
- Wolf, A. T. 2004. *Freshwater Transboundary Dispute Database*. Corvallis, OR, USA: Oregon State University. [Online.] URL: <http://www.transboundarywaters.orst.edu/>.
- World Bank. 2002. *Physical and Institutional Damage Assessment, West Bank Governorates, March-May 2002 - Summary Report*. International Bank for Reconstruction and Development.
- World Bank. 2003a. *27 Months of Intifada, Closures and Palestinian Economic Crisis*. Jerusalem: International Bank for Reconstruction and Development.
- Yoffe, S. B., A. T. Wolf and M. Giordano. 2001. "Conflict and cooperation over international freshwater resources: Indicators and findings of the basins at risk." *Journal of American Water Resources Association*, 39(5): 1109-1126.
- Zeitoun, M. and J. Warner (2006). "Hydro-Hegemony: A Framework for Analysis of Transboundary Water Conflicts." *Water Policy* 8: 435-460.
- Zisser, E. 2002. "Israel and Lebanon: The Battle for the Wazzani." *Tel Aviv Notes - An Update on Political and Strategic Developments in the Middle East, No. 50*. Moshe Dayan Center for Middle Eastern and African Studies / Jafee Center for Strategic Studies, Tel Aviv University.