

THE POWER POLITICS OF WATER STRUGGLES:
LOCAL RESOURCE MANAGEMENT
IN THE WEST BANK

by

UROOJ MUGHAL

A THESIS

Presented to the Department of International Studies
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Master of Arts

June 2013

THESIS APPROVAL PAGE

Student: Urooj Amjad Mughal

Title: The Power Politics of Water Struggles: Local Resource Management in the West Bank

This thesis has been accepted and approved in partial fulfillment of the requirements for the Master of Arts degree in the Department of International Studies by:

Dennis Galvan	Chairperson
Alexander Murphy	Member
Diane Baxter	Member

and

Kimberly Andrews Espy	Vice President for Research and Innovation; Dean of the Graduate School
-----------------------	--

Original approval signatures are on file with the University of Oregon Graduate School.

Degree awarded June 2013

© 2013 Urooj Amjad Mughal

THESIS ABSTRACT

Urooj Amjad Mughal

Master of Arts

Department of International Studies

June 2013

Title: The Power Politics of Water Struggles: Local Resource Management in the West Bank

This thesis examines the significance of a micro-level approach to the Israeli-Palestinian water conflict. By rethinking scale of analysis and examining local insecurities, Palestinian experiences reveal how water conflict plays out in latent and discursive ways. In a step-by-step method, I detail the processes and outcomes of the water struggle in the West Bank. First, I show how technical challenges ((i) poor water supply, (ii) antiquated water infrastructure, (iii) failed institutions) are shaped by political imperatives. Second, I show how Palestinians have responded to local water sector challenges: (iv) nonpayment to the Palestinian Water Authority for their water supply, (v) increasing rural to urban migration by Palestinian farmers. As a result, Palestinian society is stuck in cycles of crisis that make the conditions increasingly ungovernable. While Palestinians are stuck in a mode of ungovernability, their position in the peace process with Israel is undermined.

CURRICULUM VITAE

NAME OF AUTHOR: Urooj Amjad Mughal

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene
Virginia Commonwealth University, Richmond, Virginia

DEGREES AWARDED:

Master of Arts, International Studies, 2013, University of Oregon
Bachelor of Arts, Political Science, 2010, Virginia Commonwealth University

AREAS OF SPECIAL INTEREST:

Political Geopgrahy
Human Geography
Palestine Studies
Water Politics

PROFESSIONAL EXPERIENCE:

Global Scholars Program fellow, University of Oregon, Septebmer 2012 -
January 2013
Research Assistant, Palestinian Hydrology Group, May 2012-September 2012
Graduate Teaching Fellow, University of Oregon, September 2011-May 2012
Constituent Case Work, United States Senator Jim Webb, January 2010-
September 2010
English for Speakers of Other Languages (ESOL) Mentor, Refugee and
Immigration Services of Virginia, June 2009-January 2010

GRANTS, AWARDS, AND HONORS:

Promising Scholar Award, University of Oregon, 2010
Thurber Award for Research, University of Oregon, 2011
Thurber Award for Professional Development, University of Oregon, 2012

ACKNOWLEDGMENTS

First and foremost, I would like to express my sincere appreciation to Professor Dennis Galvan for his continued support, encouragement, and ideas that contributed to the formulation of this thesis. Additionally, I would like to thank Professor Alexander Murphy for his insightful comments and hard questions during my academic process. I would also like to express my deep gratitude to Professor Diane Baxter for guiding my research and helping me to develop my background and understanding of the Israeli and Palestinian struggle.

A really special and heartfelt thanks to the people in Palestine who put time and thought towards my interviews and inquiries, and those who contributed their ideas, stories, and time—without which this thesis would not have been possible. I am grateful to the Palestinian Hydrology Group for hosting me in Ramallah, during the fieldwork process. Several other organizations and individuals offered insight and assistance, including: the Jerusalem Water Undertaking; the Jericho Municipality; the heads of Local Village Councils in the Jordan Valley; Ma'an Development Center; Dr. Maher Abu Mahdi, the Institute of Environmental and Water Studies (IEWS) at BirZeit University; Dr. Gillad Rosen, Hebrew University of Jerusalem. I am extremely thankful for their shared knowledge and expertise. Furthermore, I would like to acknowledge with much appreciation and profound gratitude the crucial role of the Palestinian families who invited me into their homes and shared their daily lives with me, in a truly meaningful way.

I would like to thank my parents for their hard work in life, so that I could succeed in mine. Finally, my sincere gratitude goes to my incredible friends that are in all corners of this world. I would have never been able to finish my thesis without you all.

To those who live the water conflict.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. THEORETICAL FRAMEWORK	5
Interpreting Middle East Hydropolitical Knowledge.....	13
Methodology	21
Structure of Thesis.....	25
III. EVOLUTION OF THE ISRAELI-PALESTINIAN WATER CONFLICT.....	27
The Psychological Environment and Ethos of Water.....	27
Water Within Politics	29
Confronting Water in an Israeli-Palestinian Peace Agreement: Oslo II.....	32
Context of Regional Hydrology	35
Military Orders	38
Fragmentation of the West Bank.....	43
Governance Structures of the West Bank Water Sector	45
IV. UNPACKING THE WATER STRUGGLE: OBSTACLES TO INTERGRATED WATER MANAGMENT.....	48
The Technical Is Political: Challenges to Palestinian Water Supply.....	49
The Jerusalem Water Undertaking: Water Provision in Ramallah Al-Bireh.....	51
The City of Jericho.....	53
The Jordan Valley	60
Rawabi: A Failure in Advance?.....	73
Conclusion	76
Hard Power: Antiquated Palestinian Water Infrastructure	78

Chapter	Page
The Jerusalem Water Undertaking: Infrastructure in Ramallah Al-Bireh.....	82
The City of Jericho.....	86
“Everything Here Is Provided by the NGOs”: Jordan Valley’s Struggle to Build.....	91
Rawabi: State-building Without a State.....	101
Conclusion.....	102
“The Palestinian Authority Has No Authority”: The Internal Fragmentation of the West Bank Water Sector.....	103
The Joint Water Committee: A Cooperation Misnomer.....	105
The Internal Fragmentation.....	109
The Jerusalem Water Undertaking.....	110
The Jordan Valley.....	112
Conclusion.....	116
V. UNGOVERNABILITY: BY ACCIDENT OR BY DESIGN?.....	117
Palestinian Debts to Israel: Nonpayment of Water Services.....	118
Israel and the Palestinian Authority Tax Revenue.....	121
The Jerusalem Water Undertaking.....	123
The City of Jericho.....	127
The Jordan Valley.....	132
A Subsidy Analogy: An Indicator for Power.....	136
Conclusion.....	140
Creating Place for the Displaced: The Challenges of Palestinian Rural to Urban Migration.....	140
Migration Pressures on Palestinian Urban Centers.....	147

Chapter	Page
Conclusion.....	150
VI. CONCLUSION.....	152
REFERENCES CITED.....	156

LIST OF FIGURES

Figure	Page
1. Case studies.....	23
2. Israel’s National Water Carrier.....	30
3. Fragmentation of the West Bank.....	34
4. Regional water resources.....	36
5. Mountain Aquifer.....	37
6. Palestinian Autonomous area - Jericho.....	55
7. Rooftop tanks in Jericho city.....	58
8. Pipe to Palestinian Villages.....	61
9. Pipe to Argaman, Israeli settlement.....	62
10. “Soccer field” water distribution.....	63
11. A view of Zbeidat from the highest elevation.....	67
12. A pressure pump used on Zbeidat’s highest elevation.....	68
13. Rawabi housing ad.....	74
14. 3D graphic of Rawabi housing.....	75
15. Jericho Well 1.....	89
16. Area B and Area C in Zbeidat.....	95
17. Initial “soccer field” distribution vs. proposed distribution system.....	99
18. Palestinian water payment structure.....	119
19. Jericho’s current block tariff structure.....	130

CHAPTER I

INTRODUCTION

This thesis examines the significance of a micro-level approach to the Israeli-Palestinian water conflict, one that is often overlooked in the Middle East water politics discourse. Local water management in the West Bank can serve as a lens through which to view Israeli-Palestinian relations. The technical challenges in the Palestinian water sector are, in reality, political. They require a local perspective. An examination of the effects that the water conflict has had on a local level reveals the influence of power on transboundary water conflicts. Power and politics are not only abstract and romanticized forces. They manifest on the ground in ways that have tangible effects on human life.

In a step-by-step method, I detail the processes and outcomes of water struggle in the West Bank, an approach that is distinct from a normative and prescriptive analysis. First, I begin by examining Palestinian water struggles in the West Bank by talking with local water experts, to explore the ways in which politics have shaped issues of water resource availability and antiquated water networks. The first concern among Palestinians is inadequate water supply. Second, while rehabilitation and maintenance of infrastructure may address issues of water losses, political barriers continuously impede any sustainable solution. Third, in order to address the challenges of developing Palestinian water resources, institutions were established through the Oslo peace process. They provided the Palestinians what they were presumed to lack, control over their own resources (Palestinian Water Authority (PWA) and the Joint Water Committee (JWC)). However, due to the informal distributions of power and influence, politics in the water sector became increasingly impenetrable and complex.

Rather than each element (inefficient water supply, antiquated infrastructure, water institutions) positively reinforcing the next, one element's shortcomings reinforce the other's. Therefore, technical failures in the Palestinian water sector are belied by political imperatives.

The institutions have allowed Israel to accumulate more control, while maintaining the fractious nature of the Palestinian water sector. The technical realities, as well as the compromised position of the PWA, have engendered a lack of confidence from local Palestinian communities. In a reaction to local water sector challenges, which their government has been unable to resolve, Palestinians have responded in two ways. Their highly politicized responses lead to steps four and five of this thesis. In the fourth major step I show how the Palestinians have discontinued payment to the Palestinian Water Authority (PWA) for their water supply. Consequently, the PWA is in debt to Mekorot, and in turn, to Israel. As a result, the unpaid Mekorot invoices are paid by Israel offsetting those charges against the value added tax (VAT) it collects on Palestinian imports. In the fifth step I show how rural to urban migration by Palestinian farmers is exacerbating pressure on urban centers. Due to the inadequate water resources in the Jordan Valley, farmers are unable to sustain agrarian lifestyles.

Palestinian nonpayment and rural to urban migration by farmers contributes to a cycle of crisis in Palestinian communities. With triggers at a local level, Palestinian responses have implications which contribute to conflict between Israel and the Palestinian Authority at a national level. Furthermore, because the frustrations continue to exist for Palestinians at the local level, nonpayment and migration are perpetual. As a result, Palestinian society plunges into a prolonged phase of

ungovernable conditions. I conclude this study by asking whether or not these cycles of crisis are accidental. While Palestinian society is stuck in a mode of ungovernability, the Palestinian position in the peace process with Israel is undermined. An unhelpful rhetoric prevails: “If the Palestinian’s are unable to govern themselves, how can they be equal partners to Israel in peace talks?” This rhetoric is used time and time again to discount Palestinian rights in negotiations.

By rethinking the scale of analysis (from an interstate to intrastate level), local Palestinian experiences key into the power dynamics and reveal how water conflict plays out in latent and discursive ways. Technocratic approaches obscure the particularities of actual lived lives that are affected by these power dynamics. The discourse on water politics in the Middle East can be categorized in two ways. The first category claims that water leads to war; the second category looks to resolve water conflict by promoting peaceful cooperation. Although somewhat of a caricature, Middle East water politics are subject to the standard themes of these two categories. In order to prevent armed conflict, mechanisms for cooperation are established at the interstate level. They include technical solutions such as transboundary agreements or joint cooperation initiatives between states that are in conflict over water resources. Consequently, when the water struggle is rendered technical, it is simultaneously rendered nonpolitical.

I depart from the ideas that water struggle is characterized by armed conflict or peaceful cooperation. Such a framework contains a challenge to the status quo and leads to standardization of complex and essential realities. It ignores the role of power and how it plays out on the ground. For that reason, local insecurities are ignored. I intend to augment the current work being done to counter conventionally accepted

technical paradigms of water issues, by providing more insight into facts on the ground and crystalizing the power structures and relations surrounding governance and management of water in the West Bank. My research findings provide a descriptive rather than prescriptive account; a focus on processes; and, a deep view into the internal operations of the West Bank's water sector.

CHAPTER II

THEORETICAL FRAMEWORK

Although there are cases of cooperation between riparian states in the Middle East through transboundary water agreements, the Israeli-Palestinian water conflict is unique due to the geopolitical circumstances within which it is embedded. It is most importantly marked by the lack of domestic control over water resources within the Territories. Riparian states are given “riparian rights,” which is essentially a water allocation scheme. These rights claim that a person or, in this case, a state that owns land on, alongside, or crossed by a natural watercourse has a legal right to access and use the water running through the property. But, because the West Bank currently does not have legal status in the international community, the water conflict is placed within a different geopolitical context.

The dominant body of literature regarding water issues in the Middle East relies on technocratic approaches to promote cooperation over transboundary water resources. For technocrats, water diplomacy is a fundamental component to resolving water conflicts. It relies on technical and mechanical approaches, such as transboundary agreements and joint cooperation initiatives.¹ However, these approaches are insufficient to explain the complexities of the Israeli-Palestine water conflict for two reasons: 1) they are state-centric; and, 2) they assume an actual or normative equality in power. Accordingly, the exploitation of nonstate actors is easily obscured.

¹ Mitrany, David qtd. in Selby, J. *Water, Power and Politics in the Middle East: The Other Israeli-Palestinian Conflict*. New York: I B Tauris & Co, 2009, 54. See also: Wolf (1995); Medzini and Wolf (2004); Elhance (1999); Dellapenna (1995); Giordano, Giordano, and Wolf (2005).

The influence of power affects those in subordinate positions, whose voices are obscured by a discourse that is interstate obsessed. The politics that shape power, in its various guises, are also manifest in very real ways for the people who are subjected to them. For this reason, I emphasize the local experiences and challenges confronting Palestinians in the water sector.

Additionally, some liberal optimists such as Mitrany further argue for the “spill over” effect, in which cooperation between states over “low politics” fosters greater understanding and, in turn, cooperation in more “high political” areas of policy making.² Miriam Lowi, though a realist, further contextualizes the approach, and says that technical arrangements, which promote ongoing practical cooperation in issues of mutual concern, expect to blur animosities by virtue of a new perception of shared needs, eventually leading to political cooperation.³ However, cooperation and joint management can exist only with a symmetry of power and equality in rights. Cooperation and joint management also require a power balance in order for an equitable water allocation agreement to take place. The described top-down approaches are largely dependent on information that has been generated for instrumental or administrative purposes with technical or developmentalist agendas. Such information is presumed to rise above politics. These conventional resources that Foucault referred to as “power knowledge”⁴ obscure and gloss over complex but relevant divisive political issues and address water as an independent variable. While the shortcomings of “power knowledge” are not new, examination of how

² Hillel (1994); Sherman (1999); Dolatyar and Gray, *Water Politics in the Middle East*, (2000).

³ Lowi, Miriam R. *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*. Cambridge [England: Cambridge University Press, 1993, 194.

⁴ Foucault and Gordon (1980).

conventional resources influence the discussion of water struggles is still in its nascent stages.⁵ That knowledge which does exist, strikingly tends to say very little about power dynamics that govern the use of water resources, and how they influence local Palestinian water management.

In a world where statehood is deemed to be the highest form of political organization, the issue of water provision in the Middle East is usually assessed from a state level, through technical approaches. While this approach does help us to understand some issues, we must also incorporate more realistic conceptions of sovereignty as we approach the subject. By interrogating the scale of analysis, the Israeli-Palestinian case shows that water conflict does not fit the state-based technical analytical framework. Although critiques of state-centric approaches are an old and persistent theme, they remain to be further explored in regards to this particular case so that we can better understand how these approaches obscure the exploitation of nonstate actors.

James C. Scott aptly stated, “We are condemned to live with states, they are both our freedoms and unfreedoms.”⁶ In his work, he warns against the intellectual hubris rooted in technocratic approaches, which ignore the particularities of actual lived lives. The large scale attempts to resolve issues of water struggles, like those conducted by modern states, require the simplification and standardization of complex facts. Through this process essential knowledge is lost, because state processes simplify societies.⁷

⁵ Zeitoun, Mark. *Power and Water in the Middle East: The Hidden Politics of the Palestinian-Israeli Water Conflict*. London: I.B. Tauris, 2008, 13; Selby, Jan. *Water, Power and Politics in the Middle East*. London: I.B. Tauris, 2003, 54. See also: Wester and Warner (2002); Lowi (1993).

⁶ Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998, 7.

⁷ Scott, 4.

In recognition of Scott's critique, I examine the issue of water conflict from the micro-level by looking at the empirical nature of experiences of those dependent upon the water itself, in a direct way, whether it be Palestinian water utilities or the Palestinian communities themselves. The needs of Palestinian communities on the ground are often lost in the impersonal efforts of those asserting technical and scientific reasoning. While trying to break outside the "power knowledge" circuits that exist, I looked to those most intricately involved with the local water management, administration, control, and use in the West Bank.

If we begin the analysis of Palestine's water circumstances by scaling down, we begin to understand how they influence the situation at the state level, by way of explanatory and causal analysis. Technical solutions or joint management in the Israeli-Palestinian case have not worked because politics cannot be removed from the water conflict. The water conflict is not only an issue of general water scarcity in the region, which indeed is a factor; it is also an issue of Palestinian lack of sovereignty over water resources, due to the conditions resulting from the 1967 Israeli military occupation. Territorial conflict and water conflict are inextricably linked in this case, and an attempt to separate or address them separately will lead only to artificial solutions.

A micro-scale examination highlights the complexities of hydropolitics that are tied up in state processes. It also shows how the power dynamics materialize on the ground for Palestinian people. Therefore, water governance between Israel and Palestine must be recognized less as a technical issue than a political one. One of my interviewees told me, an official from the Palestinian Water Authority (PWA) told me, "There are two types of peace that the Palestinians struggle with: political and social."

“Social peace” refers to peace at a Palestinian society level, which is their internal challenge. However, internal challenges have been constrained and limited by the lack of “political peace” between the two sides. The PWA official further asked, “The goal of government is to provide people with social services, so the question is: Can we do that or not?” He went on to say, “Sure, I can do this, but first I must have political peace. We don’t even have the tools to give our people social peace when we are occupied.” Access to water must be a part of Palestinian sovereignty. His observation touched on a crucial point: that the internal issues can only begin to be addressed once Palestine has the autonomy to equally participate in the discourse.

The assumption, however, is not that a peace settlement can be a fix-all, and the PWA official confirmed that sentiment. He claimed that “[Political peace] will help because we can work to build strong institutions. Right now our mandate is to do nothing. We have zero enforcement tools.” He went on to describe the PWA’s role as a “mere mediator” and said, “People ask us to solve their problems, but do we even have the power? And then, this creates more problems.”⁸ His ideas reflect the opposite of what the liberal minded strategies for water cooperation promote. Cooperation over water resources cannot be achieved until both sides have reached a Final Status Agreement. Although in the current state of affairs a final agreement feels like a pipe dream, the point emphasizes that the water conflict is not an isolated phenomenon. Instead, there is interplay between the water struggle *and* issues, such as Palestinian refugees and Israel settlements, that are central to the Israel-Palestinian conflict. Furthermore, the separation between “low politics” and “high politics” is an artificial one. On the contrary, all politics needs to be seen within the broader structural context.

⁸ Najjar, Yousef. Fieldwork Interview. 9 July 2012.

In fact, the latter approach reveals how power influences Palestinian realities in the water sector and the implications on relations between Israel and Palestine at the national level.

Mostafa Dolatyar and Tim Gray, two frequently cited scholars on water politics in the Middle East, situate the discourse on water conflict into three main questions: 1) Has water scarcity caused war in the past? 2) Will water scarcity cause war in the future? 3) Will water diplomacy assist in negotiations?⁹ This discourse is characteristic of the discussion that surrounds a majority of water struggles in which they are identified through armed conflict or peaceful cooperation. The framework is problematic for two reasons: 1) It is a state-centric analysis that obscures the exploitation of nonstate actors; and, 2) technocracy promotes water diplomacy through standardized systems and, therefore, overlooks the political territorial status quo of the West Bank. The power structures and relations surrounding governance and management of water in the West Bank create a unique situation because with the lack of Palestinian domestic control of water resources, issues of sovereignty and rights remain at the forefront. Although Dolatyar and Gray's outline is something of a caricature, the discourse is nonetheless subject to its standard themes. Within this framework, the growing Palestinian social struggle for water access is largely unobservable.

The centrality of "war" is, also, much too narrow since it focuses largely on interstate hydropolitical relations. The absence of war does not mean the absence of conflict, which is evident after almost five decades of Israeli occupation and Palestinian loss of sovereignty over its water sector. By putting emphasis on "war" as

⁹ Dolatyar, M, and T S. Gray. "The Politics of Water Scarcity in the Middle East." *Environmental Politics*. 9 (2000): 65-88, 65.

an outcome of water tensions, latent forms of conflict are neglected. As a consequence, it is impossible to expose the power relations that are embedded in the dominant narratives. The 1967 War between Israel and its neighbors is a common point of reference for many scholars in this debate, who examine the role of water on conflict.¹⁰

Kathryn Furlong, a political geographer, refers to this as the “regimes” approach, arguing that this framework views exploitation as an interstate affair and neglects the people unrepresented within the states in question.¹¹ Furlong shows that those who are subjugated to a state’s power, in a subordinate position, are left unattended. For water resources this is especially important because water conflict in the context of structural power asymmetry is significantly different than in circumstances of power equality.¹² She rightly points out that such analyses lead to mistheorizations of hegemonic structures at work and that assume that conflict is restricted to state competition.

Another foundational component of the water struggles discourse surrounds the idea of “water diplomacy” or “cooperation” between hostile riparians. The third question posed by Dolatyar and Gray asks if a solution to the Israel-Palestine peace process can move the peace process forward. Yet, their inquiry should be dissected into two parts: 1) Is cooperation over contested sources of water possible?; and, 2) If so, can it potentially catalyze the peace process? Dolatyar and Gray believe that

¹⁰ See Hillel (1994); Kliot (1994); Shapland (1997); Sherman (1999); Sofer (1999); Wolf (1995); Naff and Matson (1984).

¹¹ Furlong, K. "Hidden Theories, Troubled Waters: International Relations, the 'territorial Trap', and the Southern African Development Community's Transboundary Waters." *Political Geography*. 25.4 (2006): 438-458, 442.

¹² Warner, J.F, and Mark Zeitoun. "International Relations Theory and Water Do Mix: a Response to Furlong's Troubled Waters, Hydro-Hegemony and International Water Relations." *Political Geography*. 27.7 (2008): 802-810, 805.

“although water has sometimes provoked tensions, it has much more often promoted co-existence and cooperation.”¹³ Furthermore, according to scholars like Mitrany, water diplomacy can “spill over.” The claim is that resolutions to water disputes can promote efforts at achieving wider peace objectives between otherwise hostile enemies.¹⁴ In fact, Dolatyar and Gray assert that the spillover effect has already occurred by saying, “Water scarcity has invariably been a platform for cooperation in the region.”¹⁵ However, they provide little evidence to support their argument. In the case that riparian disputes do generate agreements and treaties, John Agnew states that there should not be a presumption of equality between contested parties in the capacity to affect outcomes.¹⁶ In addition, he cites an emerging perspective on “hydro-hegemony” which argues that much of what often goes for an “agreement” is in fact the outcome of clear power differentials.¹⁷

Moreover, liberal optimists and technocrats contend that conflicts arise from misperceptions, inadequate knowledge, and poorly designed or undemocratic administrative and political structures. Jan Selby, British environmental security scholar, contends that in this light, cooperation flourishes when the technical measures are put into place, that is when institutions are appropriately designed alongside development of corresponding pricing and tariff systems, when governments are democratic and accountable, and when decision making power is transferred from

¹³ Dolatyar, Mostafa, and Tim Gray. *Water Politics in the Middle East: A Context for Conflict or Co-Operation?* New York: St. Martin's Press, 2000, 209.

¹⁴ Dolatyar and Gray, "The Politics of Water Scarcity in the Middle East," 65-88, 65, 84.

¹⁵ Dolatyar and Gray. *Water Politics in the Middle East: A Context for Conflict or Co-Operation?*, 209.

¹⁶ Agnew, John. "Waterpower: Politics and the Geography of Water Provision." *Annals of the Association of American Geographers*. 101.3 (2011): 463-476, 473.

¹⁷ Agnew, 463-476, 473.

politicians to expert “epistemic communities.”¹⁸ The notion of “epistemic communities” in water provision pervades the entire study and practice of water politics. Although science rarely seems to resolve policy debates, Agnew reiterates that the claims to expert knowledge permeate disputes over many environmental issues, one of those being water. Objectivity, the determinant character of scientific knowledge, creates an artificial separation between the policies implemented for water management and the power structures and politics that produce them. But of course, as the essayist and scholar Nassim Taleb said, “The problem with experts is that they do not know what they do not know.”¹⁹ They do not know the values, desires, or objections of civil society.

Interpreting Middle East Hydropolitical Knowledge

In this section, I substantiate further the governing technocratic approaches through a discussion of some seminal works on water conflict in the Middle East. However, while the literature is broad on this enormous topic, I cite only a small fraction that I have chosen based in the 1990s, a significant turning point for water relations in the Middle East. John Anthony Allen, a longtime water analyst, called this time in water discourse history to be pivotal:

The 1990s have demonstrated that there has been a steady shift in awareness and expectation concerning water, especially among the Jordan Basin riparians. In both Jordan-Israel and Palestine-Israel negotiations, water was seen as one of the major issues of contention. [...] In practice, water has

¹⁸ Selby, 54; Lowi, 194.

¹⁹ Taleb, Nassim. *The Black Swan: The Impact of the Highly Improbable*. New York: Random House, 2007, 147.

moved into a much more negotiable mode than anticipated in the early 1990s.²⁰

The 1990s marked a historic turning point for Arab-Israeli relations, particularly with regard to water: the Israeli-Jordanian peace treaty, which amounted to a detailed water agreement between the two sides; and the Oslo process between Israelis and Palestinians, which marked the first time that they convened to discuss water rights. A great deal of seminal work emerged that sought to raise the profile of water issues in the Middle East alongside the peace talks, some of which include: *Rivers of Eden: the Struggle for Water and the Quest for Peace in the Middle East* (Hillel, 1994); *Rivers of Discord: International Water Disputes in the Middle East* (Shapland, 1997); *The Politics of Water in the Middle East: An Israeli Perspective on the Hydropolitical Aspects of the Conflict* (Sherman, 1999); *Rivers of Fire* (Soffer, 1999); *Hydropolitics along the Jordan River: Scarc Water and Its Impact on the Arab-Israeli Conflict* (Wolf, 1995); and *Water Politics in the Middle East: A Context for Conflict or Co-Operation?* (Dolatyar and Gray, 2000).

Daniel Hillel's work is known mostly for his profound assertion that "water can catalyze and lubricate the peace process... and soften the transition to regional cooperation."²¹ His argument is similar to Dolatyar and Gray's in that both agree that a dispute over water need not lead to violent conflict. Rather than foster a *casus belli*, it may well serve as *casus faci*, an inducement to negotiate, a nonviolent resolution through compromise and cooperation.²² All three scholars state that a solution to the problem of water scarcity may be achieved independent of a solution to the wider

²⁰ Allan, J.A. "Middle Eastern Hydropolitics: Interpreting Constructed Knowledge." *Geopolitics*. 3.2 (1998): 125-132, 131.

²¹ Hillel, 283.

²² *Ibid*, 287.

problem of peace in the region.²³ Sherman calls this “unfounded optimism and potentially hazardous naivety” rooted in the lack of comprehension of the structure of Arab states and its significance. Further, he says the idea of “peace” is deceptive as it can embrace two totally antithetical ideas and political conditions. One infers a mutual harmony between states, and the second may be used in the sense of the absence of war.²⁴ Just as the sense of “war” is too narrow of a determinant, “peace” is also a rather ambiguous concept.

While Sherman’s dissection of “peace” is a worthwhile consideration, he is persistent in his admonitions that the next war in the Middle East will be over water. He argues against Israel’s withdrawal from the territories occupied in 1967 and declares that Palestinians and other Arab states cannot be trusted to abide by water allocation agreements. Sherman asserts this point because his analysis says that water resources must be secured at any cost and compromises over water are unacceptable to nondemocratic entities.²⁵ In spite of that, the Palestinians could easily (and obviously) argue that their legitimate struggle has not found the capacity to build democratic institutions. Furthermore, Sherman fails to pay any attention to the role that water allocation had in the Oslo process and the resulting disposition of Palestine.

However, an opposite and rather conciliatory tone, on par with earlier authors, is demonstrated by Aaron Wolf’s ongoing research. He and some fellow scholars have compiled a Transboundary Freshwater Dispute Database (TFDD). It includes approximately 450 of the worlds water related treaties and illustrates international

²³ Dolatyar and Gray. "The Politics of Water Scarcity in the Middle East," 65-88, 71.

²⁴ Sherman, Martin. *The Politics of Water in the Middle East: An Israeli Perspective on the Hydro-Political Aspects of the Conflict*. Basingstoke: Macmillan, 1999, 86.

²⁵ Sherman qtd. in Allan, 125-132, 131.

water as a resource for cooperation.²⁶ Furthermore, it provides a framework for quantitative, global-scale explorations of the relationship between freshwater resources and international cooperation and conflict.²⁷ Three linked data sets are used in order to put forth water specific event data using GIS that mesh biophysical, political, and socioeconomic factors. Wolf claims that the weight of historic evidence shows that water could induce ever increasing cooperation between otherwise hostile riparians, in essence leading to peace talks.²⁸ In a later publication, Wolf and Medzini suggest what they consider to be the most critical step towards conflict resolution, which is separating concepts of territorial sovereignty and water security. This can be done most effectively by offering joint management, monitoring, and enforcement strategies, and sharing water data across boundaries.²⁹

This technical approach to water diplomacy and cooperation has a few serious shortcomings. First, the rigidity in allocational schemes and quantitative methods, which are most often central to transboundary agreements, prevent the system from adjusting to natural changes or socioeconomic developments. Julie Trottier asserts that when a quantity of water “must” be received according to a treaty, nature is being asked to oblige.³⁰ However, we can take it one step further and say, if a treaty is already an outcome of power differentials, the rigidity also prevents any challenge to

²⁶ Wolf, Aaron T. “Conflict and Cooperation Along International Waterways.” *Water Policy*. 1.2 (1998): 251-265, 251.

²⁷ Yoffe, S, G Fiske, M Giordano, M Giordano, K Larson, K Stahl, and A T. Wolf. "Geography of International Water Conflict and Cooperation: Data Sets and Applications." *Water Resources Research*. 40 (2004): 1-12, 1.

²⁸ Wolf, Aaron T. *Hydropolitics Along the Jordan River: Scarce Water and Its Impact on the Arab-Israeli Conflict*. Tokyo: United Nations University Press, 1995, 3.

²⁹ Medzini, Arnon, and Aaron Wolf. "Towards a Middle East at Peace: Hidden Issues in Arab-Israeli Hydropolitics." *International Journal of Water Resources Development*. 20.2 (2004): 193-204, 193.

³⁰ Brooks, D, and J Trottier. "Confronting Water in an Israeli-Palestinian Peace Agreement." *Journal of Hydrology*. 382 (2010): 103-114, 105.

the status quo. Second, Wolf and other technocrats disregard the effects that securitization of water has on cooperation. When water is securitized, it is portrayed as an essential component to national security. As a result, water leaves the realm of what is negotiable, what can be the object of compromise. If allocations are changed within an agreement, it is perceived as a threat to national security. This point is especially relevant in the case of water allocation between Israelis and Palestinians, where it remains securitized and closely linked to concerns of territorial sovereignty within the present institutional setting and the present approach to water negotiations.³¹

In their writing, Wolf and Medzini claim that water sources were incidental conquests as Israel moved into various territories after the 1967 war and, moreover, that it was only after the annexation of those areas that Israeli authorities understood the importance of corresponding water resources.³² While their claims hold true, it is of little relevance to discuss now, because water need not be the *reason* for conflict, but a reason to maintain it. As Murad Shaheen argues, “It is a contributing factor to Israel’s retention of land,” an idea that is reflected back to the state’s securitization of water.³³

Also, Wolf and Medzini put forward joint initiatives as a panacea for water conflict, which give priority to interstate hydropolitical relations, thus, feeding into the reification of states as fixed bonded spaces where state power is presumed to be fixed, an approach Agnew calls the “territorial trap.”³⁴ However, power must be analyzed at

³¹ Brooks and Trottier, 105.

³² Medzini and Wolf, 193-204, 194.

³³ Shaheen, Murad A. *The Influence of the Water Dispute on the Arab-Israeli Conflict*. University of Keele, 1997, 209-210.

³⁴ Agnew, John. “The Territorial Trap: The Geographical Assumptions of International Relations Theory.” *Review of International Political Economy* 1.1 (1994): 53-80.

multiple scales. Israeli and Palestinian polities are sharply different from one another. Israel is an internationally recognized state that nationalized all water in the name of the public through its 1959 water law, and went on to build both physical infrastructure and institutions to implement that form of water governance. The Palestinian Authority, on the other hand, still lacks true independence vis-a-vis Israel in its preparation of legislation.³⁵ It has been given only a weak institutional structure and limited resources as a result of the Oslo agreements.

The shortcomings of scientific knowledge are repeated in Wolf's work. Jessica Budds, a political ecologist, notes, "Little attention has been paid to the production of hydrological data, their use in policy, and their role in changing waterscapes."³⁶ It is illusory to assume that quantitative approaches are free of political influence. There are often competing numbers, and the ones which are referred to and cited are not selected on "objective" criteria. Numbers can be affected by tendencies to "group think," varying interests, desires for particular outcomes, and so forth.

Arnon Soffer, a geographer from Haifa University in Israel, provides the first attempt in this literature review to derail the "optimists." Overall, he is pessimistic about the chances of peace due to the historical distrust that exists among Middle East riparians. But, he suddenly abandons the issue of distrust in his conclusion, where he falls back on the Malthusian approach, claiming that the ultimate solution lies in addressing concerns of population growth.³⁷ His ideas reduce the world to a place in which nature is static and unyielding, and human relationships to nature as

³⁵ Brooks and Trottier, 103-114, 109.

³⁶ Budds, Jessica. "Contested H2O: Science, Policy and Politics in Water Resources Management in Chile." *Geoforum*. 40.3 (2009): 418-430, 420.

³⁷ Sofer, Arnon. *Rivers of Fire: The Conflict Over Water in the Middle East*. Lanham, Md: Rowman & Littlefield Publishers, 1999, 271.

consumptive and exploitative. In regards to the Middle East's water troubles, a naturalist discourse is exceedingly inadequate. As David Harvey points out, "To declare a state of eco-scarcity is in effect to say that we have not the will, wit or capacity to change our state of knowledge, our social goals, cultural modes, and technological mixes, or our form of economy, and that we are powerless to modify either our material practices or 'nature' according to human requirements."³⁸

Prescriptive approaches for cooperation, such as conservation and desalination, collection of better hydrological data, and altering agricultural water use, are still fashionable in the realm of water provision in the Middle East. But it is a dangerous assumption that nature and society are both ontologically separate from one another. The assumption makes it seem as if power relations have no influence. It is not to deny that interstate coordination in the Middle East over water issues has not occurred. However, the state-centric approaches turn a blind eye to local insecurities and deprive nonstate actors from access to the discourse and conversation. Additionally, while focusing on war as an outcome of water problems, we ignore the fact that conflict plays out in discursive ways as well. As a result, initiatives are directed towards promoting water diplomacy between states, which are characterized in technical terms. The problems are framed as if they were amenable to technical solutions.

Greg Shapland is the first to acknowledge water rights and water entitlements. Otherwise, solutions for water conflict are restricted to issues of *need*. Shapland recognizes the significance that water rights will have on Israeli-Palestinian final status peace talks. As an observer in the multilateral peace talks on water following the Oslo Accords and head of the Working Group on Water Resources established during Oslo,

³⁸ Harvey, David. *Justice, Nature, and the Geography of Difference*. Cambridge, Mass: Blackwell Publishers, 1996, 147.

the equity and compensatory principles which inspire Palestinian negotiators are discussed in his writing.³⁹

The fact that rights and entitlements are absent from this influential body of work encourages Israel's "needs not rights" discourse. Mark Zeitoun, head of the London Water Research Group, describes two main features of this discourse that were generated by Israeli actors during Oslo, who advocated "needs" as the basis of cooperation with Palestinians: 1) an acceptance that there are legitimate domestic needs; and 2) a refusal to countenance Palestinian water rights.⁴⁰ Eran Feitelson elaborates further on the Israeli consensus regarding water cooperation with Palestinians on a "needs not rights" basis. He remarks that even members in the Israeli legislature who "differ in Israeli-Palestinian issues can still form a coalition on water issues."⁴¹ Such views were especially relevant during the 1990s, during the peak of the Oslo peace process. They are also reflected in the body of literature that I discuss in this section, which focuses on large scale technical schemes designed by modern states. The notion of "needs" simply refers to water for Palestinian domestic use, not agricultural. Zeitoun states that this "needs not rights" discourse can be encapsulated as follows: "There is not enough water for all of us, so let's not talk about water rights. Let's cooperate to make the best of the situation."⁴² Such a framework precludes any discussion of inequitable distribution, therefore perpetuating an artificially conciliatory approach and establishing the status quo as a default position.

³⁹ Shapland qtd. in Allan, J.A, 125-132, 131.

⁴⁰ Zeitoun, 77.

⁴¹ Feitelson, Eran. "Political Economy of Groundwater Exploitation: the Israeli Case." *International Journal of Water Resources Development*. 21.3 (2005): 413-423, 418.

⁴² Zeitoun, 83.

The roles that water plays in shaping relations of power deserve special attention in the Israeli-Palestinian water conflict. Alex Loftus succinctly states that, “As water comes to embody and express social relations, its becomes just as crucial to the production and reproduction of power in the world.”⁴³ Water and power are two mutually constitutive forces.

Methodology

In striving to depart from a state-centric approach to the Israeli-Palestinian water conflict, I conducted 30 interviews with Palestinians involved in local water management in the West Bank during a five month period in the summer of 2012. In order to understand conditions at the micro-level, I visited four rural villages of the Jordan Valley to interview members of local village councils and three cities, where I interviewed members of the municipalities. In addition to meeting with those directly involved in water distribution activities, I interviewed members of local organizations, including the Palestinian Hydrology Group (PHG) and Applied Research Institute of Jerusalem (ARIJ), as well as academics involved in water politics from Hebrew University and BirZeit University. In the thesis, I use pseudonyms for a few informants, in order to maintain their confidentiality. Although they are from small communities and, therefore, easy to distinguish, it provides them with some level of privacy. However, I use real names for the informants who were from local NGOs, local development organizations, and universities.

This was not my first time visiting the region; I went the prior summer when I expanded my knowledge of Arabic through a language program in Jerusalem and met

⁴³ Loftus, Alex. "Rethinking Political Ecologies of Water." *Third World Quarterly*. 30.5 (2009): 953-968, 954.

with local Palestinian organizations to gain a better understanding of the most pressing issues for Palestinian communities. During this time, I established a research assistant position with the Palestinian Hydrology Group, which hosted me in Ramallah the next summer. While assisting with local water projects, I also developed individual research goals.

There is an extensive body of literature dealing with issues of water allocation and water use between Israel and Palestine. However, there is a dearth of work that details the role of power in controlling water resources. In order to provide insight to the internal dynamics, I based the initial interviews of my study on a purposive sampling technique, where I sought out local Palestinian water management practitioners. From there the research developed based on advice from local experts and community members.

Heeding Bott's methodological advice, I located a majority of my participants through local agencies and "entered" the field through a local organization that also hosted my research, the PHG.⁴⁴ My goal was to establish credibility in a variety of Palestinian communities and to structure my relationships with people to include my role as a researcher. Therefore, I became a functioning participant in the PHG's activities and often assisted by drafting grants and data reports, while also using that time to visit the field with a local and trusted organization. However, "entrance" into communities, peoples homes, and different public spaces was not a one-time activity.

⁴⁴ Bott qtd. in Emerson, Robert M. *Contemporary Field Research: Perspectives and Formulations*. Prospect Heights, Ill: Waveland Press, 2001, 161.

As Baca Zinn states, it is a constant process because potential informants had to be negotiated with and relationships established separately.⁴⁵

I chose my case studies based on comparative criteria including locations that varied in political autonomy, their main source of income (industry or agriculture), and rural or urban lifestyles. The locations are illustrated in Figure 1.

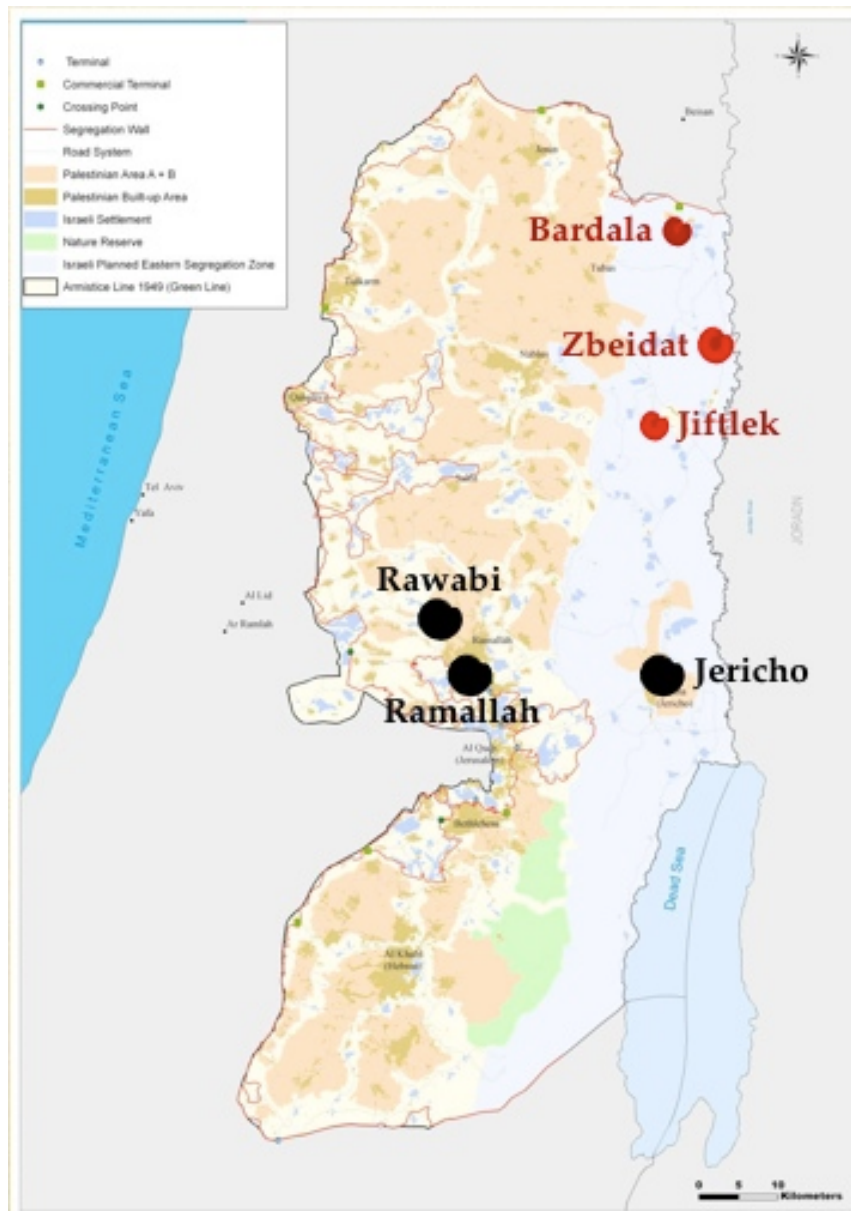


Figure 1: Case studies, map adapted from Applied Research Institute of Jerusalem.

⁴⁵ Baca Zinn, Maxine. “Insider Field Research in Minority Communities” *Contemporary Field Research: Perspectives and Formulations*. Ed. Emerson, Robert M. Prospect Heights, Ill: Waveland Press, 2001, 161.

The first set of case studies were Area A autonomous regions of the West Bank: Ramallah, Jericho, and Rawabi, which are identified by a black font. The second set of cases studies included rural agricultural villages in the Jordan Valley, designated Area C, such as Bardala, Zbeidat, and Jiftlek, which are identified by a red font.

The questions that were posed to each pertained to the reliability of water supply; water reliability; water infrastructure; willingness to pay; and, local community perceptions of the roles of various institutions involved in the Palestinian water sector. However, in most cases I adjusted my data collection and interview questions according to the concerns identified by the participants in my study.

As my fieldwork progressed, I became directly involved in the lives of my informants and prioritized building relationships based on mutual exchange and reciprocity. This was not a way of furthering my research goals, but it was “essential to alter the exploitative relationships which research imposes.”⁴⁶ It also allowed me to move back and forth between gathering data and analyzing it, which helped to sharpen my understanding of the communities I was studying. Although it may be argued that my direct involvement with participants, mere presence, or selective perception equated with subjective distortion, I guarded against these biases by collecting information from a variety of sources and through triangulation. Furthermore, I supplemented my interviews with observation, which is considered the best corrective because “each method reveals different aspects of empirical reality.”⁴⁷

Despite my attempts to create balanced and fair research relationships, their uneven nature became clear to me when I prepared to leave the field. While this ethical

⁴⁶ Blauner, Robert, and David Wellman. “Towards the Decolonization of Social Research.” *The Death of White Sociology*. Ed. J. A. Ladner. New York: Vintage Books (1973), 323.

⁴⁷ Denzin, Norman K. *The Research Act: A Theoretical Introduction to Sociological Methods*. Chicago: Aldine Pub. Co, 1970, 49.

dilemma is not unique for a fieldworker, researchers often do not speak of it. However, Baca Zinn distinctly explores what it was like bringing her relationships in the field, to an end: “[they] were not exploitative, but they were not equal. I created the relationships to specifically carry out my research [and] brought those to a close when my purposes were accomplished.”⁴⁸ Since returning, I often find myself wondering if I am, after all, one of those researchers who does not return to the community because the research is completed. Though I hope that this is not the case, my worries bring home the fact that, “doing research is not a neutral encounter but a problematic, often painful human experience which changes the informant as well as the researcher.”⁴⁹

Structure of Thesis

Following the conceptual framing and methodology of this research, the succeeding chapters provide a historical context for the Israel-Palestinian water conflict, give a brief overview of the regional hydrology, and detail the governance structure of the West Bank’s water sector. In a subsequent section, I discuss challenges in Palestinian local water management in the West Bank. This portion is divided into two parts. Chapter 4 focuses on the technical and physical challenges at play in the water sector and show how they have been transformed by political and social production. I also discuss the institutions that resulted from the Oslo peace process, those that gave the Palestinians what they were assumed to be lacking: the Palestinian Water Authority and the Joint Water Committee. This section explains the ways in which an inequitably structured treaty and inequitable coordination bodies

⁴⁸ Baca Zinn, 165.

⁴⁹ Blauner, Robert. “Forward.” *Portraits of White Racism*. Cambridge, UK: Cambridge University Press, (1977): xviii.

consequently led to further fragmentation of the Palestinian water sector. Chapter 5 details the implications that have resulted from the empirical accounts in the previous chapters. It captures how the Palestinians have responded and reacted to the challenges in local water provision. In Chapter 6, the conclusion reflects on the impacts and consequences of the challenges that effect local water struggles. On a final note: While I have three main case studies, Ramallah, Jericho, and Palestinian villages in the Jordan Valley, I discuss Rawabi at length, only in 4. Due to the nature of Rawabi, the first planned city in Palestine, its development remains to be seen because it is still under construction in the West Bank. Regardless, it provides a poignant example of struggles that lie in the West Bank's foreseeable future.

CHAPTER III

EVOLUTION OF THE ISRAELI-PALESTINIAN WATER CONFLICT

In this chapter I discuss the evolution of the water dispute between Israel and the West Bank territory within the context of the larger political conflict. First, in order to understand how the political culture surrounding water emerged, the founding ideological myths that underly the Zionist project and Palestinian tradition must be incorporated into the larger discussion. The aim is to better understand the motivations of Israeli actions and Palestinian reactions in regards to their water policy upon settlement in the region of Palestine. Also, aspects of the psychological environment have, in one way or another, functioned as justification for Israeli and Palestinian behavior in regional hydrology. Second, I discuss the role of water in the Israeli-Palestinian conflict from the 1967 war to the present day and show how the occupation transferred control of water from Palestinian ownership to Israeli state ownership. Last in this chapter is a detailed outline of the West Bank's water sector.

The Psychological Environment and Ethos of Water

For the Israelis, water was important insofar as it was part of the “ideology of agriculture” in Zionist thought.¹ “For those who make the desert bloom there is room for hundreds, thousands, and even millions,” Israel's first prime minister, David Ben-Gurion, wrote in 1954, when he moved to the Negev.² However, it was the years before Israeli independence that truly shaped poststatehood water policies and those

¹ Lowi, 51.

² Peraino, Kevin. “The Myth of Water.” *The Daily Beast*. 28 Jun 2008. Web. 6 Nov 2011, par 1.

that were imposed later in 1967, on the Territories. The quest for water always played a large role in the ideology of Zionism. It could be argued that the first Prime Minister was merely following the traditional Judaic concepts of redemption that were so seriously engrained into the psyche of early immigrants to Eretz Israel.³ One of those immigrants, Levi Eshkol, who would also eventually serve as a Prime Minister of Israel, referred to water as, “the blood flowing through the arteries of the nation.”⁴ The profound words of such Zionist leaders help to show that in Israel, water is more than just an economic commodity or precious resource vital to its national security; it is a precondition for achieving political goals in mind, and, for some, fulfilling religious prophecy.⁵

Before 1948, the indigenous population of Palestine constituted a largely agrarian society that worked and lived off the land.⁶ In a traditional sense, agriculture was the principal form of sustenance and for that reason, water was vital to the livelihood of a Palestinian. From those traditional ways of life, the Palestinians had ties to the land and viewed water as an extension of it. By the early 20th century, Zionist efforts to purchase land in Palestine lead to the gradual alienation of many Arab peasants from their land.⁷ For the Israelis, agriculture was connected to defense because land was a means to establish their presence. Because of this mindset, the

³ An important point to note here is the difference in meaning and significance between “Eretz Israel” and the “State of Israel.” The former generally refers to the Holy Land. The term is from the Hebrew Bible and thus, implies a holier meaning. It is vague as far as exact borders or boundaries, but more so focuses on clearly defining *ownership*. The latter is more so a political descriptor that refers to more clear demarcated borders or simply the modern “nation state” of Israel.

⁴ Eshkol qtd. in Galnoor, Itzhak. “Water Planning: Who Gets the Last Drop?” *Can Planning Replace Politics: The Israeli Experience*. R. Biliski (ed.) The Hague: M. Nyhoff, 1980, 159.

⁵ Rouyer, Alwyn R. *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*. Houndmills, Basingstoke, Hampshire: Palgrave, 2002, 80.

⁶ Sayigh, (1979).

⁷ Lowi, 52.

Arab community in Palestine sensed that their means of livelihood was being taken as well as their homeland. Consequently, the Israelis presented a double threat to the Palestinian community. Both sides saw land and water issues as a zero-sum game, with each as the “other,” representing a threat to their very existence.⁸ The concerns were aggravated by various pressures on water that also existed due to the increase in the region’s population and the demands of economic and agricultural development. It was also hoped, by both sides, that the Jordan Valley, alongside the western side of the Jordan River, would eventually become a breadbasket for the kingdom due to its fertile land. For the Jordan Valley to be a productive region, irrigation water was necessary. As a result of Israel’s de facto annexation of the Jordan Valley, a professor in the environmental conflict resolution department at Hebrew University commented on the valley’s current condition. He argued that today, most Israelis perceive it to be, almost in its entirety, Israeli territory.⁹

Water within Politics

In a hydropolitical context, the time between Israel’s independence in 1948 and the 1967 war is considered to be one of the most turbulent and chaotic periods in the history of the Israeli-Palestinian water conflict. It was a period characterized by rapid development on the Israeli side, minimal development on the Palestinian side, and clashing strategies to secure shares of the Jordan River system.¹⁰ Due to their lack of efforts in any systematic development, the water extraction rates for the West Bank

⁸ Lowi, Miriam R, and Mary E. Morris. "Water and Power: the Politics of a Scarce Resource in the Jordan River Basin." *International Journal of Middle East Studies*. 28.1 (1996): 122-125, 124.

⁹ Fischhendler, Itay. Fieldwork Interview. 28 Jun 2012.

¹⁰ Zeitoun, 66.

and Gaza increased minimally under Jordanian and Egyptian rule, which existed until 1967. However, since 1948, the newly established state of Israel embarked on a “hydraulic-driven national building exercise.”¹¹ Eran Feitelson refers to this period as the “resource expropriation era,”¹² during which the Zionist ideology dictated Israel’s water development.

The tensions between Arab states and Israel were exacerbated with Israel’s completion of the National Water Carrier in 1964, seeing that it was regarded as outright theft by its Arab neighbors.¹³ Figure 2 illustrates the national water system at its inception.



Figure 2: Israel’s National Water Carrier in 1964, map adapted from Fanack.

¹¹ Ibid, 67.

¹² Feitelson, Eran. "The Ebb and Flow of Arab-Israeli Water Conflicts: Are Past Confrontations Likely to Resurface?" *Water Policy*. 2.4 (2000): 343-363, 345.

¹³ Zeitoun, 68.

In 1967, events conspired to bring war between Israel and its neighbors. After six days of war, Israel seized all of the Sinai and Gaza from Egypt, the West Bank, and all of Jerusalem from Jordan, and the Golan Heights from Syria. The outcome of the war radically changed the region's hydropolitical map and marked the beginning of the "Israeli Hegemony Era."¹⁴ The conflict was now between the occupier and the occupied while no equality was pretended. Feitelson's terminology touches on ideas of empire and domination, while also accentuating the importance of power relations between the two entities:¹⁵

The outcome of the six-day war changed both the hydrostrategic relationship of Israeli and her neighbors, and the power balance between them. [...] This change in Israeli hydrostrategic situation and its evident military superiority effectively prevented the Arab side from challenging Israel's water plan or use.¹⁶

The 1967 Israeli conquest of Palestinian land and its resources cannot be overemphasized. Counter to the previously tumultuous era, Israeli public interest regarding issues of water almost entirely disappeared after the war. "As a result of the [1967 war]," Feitelson states, "Israel gained control over most of the contested water sources, and hence the perceived external threats to Israel's water supply faded. Subsequently, water virtually disappeared from the public agenda."¹⁷

¹⁴ Feitelson, Eran. "The Ebb and Flow of Arab-Israeli Water Conflicts: Are Past Confrontations Likely to Resurface?," 350.

¹⁵ Zeitoun, 68.

¹⁶ Feitelson, Eran. "The Ebb and Flow of Arab-Israeli Water Conflicts: Are Past Confrontations Likely to Resurface?," 350.

¹⁷ Feitelson, Eran. "Implications of Shifts in the Israeli discourse for Israel-Palestinian Water Negotiations," 302.

Confronting Water in an Israeli-Palestinian Peace Agreement: Oslo II

As the period of political tensions continued, both sides were put under pressure from the international community to reach a settlement. In 1993, the Oslo Accords were signed between Yitzhak Rabin, Israel's Prime Minister, and Yasser Arafat, the Palestine Liberation Organization's chairman. This marked the first face-to-face agreement made between the two sides that was intended to lead to a comprehensive peace treaty and framework for future relations. A fundamental aspect of the agreement recognized final status issues: the extent of the territories to be ceded by Israel, the nature of the Palestinian entity to be established, the future of the Israeli settlements and settlers, water rights, the resolution of the refugee problem and the status of Jerusalem.¹⁸ But, the final status issues were set aside to be discussed in final status peace talks.

In 1995, the last of the Oslo negotiating sessions ended with an agreement signed in Taba, Egypt, referred to as "Oslo II" or *Interim Agreement on the West Bank and the Gaza Strip*. It built upon the foundation of the initial Oslo Accords. It solidified self-rule in various Palestinian areas. Insofar as it relates to the Israeli-Palestinian water conflict, Oslo II contains the most updated understanding on water that has been reached in the peace process framework.

Seeing that the Oslo Accords I and II were part of an interim agreement, the negotiation process was to be completed by May 1999. However, because the process was set up without a specific outcome, it remained ambiguous and its promises did not come to fruition. Despite the death of the Oslo process and the shift to unilateralism, some clauses of the agreement are still active. These include: 1) the geographical

¹⁸ "The Oslo Accords." *Middle East Research and Information Project*, n.d. Web. 23 Mar 2013.

designation of Areas A, B, and C; and 2) the functioning of the Joint Water Committee (JWC), which professor Mark Zeitoun refers to as the “main discursive battleground of the water conflict.”¹⁹

The JWC and Palestinian Water authority were outcomes of Article 40 from the Oslo II Agreement. It contained provisions on water and sewage that recognized undefined Palestinian water rights, and returned some West Bank water resources and services responsibility to the Palestinian Authority, an interim self-government body. Israeli officials refer to Article 40 as a turning point at which responsibility for the water sector was transferred to the Palestinian Authority.²⁰

Mostly importantly, Article 40 set forth governance arrangements for a five year interim period, notably with the JWC to oversee management of the underground aquifers, with decisions to be based on consensus between the two parties. The expectation was that the interim agreement would be revised within a five year period. However, it still governs the water sector today, seventeen years after Oslo and twelve years after the expected end of the interim agreement.

The stipulations which initiated the fragmentation of the West Bank and creations of the JWC, the administrative structure set up under the terms of Article 40, are also in practice. The archipelago solution divided the West Bank into territories, ascribing them a status depending on the nature of security control over them. Figure 3 illustrates the administrative divisions as of 2000. It functions as a gauge of Israeli vs. Palestinian control over territory.

¹⁹ Zeitoun, 64.

²⁰ “Issues Under the Oslo Accords.” *B’Tselem - The Israeli Information Center for Human Rights in the Occupied Territories*. 1 Jan 2011. Web. 7 Jan 2013, par 1.

The distinct administrative divisions in the West Bank included Area A enclaves which were to have “full” (in fact, limited) Palestinian security and civil control; Area B had Israeli security and Palestinian civil control; and Area C (the largest mass of land) was under full Israeli control. Most of the land area above the eastern basin of the mountain aquifer, in which Palestinian water projects are confined, lie in Area C. Area C constitutes 73 percent of the West Bank territory, and also includes all Jewish settlements. Israel is meant to retain full security authority for Area C, pending “final status” talks.

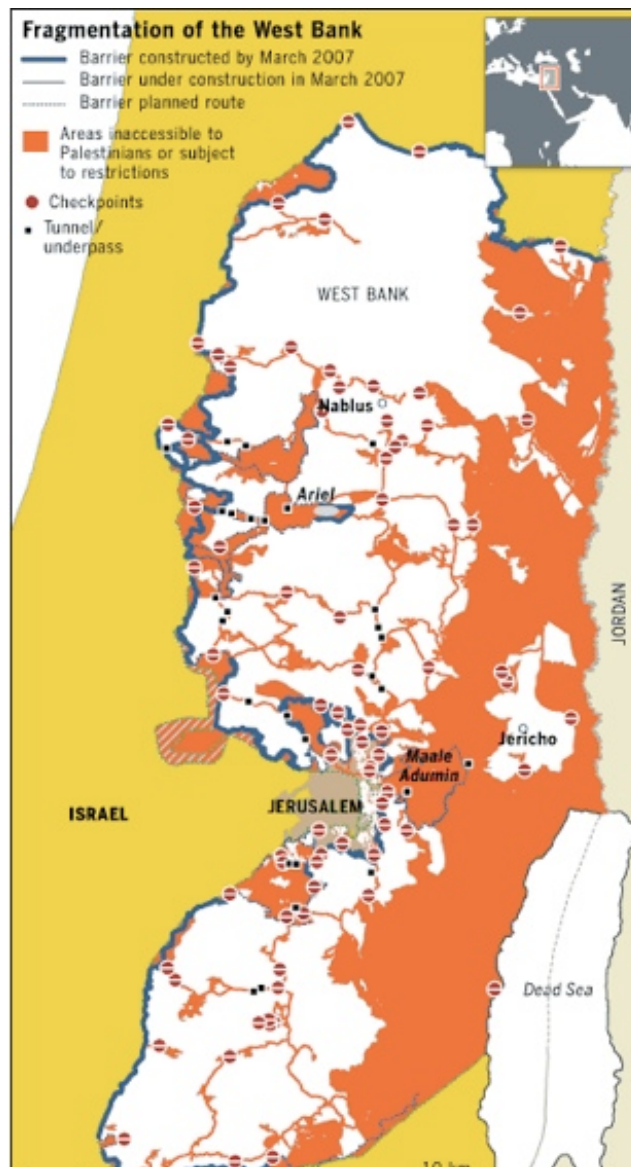


Figure 3: Fragmentation of the West Bank, map adapted from UNOCHA.

Several peace summits and proposals have been brought forth since Oslo, including the Camp David Summit (2000), Taba Summit (2001), the Road Map for Peace (2003), the Arab Peace Initiative (2002 and 2007), and Annapolis Conference (2007). Despite the efforts of peace talks to broker a solution to the political conflict at large, the issues remain unresolved.

Context of Regional Hydrology

Since the military occupation, Palestinian water policy has been dictated by Israeli control, which has resulted in a shift of water distribution and allocation. The water bodies in contention between Palestine and Israel can be divided into two categories: 1) the main water resource, which includes surface waters of the Jordan River; and 2) aquifers, the groundwater sources, which are most important and most contentious due to high demand and asymmetrical distribution. The Jordan River basin and the aquifers are shown in Figure 4; the former is illustrated by the solid tan, and the aquifers are almost entirely recharged beneath the West Bank territory and marked by arrows to show the direction of groundwater flow. The Jordan River is the main regional water resource and runs from its headwaters in the Golan Heights and Southern Lebanon to feed Lake Tiberias, the largest freshwater lake of the region, and terminates in the Dead Sea. Although it forms the eastern boundary of the West Bank territory, Palestinians are unable to extract any water from the river under the accords of the 1995 Oslo II agreement and are, therefore, almost entirely dependent on groundwater resources that are controlled, de facto, by Israel.²¹

²¹ Zeitoun (2008).

The Mountain Aquifer is divided into three main blocks as seen in Figure 5: an eastern block that lies almost entirely under the West Bank; a northeastern block that originates in the West Bank but with springs in northern Israel that drain to the Jordan Valley; and a western block, by far the largest, that originates in the West Bank with springs in Israel that drain to the Mediterranean. Because it underlies the highlands, much of the Mountain Aquifer can be exploited only by deep drilling.²² While the majority of groundwater resources in the region are replenished within Palestinian boundaries, the aquifers themselves are transboundary between Israel and Palestine.



Figure 4: Regional water resources, map adapted from American Association of Geographers: Center for Global Geography Education.

²² Trottier, Julie. *Hydropolitics in the West Bank and Gaza Strip*. Jerusalem: PASSIA, Palestinian Academic Society for the Study of International Affairs, 1999.

Furthermore, the water conflict is exacerbated by the natural features of the region: a dry and desert terrain. Desert covers 60% of Israel, 70% of Syria, 85% of Jordan, and 90% of Egypt.²³ Drought-induced water scarcity has further exacerbated the lack of access to adequate, safe, and clean water for the Palestinians.



Figure 5: Mountain Aquifer, map adapted from Palestinian Environmental Quality Authority.

²³ Tamimi, Abdel-Rahman. "Hydro-Politics: Water and Difficult Dialogues on Resources." *Macalester International*. 23 (2009): 139-156.

Military Orders

Following the 1967 War and occupation of the West Bank, through a new water development system and corresponding military orders, Israel crafted the politicized space that exists today. The economic and infrastructural incorporation that occurred in the West Bank extended Israeli material presence throughout the territory. As a result, the selective channeling, distribution, and restriction on Palestinian use of water brought forth uneven levels of access. As well, Sharif el Musa notes, the military orders provided “such legal tools, that Israel did not need to declare formally that the water resources of the Palestinian Territories were state property, and it thus could avoid formally annexing them.”²⁴

As Israel took over the West Bank, it immediately replaced prewar Jordanian laws concerning the management of water resources with new Israeli ones.²⁵ Previously, a multilayer legal system existed in the Territories, made up of Ottoman, British, Jordanian (in the West Bank) and Egyptian (in Gaza) laws—the legacy of powers that had previously controlled the area.²⁶ Water resources of the territories were also studied in detail by the Israeli national water resource development company, Tahal, in order to facilitate Palestinian incorporation into the Israeli water

²⁴ el Musa, Sharif. *Water Conflict: Economics, Politics, Law and Palestinian-Israeli Water Resources*. Washington DC, USA: Institute for Palestine Studies, 1997, 267.

²⁵ Bashir, Basema, Michael Talhamy, Allah N. 'Ata, and Ayman Rabi. *Water for Life: The Dilemma of Development Under Occupation : the Obstacles to Achieving the Millenium Development Goals and Water Rights in the Occupied Palestinian Territory*. Jerusalem: Palestinian Hydrology Group, 2006, 20.

²⁶ *Troubled Waters-Palestinians Denied Fair Access to Water: Israel-occupied Palestinian Territories*. London: Amnesty International Publications, 2009, 11.

system.²⁷ On this basis, Israel pursued two simultaneous policies in the West Bank: limitations of Palestinian water resource development on the one hand, and expansion of Israeli water infrastructure on the other.²⁸ In order to do the former, within just weeks of Israeli conquest of the West Bank, the army issued a series of military orders seizing control of water and land resources in the Territories.

Military Order No. 92 of August 15, 1967, vested all powers defined under Jordanian Law dealing with water, in the hands of an Israeli Area Commander, a military official. Henceforth, all water resources were put under Israeli control, along with the power to regulate existing water installations and the establishment of new installations. Complete discretionary authority was given to the Israeli military such as building new wells and repairing old ones as well as determining the quantity and expenditure of abstracted water.²⁹ As the extraction, transfer, and consumption was put under strict control, it led to severe Palestinian dependency on Israeli services.

In 1968, Military Order No. 158 was issued. It stated that: “No person is allowed to establish, own, or administer a water installation without a new official permit.” It suspended the drilling of any new wells in the Territories and introduced new license-based water laws. The order also gave the area’s commander absolute discretion over whether or not to issue the permits, the power to cancel or amend licenses, or make them subject to any conditions deemed fit. The military order also

²⁷ Tahal Group. Web. 28 Nov 2011. Tahal is an engineering group that ranks among the top companies of its kind in the world and specializes in multidisciplinary fields such as water and wastewater systems, hydropower, desalination, solid waste management, and agriculture and irrigation development, among others. They are linked with Kardan N.V, an investment agency that develops and manages long-term cash flow generating assets, mainly in Real Estate and Water Infrastructure, with a specialization in Israel. On their website, it is stated that Kardan N.V has a 97% stake in the Israeli water development firm.

²⁸ Giglioli, Ilaria. “Rights, Citizenship and Territory: Water Politics in the West Bank.” Farhana, Sultana. and Loftus, Alex (eds.), *The Right to Water: Politics, Governance and Social Struggles*. Taylor and Francis: London, 2011 (forthcoming).139-158, 145.

²⁹ Rouyer, *Turning Water into Politics*, 46.

stipulated that if any water installation or resource was built without a permit, it would be confiscated.³⁰ These military orders are still in place today and apply only to Palestinians of the West Bank, while settlers are subject to Israeli civil law.

The process for project approval from the Joint Water Committee (JWC) is extremely complex and infused with bureaucratic obstructions that can delay or derail it. The Oslo II Interim Agreement in 1995 established the JWC. It provides the umbrella institution for joint management of the West Bank water resources. In accordance with the agreement, both Israel and the Palestinian Authority (PA) are to have equal representation on the committee.³¹ From there, the JWC goes over the proposals to determine whether or not they will be approved and construction will begin. Since all of the projects must be approved through consensus, Israel retains veto power over any Palestinian water development in the West Bank. Theoretically, the PA also has veto power over any Israeli water projects of the West Bank. But, since the water system for Jewish settlements is already established and in place, the proposals brought to the JWC are almost nearly all Palestinian in origin.³² In this way, Palestinian power within the joint management framework is muted.

Further, two additional impediments make the process burdensome and gruelingly time consuming. First, permits are issued only for very specific projects and are required for each stage of the project. Once a permit is issued to drill a well, others are needed to construct the road to get the equipment to the site, and for a building to house the workers drilling the well. Each of the actions described is required to go

³⁰ Bashir, Talhamy, 'Ata, and Rabi, 12.

³¹ Rouyer, Alwyn. "The Water Accords of Oslo II: Averting a Looming Disaster." *Middle East Policy*. 7.1 (1999): 113-135, 125.

³² Rouyer (1999).

through a separate process. Later, separate permits are required for specific sections of the pipeline to supply each location receiving water from the well and for each pumping station and other facilities along the route.³³ The second impediment in the process is that under the 1995 Oslo II agreement, new Palestinian water development projects, with the exception of one new well in the Northern West Bank, can utilize water only from the eastern basin of the mountain aquifer.³⁴ Such a requirement presents great difficulties for the Palestinian Water Authority in its efforts to supply water to villages and towns situated long distances from existing or proposed Palestinian wells in the eastern aquifer.³⁵ The result has been the drastic curtailment of proprietary rights in regards to water that had been validly required under the pre-Occupation legal regime.³⁶ It is extremely difficult to obtain permits as they are mostly issued for emergency circumstances.

In December, following the occupation of the West Bank, Military Order No. 291 suspended Jordanian law with regard to private ownership of water, declaring all water resources in the territory to be state property in conformity with Israeli water law.³⁷ Additionally, it gave notice that all previous and existing settlements of water disputes and transactions were deemed no longer valid. Before the occupation, the water law that existed differed sharply from that imposed by Israel. It was initially considered a public resource, that allowed landowners to claim ownership rights to groundwater or springs or streams on their property. With the newly applied Israeli

³³ Rouyer, *Turning Water into Politics*, 225.

³⁴ A point to note here is that the eastern basin also serves as the primary source of water for West Bank settlers.

³⁵ Rouyer, *Turning Water into Politics*, 225.

³⁶ United Nations. *Permanent Sovereignty Over Natural Resources*. par 18.

³⁷ Bashir, Talhamy, 'Ata, and Rabi, 20.

law, water became centralized and the Israeli state was given power to allocate, license, ration, and regulate.

Core elements within the new Israeli policy included: 1) the prohibition of the drilling of new wells or the deepening or repair of wells without a permit; and 2) the metering of wells in order to enforce strict quotas on Palestinian water utilization.³⁸ Israel's justification for such policy in the West Bank was based on the need to protect the precarious water balance. Many Israelis who dictated the circumstances claimed their fear was centered on saltwater intrusion that had already occurred in the coastal aquifer, which lay along the coastal plain of the Mediterranean Sea.³⁹

The new military orders meant that Israel now controlled all water resources and transactions in the Territories. In addition, the occupation government required that all Palestinian well owners install meters on their wells in order to monitor the abstraction rates to ensure that they did not exceed the set quotas.⁴⁰

For the settler community, there was no adjustment being made to their water consumption. While the data on settlement water consumption is a closely guarded secret, it is safe to assume that settlers utilize between a quarter and a third of all the

³⁸ Rouyer, *Turning Water into Politics*, 48.

³⁹ Saltwater intrusion occurs in coastal freshwater aquifers when the different densities of both the saltwater and freshwater allow the ocean water to intrude into the freshwater aquifer. These areas are usually supporting large populations where the demanding groundwater withdrawals from these aquifers is exceeding the recharge rate. Unites States Geological Survey. *Freshwater-Saltwater Interactions Along the Atlantic Coast*. 2007. Web. 20 Feb 2013, par 1; Saleh, Abdelhaleem Ibraheem. "Impact of Pumping Saltwater Intrusion in Gaza Coastal Aquifer, Palestine." MS Thesis. An-Najah National University, 2007. Web. 28 Nov 2011.

⁴⁰ Bashir, Talhamy, 'Ata, and Rabi, 20.

water consumed in the West Bank, mostly for irrigation.⁴¹ In 1995, settlers numbering around 140,000 consumed about 50 million cubic meters (mcm), compared to the estimate of 125 mcm consumed by 1.2 million Palestinians.⁴² The water for the West Bank settlers comes from more than forty deep wells drilled since 1967 by Mekorot, Israel's national water company, in the eastern basin of the Mountain Aquifer. Furthermore, consumption is encouraged even more by the heavily subsidized prices and water development assistance from the government of Israel and a variety of Jewish organizations.⁴³

Fragmentation of the West Bank

To further exacerbate the problem, the fragmentation of Palestine and territorialization of Israel that came as a result of the Oslo Peace Process made it even more difficult for Palestinians to access groundwater resources.

The permit process in Area C of the West Bank is most burdensome and time-consuming because it is under both Israeli security and civil control. Projects that have already been approved on their technical merit that cross even a tiny portion of Area C must get the concurrence of the Israel Civil Administration before the final approval of a permit from the JWC. Even in the civil administration, each permit for any project in Area C must be signed off by each of the twelve different departments. According to officials from the PWA and local village councils in the Jordan Valley, this is the stage

⁴¹There is no common pool of reliable data on water supply, consumption, salinity levels, recharge rates, and so forth on which both sides agree. The Israeli authorities possess highly detailed and precise information from decades of exhaustive and continuous scientific assessments, including metering of all West Bank wells since 1967. The problem stems from the fact that access to this data is not available for independent assessment and analysis. In Israel, water resource data are a national security issue. Saleh, 15; Tahal Consulting Engineers. *Israel Water Sector Study*. Tel Aviv and Washington DC: 1990, 52.

⁴² Rouyer, *Turning Water into Politics*, 28.

⁴³ Rouyer, Alwyn R. *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*. Houndmills, Basingstoke, Hampshire: Palgrave, 2002, 29.

where most projects run into difficulties and delays. They can easily be rejected for any number of reasons. For instance, a well or pipeline may be too near a settlement or military base and considered a security risk; the roads department may decide that it will result in the cutting down of too many trees; or, the archaeological department may find it a danger to yet unexplored ancient sites.⁴⁴

From 1967 until the Oslo Accords in 1995, a twenty-eight year span of time, only twenty new drilling permits were issued for domestic use, three for irrigation purposes, and fifteen for repairs. No permits were issued for drilling wells or repairing the existing ones in the eastern basin of the Mountain Aquifer, which is the basin providing the greatest supply to Palestinians. The permits that were granted took years from the time of request to the time of approval. As of 1990, Mekorot itself had drilled 32 wells serving the West Bank settlements. Moreover, these reached much greater depths than Palestinian wells, leading to the average yield of 750,000 mcm/year for Mekorot wells as opposed to the average yield of 13,000 mcm/ year by Palestinian wells.⁴⁵ Second, meters were placed on all wells in order to regulate water consumption by the Palestinians. The Israeli Water Commissioner set quotas on the amount that could be pumped and other restrictions such as bans on Palestinian use of water for farming after 4:00 p.m. were enacted.⁴⁶

Naff and Matson have noted that nearly all the increase in Israeli water consumption since 1967 came as a result of its territorial gains.⁴⁷ Nearly fifty percent

⁴⁴ Rouyer, *Turning Water into Politics*, 226.

⁴⁵ Awartami, Hisham. "Artesian wells in Palestine: Present Status and Future Development." *Palestinian Hydrology Group*: 1992, 5.

⁴⁶ Naff, Thomas. *The Middle East in the 1990s: Middle East Water Issues*. A testimony before the House Committee on Foreign Affairs. Washington DC: House Committee, 1990, 187.

⁴⁷ Naff, Thomas and Ruthie C. Matson. *Water in the Middle East: Conflict or Cooperation?* Westview Press, 1984, 49.

of its total groundwater and approximately twenty-five percent of its sustainable annual water yield comes from the West Bank. The western basin of the Aquifer alone, because of its low salinity level, supplies over fifty percent of Israel's drinking water.⁴⁸

Governance Structures of the West Bank Water Sector

This section provides a detailed explanation of Palestinian and Israeli control over water resources in the West Bank. Israeli institutions control the abstraction and development of water resources within its political borders, and Palestinians, from 2005 onwards and barring repeated Israeli military incursions, do so in Gaza.⁴⁹ However, the situation in the West Bank is extensively more complex.

Sources controlled by Palestinian management structures include: 1) four Palestinian Water Authority wells of high abstraction capacity, developed following its creation; 2) agricultural wells, which were traditionally privately owned and regulated, and which now are under the jurisdiction of the PWA (there are over 300 of these wells throughout the West Bank, which were mostly dug before 1967 and are low capacity); and 3) municipality wells that are regulated and billed for primarily by municipalities, but also fall under purview of the PWA.⁵⁰

Israeli controlled resources include: West Bank Water Department (WBWD) wells, Israeli wells inside the West Bank, water purchased by the PWA from Israel, and water purchased by Palestinians in the West Bank from Israeli settlers. The WBWD wells consist of thirteen wells operated and maintained, but not owned, by the

⁴⁸ "Political Arrangements in Judea, Samaria, and Gaza, and their influence on the Security of Water in the State of Israel" qtd. in Sherman, Martin. "Water as an Impossible Impasse in the Arab-Israeli Conflict." *Policy Paper No. 7*. Tel Aviv: The Nativ Centre for Policy Research, (1989), 20-21.

⁴⁹ Zeitoun, 51.

⁵⁰ Ibid.

WBWD. They were originally formed as part of the Jordan Water Resources Authority in 1962. The WBWD was created in 1967, and was run until 1995, by Israel's Civil Administration. Between 1967 and 1995, several additional wells were drilled by the Civil Administration to supply settlements and Palestinian villages. Since the creation of the PWA, the Water Department is institutionally under the PWA. However, the decisions and operations of the wells are dictated by the Civil Administration. Although Zeitoun's research was conducted in 2006, my follow-up fieldwork verified that although the water flow-switching valves continue to be literally turned by Palestinian hands, the WBWD is in reality under Israeli command.⁵¹

Israeli wells in the West Bank are owned by Mekorot, which distributes water to Israeli agricultural settlements in the Jordan Valley and Israeli military bases. A small share of water is provided to the rural Palestinian areas in the Jordan Valley. Water that is purchased by the PWA from Israel is supplied through 25 connection points at the WBWD, also owned by Mekorot. The administration systems that established these connections resulted from Oslo II. As I mentioned earlier, the WBWD is operated by the Civil Administration *and*, as we see here, in conjunction with Mekorot. In this case, power makes a direct impact on the consumer. Israel has threatened to cut off water supply to Palestinian consumers due to deficient water payments, as was the case in Bethlehem in 2006.⁵²

The more than 200,000 Palestinians who are not connected to piped networks in the West Bank rely on rainwater that is collected during the winter months. When stocks run out in the summer, they are compelled to purchase water from private

⁵¹ Zeitoun, 52.

⁵² "Israel Threatens to Cut Water supply to Palestinian Areas." *Ma'an News Agency*. Ramallah, Palestine. 17 Oct 2006. 5 November 2012. <<http://imeu.net/news/article003277.shtml>>, par 2.

Palestinian water tankers, which if blocked from their routine filling points will fill up from Israeli settlements.⁵³

⁵³ Zeitoun, 52.

CHAPTER IV

UNPACKING THE WATER STRUGGLE:

OBSTACLES TO INTEGRATED WATER MANAGEMENT

An overview of events regarding the water resources pictured, following 1967, make clear the asymmetry of power. Yet, the influence of power in transboundary water conflicts has not been systematically conceptualized. Wester and Warner illustrate this point when they boldly ask readers to question the received wisdom of river basin management.¹ They argue that getting stuck in the conventional technical paradigms tends to defang serious water issues of their political component, and in effect reinforces existing power inequalities.²

This chapter shows how power has given form to challenges in the water sector that are otherwise approached in a prescriptive and mechanical fashion. There are three obstacles to a consolidated regional model for Palestinian water distribution in the West Bank: (1) inadequate Palestinian water supply; (2) antiquated Palestinian water infrastructure; and, (3) the inability of the Palestinian Water Authority (PWA) to conduct integrated management of the resources within the current governance framework. As a consequence, failures of water resources development and management have contributed to low and declining per capita water resource availability for the Palestinians. By way of explanatory and causal analysis, each chapter links the issues from the micro-level, those internal to the Palestinian water sector, to issues at the national level.

¹ Zeitoun, 13; See also Wester and Warner (2002).

² Ibid.

The Technical Is Political: Challenges to Palestinian Water Supply

Water supply management in the West Bank falls within the responsibility of water utilities, local municipal and village councils, as well as the West Bank Water Department (WBWD).³ These institutions take charge of coordinating the Palestinian water needs, which in most cases requires water purchase from Mekorot, Israel's national water carrier. The Palestinian regulatory body is the Palestinian Water Authority (PWA), under which all water management operations are conducted.⁴ In theory, the PWA has a mandate over water and sanitation management in the West Bank. Regardless of the framework that emerged following the 1995 Interim Agreement, the PWA is marginalized by the "real water authority" in the West Bank which is embodied by the Joint Water Committee (JWC) as well as Israeli military control.

As we have seen, after 1967 Israel took control of the water resources and developed wells throughout the West Bank, and developed a water supply network serving the settlements that linked into Mekorot. Today, almost eighteen years after Oslo II, Israel has taken control of water distribution to the Palestinians, with over three quarters of their water now supplied by Mekorot.⁵

An official from the PWA explained how Israeli control over water developed and Palestinian resources were seized:

"The [Israelis] are providing a supply, but *our* resources that we were using, the wells and springs, they dried up due to the Israeli sources nearby, which lowered our water table. We lost those resources."⁶

³ Bashir, Talhamy, 'Ata, and Rabi, 42.

⁴ Ibid.

⁵ *West Bank and Gaza: Assessment of Restrictions on Palestinian Water Sector Development* (2009).

⁶ Najjar, Yousef. Fieldwork Interview. 8 Jul 2012.

Well drilling was carried out by Israelis in the West Bank in close proximity to local Palestinian wells or springs. The result marked a decline in the output of Palestinian resources, which resulted in a lowering of the water level. Due to the superior technology available to Mekorot, it drills deep wells after extensive geological surveying, in contrast to Palestinians, who drill shallower wells in convenient locations. The deeper the well and more geologically sound its location, the more abundant its water supply and the better equipped it is to resist contamination, saltwater intrusion, and the harsh effects of drought. Also, if two wells are located in close proximity to one another, the deeper one abstracts more water than the shallow one.⁷

Alongside the loss of Palestinian control upon local water resources, Israeli presence steadily increased in the West Bank through its settlements, military zones, and other various areas designated as C. The Israeli areas fell outside the jurisdiction of the Palestinian Authority (PA) as assigned by Oslo II, which further impeded the Palestinian Water Authority's ability to develop a fully integrated water network in the West Bank. The independent means for Palestinian water supply were replaced by Mekorot, increasing the West Bank's dependency on an external source.

The failure to develop new water resources has led to chronic Palestinian supply shortages. As a result, Mekorot is increasingly important to Palestinian water access. In 2008, Mekorot supplied 22.3 mcm of water, 19.2 mcm more than that Article 40 commitment of 3.1 mcm. The idea was that 3.1 mcm would be provided by Israel, while the remaining water resources would be developed by the PWA and other Palestinian water institutions. Although water supply through the Israeli carrier

⁷ Lowi, 189.

increased to the Palestinians, it was at the cost of losing Palestinian owned wells and springs. This was exactly the opposite of the Palestinian aspiration for more water autonomy and self-sufficiency, as was hoped for in the Oslo II agreement. However, the increased allocation from Mekorot shows that the West Bank “increase” in water supply was at the cost of Palestinian control over resources, and not the product of an increase in their actual consumption.

In this chapter, the case studies illustrate the various ways that Palestinian sovereignty has been compromised as a result of Israeli control over water resources in the West Bank. I organize the case studies according to their degree of Palestinian political autonomy. First, Ramallah Al-Bireh is juxtaposed to the situation in Jericho, both of which are in Area A. Next, I present issues that confront the Jordan Valley villages, which lie in Area C. Third, the challenges confronted by developers in Rawabi, the first Palestinian planned city, highlight how the lack of autonomy over water resources will present future challenges to the West Bank’s development.

The Jerusalem Water Undertaking: Water Provision in Ramallah and Al-Bireh

“We do not have enough of our own resources and the quantities from Mekorot cannot be changed easily. We have been getting the same supply for five years, but our population is growing. If we want to change that, it means grueling long negotiations in the Joint Water Committee”⁸
-Jerusalem Water Undertaking official, July 7th, 2012.

The Jerusalem Water Undertaking (JWU) is one of two water suppliers in the West Bank to have legal status as an autonomous utility. It provides services to the Ramallah and Al-Bireh districts and operates five Palestinian wells, although most of the JWU’s water, about 85%, comes from Israel, illustrating the JWU’s dependence on

⁸ Salhoub, Amar. Fieldwork Interview. 7 Jul 2012.

Israel for its water supply and consequent vulnerability. It underlines the need for water supply and increased Palestinian authority in regards to its management. The utility faces three key challenges: 1) the risks of dependence on Israel in terms of vulnerability to Israel's decisions and interventions; 2) the impossibility of planning rationally when the local Palestinian company, as well as the PWA, control neither the land (outside its district) nor the water; and, 3) the higher financial cost and commercial risk of having always to work with the Israeli administration.⁹

The JWU is a microcosmic example of how the availability and control of water resources are fundamental problems in the Palestinian water sector in the West Bank. Availability is low due to strict controls on quotas and consumption of water. The Palestinian residents in the Ramallah and Al-Bireh districts depend on the water that Mekorot extracts from the Mountain Aquifer and provides through the West Bank Water Department (WBWD). Then, the JWU makes a purchase from the WBWD. However, when supply from the JWU's five local wells and Mekorot is insufficient to meet the area's needs, locals must purchase water from private tankers. The cost of the private tankers includes the tank itself, pumping, and transportation. Due to the hundreds of temporary or permanent Israeli checkpoints and cantonization of West Bank territory, tanks must make long circuitous journeys to reach Palestinian areas, which increase the costs of transportation.

According to Zeitoun, when access to Palestinian water sources is barred by physical obstructions, the tankers purchase water from obliging Israeli settlers. The settlers making the deals sell water provided to them at a subsidized cost from the

⁹ *West Bank and Gaza*, 43.

Israeli government.¹⁰ This means that 1 cubic meter of water via tanker costs NIS 20, as opposed to what it costs an Israeli in the West Bank territory, which is NIS 5.¹¹ The irony is not lost.

According to the political classification system in the West Bank, Ramallah and Al-Bireh are autonomous Palestinian areas, free from Israeli military control. But, the JWU is still presented with difficulties in regards to its water supply. The utility has autonomy over five of its wells, which constitute less than a quarter of its water supply. The remainder comes from Mekorot, and the supply has not been adjusted since Oslo, which is needed in order to address the increasing needs of a growing population.

The next case study, Jericho, is also an Area A municipality. However, it varies slightly from Ramallah and Al-Bireh because it has its own independent water resource that supplies most of the city, with the exception of one refugee camp that relies on Mekorot. Like Ramallah, Jericho struggles to develop its water resources even though its primary supplier is not Mekorot. However, Israel's control manifests differently in Jericho because the city is not dependent on Mekorot. Instead, the policies of occupation prevent Jericho from physically expanding according to its needs. Instead of growing, Jericho is "swelling," which is in effect putting pressure on the current water services and infrastructure.

The City of Jericho

*"Jericho is an Island." -Head of Jericho's Water Network Department.
August 1st, 2012.*

¹⁰ Zeitoun, 182.

¹¹ Wasem, Jalal. Fieldwork interview. 7 Jul 2012.

In 1994, Jericho, like Ramallah, became an Area A municipality. The city has its own water resource to the north of the city, the Ein Al Sultan Spring, which is the largest spring in the area. It is the least dependent on Mekorot for water compared to other regions in the West Bank. The spring is known to have provided the greatest and most constant supply of potable water to the city for decades.

Since Jericho has also been self-governed for over a decade, in theory it could serve as an example of future Palestinian administration of water resource management. However, theory differs from practice in fundamental ways. While Jericho is a Palestinian controlled municipality, it is still operating within the larger context of Israeli military control and is faced with the same constraints as other Israeli controlled areas. Unlike an Israeli municipality operating within Israel proper, Jericho faces considerable challenges in its water infrastructure and distribution system.

The head of Jericho's water network department highlighted the key obstacle for the city: "It is only natural for cities to grow, but here, we are stuck."¹² His point reflects the idea that the city is an "island" due to its geopolitical setting. It is surrounded entirely by Area C, which remains under complete Israeli security and civil jurisdiction. Due to the city's unique social and historical characteristics, the water supply is already facing additional pressure. Compounded with the inability to grow and expand due to military restrictions, Jericho faces problems in developing its water sector to meet growing needs. The city requires physical space in order to develop itself in response to the demand. In the shaded area of Figure 6, Jericho's boundaries are illustrated as well as the surrounding Israeli administered Area C.

¹² Bsharat, Jalal. Fieldwork Interview. 1 Aug 2012.

Therefore, in addition to challenges of infrastructure, there is the literal inability of Jericho to take part in any type of “state building activity.” The physical restrictions on Jericho’s growth are not solely a result of geography, but are due to the political-structural issues that are experienced elsewhere in the West Bank as well. Although it is in the city’s benefit not to rely on Mekorot for water, it needs both infrastructure and an increased water supply in order to develop. Without the former, Jericho cannot inquire into the abstraction potential of its local resource. ts local resource.

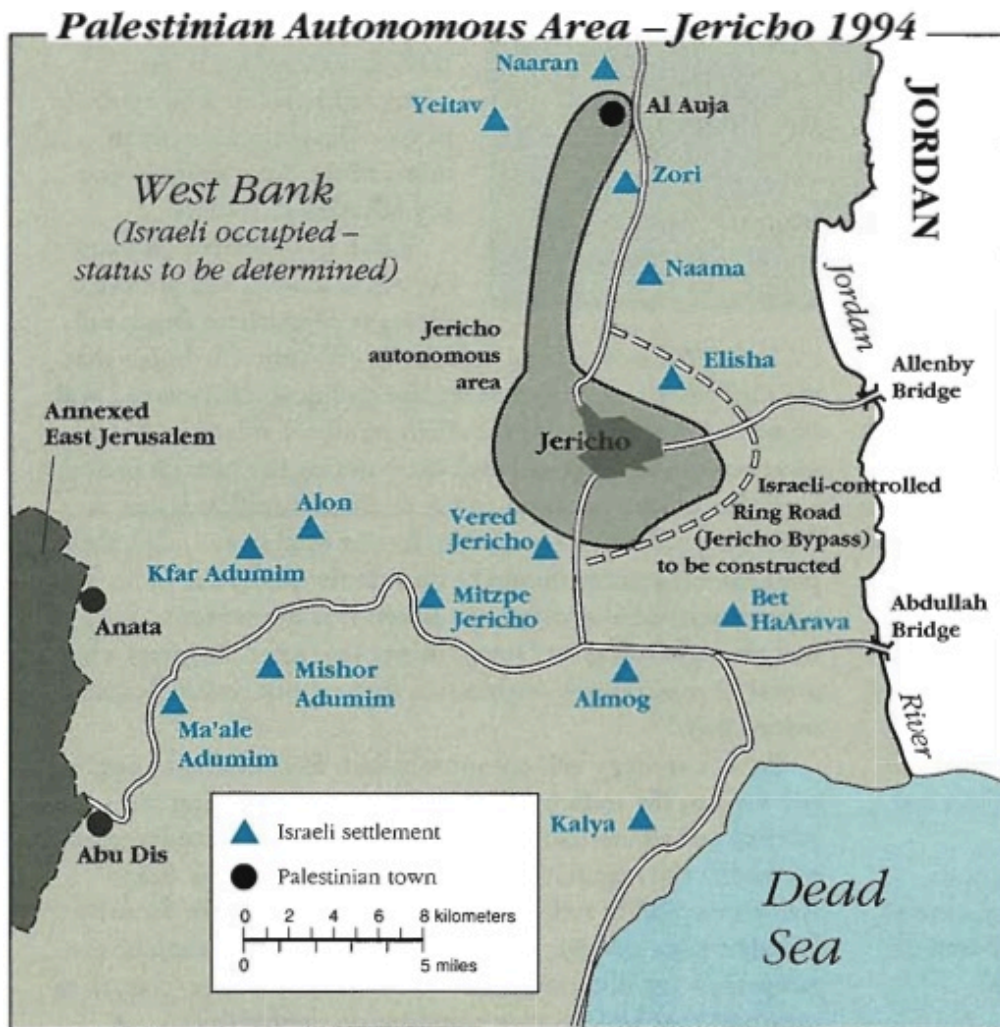


Figure 6: Palestinian autonomous area - Jericho, map adapted from Foundation for Middle East Peace.

Jericho is one of the oldest continuously inhabited cities in the world, which gives it a unique character. Accordingly it has a large number of historical, ancient,

religious, and natural sites, which make it a regional center for tourism.¹³ Moreover, industry has continually increased since the 2nd Intifada because regional security has improved.¹⁴ Several other factors have put a pressure on Jericho's water supply, including: 1) the extensive use of wet cooling systems or water based air conditioning; 2) widespread agricultural activity; 3) increased domestic use of water at the household level; and, 4) the spread of swimming pools, especially those owned by partially residing property owners (mainly from Jerusalem).¹⁵ Those who looked to build their second homes in Jericho claimed that, due to its political autonomy, it was easier to build there than in other areas of the West Bank, where permission must be granted by Israel. "Building" in this context is not to be confused with building of water related infrastructure, the latter requiring an infinitely longer process. The city's temperate winter climate is another incentive for those coming to Jericho rather than to other West Bank cities.¹⁶ The municipality's water department mentioned that the Palestinian Authority training and security center also increased the city's consumption rates.¹⁷

Jericho's climate is another significant influence on the city's water consumption. The municipality acknowledged that the culture of consumption is generally higher than in other areas of the West Bank, because temperatures rise much

¹³ Palestinian Hydrology Group (PHG). *Draft Master Plan for Jericho* (August 2010). Copy acquired through personal correspondence with Jericho Municipality official, Jalal Bsharat. 1 Aug 2012, 13.

¹⁴ Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012.

¹⁵ *Draft Master Plan for Jericho*, 63.

¹⁶ Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012; Abusaada, Muath. Fieldwork Interview. 26 Jul 2012.

¹⁷ Bsharat, Jalal. Fieldwork Interview.

higher in the city than in any other Palestinian governorate.¹⁸ For centuries, weather conditions have influenced people's water practices in the area, resulting in much higher water usage for hygiene and cooling purposes. Tourism, local agriculture, and Palestinians who come to Jericho to build their second homes, are additional contributing factors to the culture of consumption. In a Master Plan Draft for Jericho, the Palestinian Hydrology Group, a local water NGO, is careful not to point blame for high consumption solely on the population's consumption patterns:

These water practices cannot entirely be considered as reckless behavior since the extremely elevated temperatures do in fact require much higher use of water to sustain a healthy life.¹⁹

The issue, then, is: How must the Jericho Municipality address these consumption issues? As it is right now, the water supply is not functioning 24/7 because it is not enough to meet the continuous needs of Jericho's residents. The municipality has devised a scheduling system for distribution: some residents are supplied at night for twelve hours and others are supplied during the day for twelve hours.²⁰ In order to deal with the water cutoffs, a majority of Jericho's residents invest in roof-top cisterns to store water (illustrated in Figure 7).

The cutoffs occur due to pressure on Jericho's water demand, but also due to poor infrastructure and lack of development in the water sector. When asked about the distribution problems in Jericho, the municipality corrected the claims and cited that *controlling consumption* must be their number one priority for the water sector, because rehabilitating its distribution system was subject to Israeli policies, which

¹⁸ Bsharat, Jalal. Fieldwork Interview; *Draft Master Plan for Jericho*, 63.

¹⁹ *Draft Master Plan for Jericho*, 63.

²⁰ Bsharat, Jalal. Fieldwork Interview. 1 Aug 2012.

could take months or years to put into practice.²¹ Whether a distribution or consumption issue, Jericho needs the space to physically expand so that it can develop its water network and increase its supply efficiency.



Figure 7: Rooftop tanks in Jericho city, photo by author.

Due to increasing demands on water, reforming water allocation would require the development and expansion of the water network and the city itself. If consumption growth continues and Jericho is stuck within its Oslo designated boundaries, it is unlikely that engineering solutions will be able to address issues in the future. As the head of the municipality's water sector explained, "Just because we have more autonomy over our resources doesn't mean we have more water."²² More water

²¹ Bsharat, Jalal. Fieldwork Interview. 1 Aug 2012.

²² Bsharat, Jalal. Fieldwork Interview.

in Jericho would require it to have authority over its city planning and development projects.

The problems of demand in Jericho cannot be addressed in a vacuum. With the influence of Israeli control on the Palestinian water sector, Jericho is dependent on the guidelines put forth by Israeli authorities for its development. While it is “only natural for a city to grow,” it cannot do so without the ability to provide appropriate social services. Jericho’s autonomy is superficial until it can independently make policy decisions and implement them accordingly.

Although the first two case studies are situated in Area A, Ramallah’s autonomy comes into question due to its dependency on Mekorot for its water supply; and Jericho’s autonomy is also challenged due to its inability to increase efficiency and augment water supplies. Heavy influence from Israeli authorities would be expected in the Jordan Valley, which is entirely under the control of the Civil Administration. However, Israeli control manifests itself in various ways, in all areas of the West Bank, regardless of their political ascription. In the Jordan Valley, all Palestinian issues pertaining to water resources and development must also refer to the Civil Administration, in addition to the Joint Water Committee. Area A is only required to refer to the Joint Water Committee. Both institutions involve extremely complex processes infused with bureaucratic obstructions. Palestinian villages in the Jordan Valley also illustrate how the issues of water supply are less technical than they are political.

The Jordan Valley

“The local village council’s role is to give services, as a part of the Palestinian Authority and PWA, but everything is under Israeli control. [If we want to give services] no one can do anything. If Israelis accept to let us do something, then we will do it. Otherwise, we will not have anything. This is the life. We must adapt to this. Between you and me, we have to find a way to drink what we have. Even if we know this, it’s not enough”
- The Head of Zbeidat’s Local Village Council. July 24th, 2012.

Village councils are local government bodies used by the Palestinian Authority in the Jordan Valley. They have approximately three to eleven members, with the Chairman as the head of the council.

The quote above reflects the impacts of restrictions on Palestinian water supply that are imposed on a majority of the Jordan Valley. Aside from the portions of land which include Palestinian homes and classify as Area B, the Jordan Valley is categorized as a restricted military zone in Area C, subject to Israel’s complete authority. Area C also includes Palestinian agricultural land, which is closely monitored and ascribed strict policies by the Civil Administration.

The Village council, although set up as a local regulatory body, has no influence on the decisions regarding water resources, which are supplied entirely by Israel at the West Bank Water Department level. There is one pipe from the main Mekorot well in the area that supplies Zbeidat and two other nearby villages. From that same well, there is a separate pipe for the Israeli settlement, Argaman. The Palestinian communities have a population of approximately 3400 residents and Argaman houses approximately 166 residents. Figures 8 and 9 illustrate the two pipes: the first photo shows a pipe going to three Palestinian villages (Marj Ghazal, Zubeidat, and Marj Na’jeh); the second photo shows a pipe going to the Argaman settlement. Water supply for both communities originates at the same Israeli well.

The two pictures show one way in which distribution and supply are greatly different for the two groups. For a community of 166 residents, the water infrastructure consists of a modernly constructed pipe with a diameter of approximately 10 centimeters, placed within a protective wire barrier. For the three Palestinian communities, the pipe is significantly older and the diameter is significantly smaller, approximately 4 centimeters. The wider the pipe, the greater the water quantity and pressure being pumped through. For two populations that are very different in size, Argaman's pipe is more than double in size than that of the Palestinian villages.



Figure 8: Pipe to Palestinian villages, photo by author.



Figure 9: Pipe to Argaman, Israeli settlement, photo by author.

Alongside strict consumption quotas and compromised water pressure, the way that water distribution is designed creates an inequitable supply of water between the Palestinian villages. Marj Ghazal, the first Palestinian village, is consuming the greatest amount of water because it lies first along the distribution line. The last village, Marj Na'jeh is barely receiving any water from the Mekorot connection because by the time water crosses through the first two villages, the quota assigned by Israel has already been met. The director of the Institute of Environmental and Water Studies (IEWS) at BirZeit University called this situation, typical in rural areas of the West Bank, the “soccer field analogy.”²³ The idea is that the closer the water consumer is to the main source of supply, the higher the water pressure and quantity of water available. However, due to physical losses from the poorly developed water

²³ Abu Mahdi, Maher. Fieldwork Interview. 8 Aug 2012.

infrastructure, combined with the inadequately designed pipes, pressure and supply are further affected. The supply is already low compared to the demand and compounded with unmaintained infrastructure and poor distribution schemes, making water availability to the Palestinian villages severely compromised.²⁴

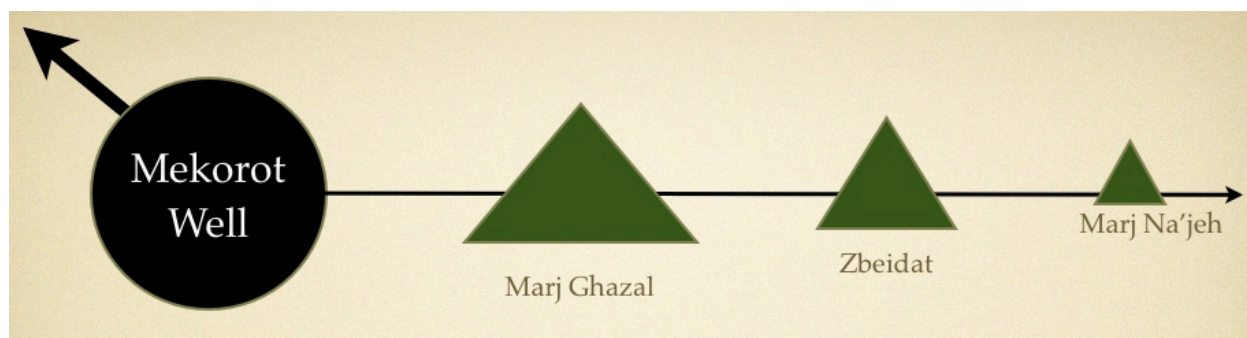


Figure 10: “Soccer field” water distribution.

Figure 10 illustrates the way in which water supply is distributed through the three villages. The sizes of the triangles correspond to the amount of water being consumed by each Palestinian village. Marj Ghazal receives the highest pressure and largest supply compared to Zbeidat and Marj Na'jeh. The black arrow marks the pipe going to Argaman. In some cases, rooftop cisterns are used to store the water coming from the pipes to create a gravity water system, in order to address the problem of inadequate pressure. If the source of water is at a higher elevation than it used to be, supply by gravity increases the pressure in its supply. However, cisterns are rare in the Jordan Valley. Given their expense and the transportation costs of reaching distant rural villages, many Palestinians in the region cannot afford to create these systems on a large scale. Access to and from villages in the Jordan Valley is highly constrained, with almost six access routes controlled by Israeli checkpoints. According to UN-

²⁴ Abu Mahdi, Maher. Fieldwork Interview.

OCHA, the commercial vehicles that would deliver these cisterns to Palestinian villages have to coordinate with the crossing in advance.²⁵

However, cisterns are only short-term solutions because in order to have reliable and adequate water pressure, Palestinians would need a sufficient water supply, more than they are receiving now. The PWA clarified that a solution could not come from within the village: “[The villages] are not connected in the same way as settlements, the dimensions of the pipe matter. If they are bigger, [there is] better pressure, but [the Palestinians] are provided only three to four centimeter pipes ... this is to control our quantity.”²⁶ This comment makes a compelling point that underlines how issues of power and control influence the size of water pipes, a problem that otherwise remains in the technical domain.

This point is also mirrored in Karen Bakker’s writing, in which she discusses the concept of exclusion in water policy in Western Europe and North America during the second half of the 20th century. The development of water infrastructure occurred in the context of large-scale centralized planning, and generalized access to water represented a fundamental emblem of inclusionary citizenship. As the Israelis receive substantially different levels of water provision, difference is being marked in a symbolic sense. Furthermore, the selective extension of the water network is a way to create and emphasize difference, similar to Bakker’s notion of inclusionary citizenship. On that basis, the inequality of water access is a form of asserting who

²⁵ “Humanitarian Fact Sheet on the Jordan Valley and Dead Sea Area.” *United Nations Office for the Coordination of Humanitarian Affairs: occupied Palestinian Territory*. Feb 2012, 1.

²⁶ Najjar, Yousef. Fieldwork Interview. 8 Jul 2012.

belongs and who does not.²⁷ The pattern of infrastructural development is inextricably linked and continuously influenced by power dynamics in the Jordan Valley.

The water network, as we see in the comparative photos above, is part of the construction of difference through processes of segregation and exclusion enacted via “technologies of government.”²⁸ The inequality issue in regards to water distribution functions as a way for the state to establish legitimacy towards its “citizens,” while at the same time asserting control over space and resources through physical infrastructure and concurrent military authority policies.

In addition to infrastructural challenges, Zbeidat, by its natural topography, has three varying elevations, that move upward in a steady incline. In response to Israel’s strict quotas and water planning scheme in Zbeidat, the village has made attempts to create a distribution system so that residents of the village have equitable access to the resource. It has set up three separate distribution zones, using three different pipes within the village. The first and lowest zone in the village receives the most water. As it lies right at the start of Mekorot’s pipe to the village, it is unaffected by consumption from elsewhere in the village. The second zone, slightly more steep than the previous one, receives water only at night, because the usage in Marj Ghazal, the previous village, is lower than in the day time. For the third zone, which is the highest, there is no water supplied through the third pipe because there are no means to pump water to reach such a height. Figure 11 is a photo that shows the two lower zones of the village from the highest point in Zbeidat, in order to show the difference in elevations.

²⁷ Kooy, Michelle. and Bakker, Karen. "Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta." *International Journal of Urban and Regional Research*. 32.2 (2008): 375-391.

²⁸ Kooy and Bakker, 375.

A Palestinian, whose family resides on the highest elevation, shared his technique for accessing water: “My sister lives just below us, she lives on the second level of the village. At night they have water because Marj Ghazal isn’t using as much. She fills [a tank] for us at night so that we can use it the next day.”²⁹ Some residents living on Zbeidat’s highest elevation receive their water by relying on family or community ties in the village. The head of Zbeidat’s local council has opted to use pressure pumps, another technique, to transfer water from the lower tiers of the village to the highest one. Figure 12 shows the way these pumps are haphazardly set up. Due to Israel’s restrictions on purchasing water pumps, Palestinians make use of the supplies available to them.

For the third zone, there is no water supply without these pumps or help of others in the community. But even this self-manufactured solution can only address the water concerns only temporarily due to the repercussions they cause village wide. The head of the village council admitted his concerns with people increasingly relying on pressure pumps: “It is a problem because they use too much electricity. Our [village] generator is weak, especially in [summer], it’s hot, so the electricity is often being used in other ways.”³⁰ In the long and dry summers, the people of Zbeidat depend on wet cooling systems, which consume a great deal of electricity. Therefore, not only are the engineering costs a concern, but pumps also present challenges at the village level because they compromise electricity that is crucial during long summer months. While they may address the issues in the short term, they are not an appropriate long-term solution to water shortages.

²⁹ Zbeidat, Samir. Fieldwork Interview. 24 Jul 2013.

³⁰ Masih, Nader. Fieldworld Interview. 24 Jul 2013.



Figure 11: A view of Zbeidat from the highest elevation, photo by author.

An actual resolution necessitates addressing issues of water allocation, developing a new distribution plan, and rehabilitating poor infrastructure. Those would require the Palestinians to negotiate with the Israelis in the Joint Water Committee (JWC) and the Civil Administration. Moreover, as we have seen in the background portion, water allocation schemes are often addressed at the international level and involve numerous parties. Section II elaborates on the nuances of the Israeli bureaucratic processes for rehabilitating and developing the Palestinian water network.



Figure 12: A pressure pump used on Zbeidat's highest elevation, photo by author.

Bardala is another Palestinian village that lies in the northern region of the Jordan Valley. While water pressure and distribution issues within the village are of primary concern for Zbeidat, Bardala's primary struggle is sufficient water access to cultivate its agricultural land. The total area in Bardala village is 20,000 dunums, with only 480 dunums of land that is a "built up," residential area. Its agricultural land consists of 10,000 dunums, which is rapidly shrinking due to the lack of water resources to maintain it.³¹ A representative from the PWA explained the circumstances:

In the Jordan Valley, [the villages] are connected to water, but it is not enough supply for agriculture, too. In the Jordan Valley, the water supply needs to be more than in nonagricultural areas, but now it is either enough for one or the other due to the quantity provided by Israel.³²

³¹ "Bardala Village Profile." *Applied Research Institute of Jerusalem*. Feb 2006, 2.

³² Najjar, Yousef. Fieldwork Interview. 8 Jul 2013.

Israel's quotas for the village are only enough for domestic water *or* agricultural water. It would cost double, and in some cases triple, the amount to buy additional tankers, thus rendering that option unaffordable.

The council head explained the ways in which Bardala's land has shrunk by sizable amounts. "We used to cultivate 10,000 dunams, now we are only cultivating 4,000 dunams due to the decrease in water supply," he stated, pointing to the village's loss of over half its land since the occupation.³³ Speaking further on the details of agricultural water, the village head stated:

Bardala is given agricultural water only eight hours of the day, three days a week. We have a large tank that Mekorot pumps to, and then they distribute it throughout the village. Eight hours a day maybe sounds good, but it is tough when you need water, for example 2,000 dunams, and are only getting it for half the amount of land.³⁴

In this case, the residents of Bardala are stuck in a compromise between domestic water for daily use or sustaining their means of livelihood, as agriculture has long been a critical component of Palestinian economic, social, and political life. Agriculture being the obvious compromise for drinking water, the amount of land available to Bardala for cultivation is decreasing and the surrounding Area C is encroaching onto its territory. Therefore, the built up areas in Bardala, and other villages in the Jordan Valley under similar circumstances, are becoming increasingly isolated.

A second concern for Bardala is a water distribution issue as a result of inadequate supply, similar to Zbeidat. In both villages, the water distribution was not set up according to the village's topography and physical layout. Bardala has been

³³ Halabi, Tayeb. Fieldwork Interview. 25 Jul 2012.

³⁴ Halabi, Tayeb. Fieldwork Interview.

connected to Mekorot's water network since 1975, a few years after the occupation. Before then, the region had approximately fourteen springs and seven wells, and Bardala, specifically, had three of its own water wells.³⁵ However, due to Israeli prevention of rehabilitation of the wells that were destroyed in the war, these wells could no longer function. As such, Israel gained control of the water supply in the northern Jordan Valley and today, Israel is the main provider of water resources to Bardala and surrounding areas.³⁶

A PWA representative described how Israel's control over the local water resources developed:

The [Israeli] developers approached the Palestinian farmer communities [after the 1967 war] and promised them a connection to the Israeli network and inquired into the quantity needed to irrigation and domestic usage. They were told that they must pay for the cost of pumping and their supply would continue.³⁷

Because the infrastructure and network was in ruins due to the war, and because permission was not granted to rehabilitate, the Palestinians opted for a connection to the newer network. This also marked the beginning of Israel's occupation of the West Bank and the government's view that development of local water systems and infrastructure represented a good economic and security investment. Rather than maintaining water supply to the Palestinians and increasing it according to population growth and need, Bardala faced a loss of autonomy over water resources. In addition, Israel gradually reduced the amount of water being supplied to the Bardala well year by year, even as it increased the prices.³⁸

³⁵ Tamimi, AbdelRahman. Fieldwork Interview. 25 Jul 2012.

³⁶ "Bardala Village Profile," 9.

³⁷ Najjar, Yousef. Fieldworld Interview. 8 Jul 2012.

³⁸ Zbeidat, Samir. Fieldwork Interview. 25 Feb 2013.

Today, with no autonomy over its water and strict quotas, Bardala has supply problems, similar to the other case studies in this chapter. However, with the help of increasing NGO and international donor agencies, Bardala has more funding to allocate towards creating its own internal distribution scheme, one that is more efficient than Zbeidat's. Because its water supply was within the village and did not affect the Mekorot well in any way, it was easier to obtain permission from the Israelis. The scheme divided the village into three zones, with each section of the village receiving twelve hours of supply per day. Before this distribution scheme, those at the beginning of Mekorot's pipe would consume the greatest quantity of water, similar to Zbeidat. The village head stated that the new distribution plan was the only solution to the limitations on supply. Also, it required the least engagement in the Joint Water Committee's and Civil Administration's permit process. The residents configured a system that would alternate the water supply between day and night for the different zones.

A resident from Zbeidat pointed out that his village was in need of a similar system. However, because Bardala has a lot less population density and, ironically, more physical space, it is easier to implement projects. A member from a Palestinian community development organization further detailed that due to the difficulties already faced by international donors because of Israeli building restrictions, they look to areas where they can work more easily. Bardala has more space in Area B so it can route pipes on the edge of the village, creating a better water distribution plan.³⁹

The only place in Zbeidat left to build is in surrounding Area C. Therefore, it needs a building permit from the Israeli authorities to install new pipes. An informant

³⁹ Reed, Matthew. Fieldwork Interview. 26 Jul 2012.

from a local Palestinian nonprofit also mentioned that to begin the project they would require access to the main Mekorot well, which unquestionably required a permit.⁴⁰

Zbeidat's case is also different because the main well from which it gets water is intended to supply Argaman, the settlement that rests close to the village. There lie the complexities in changing the water distribution for Zbeidat. It is not only an internal village matter, as in Bardala, but also an issue that affects the nearby settlement. Bardala's main well, on the other hand, is not supplying a settlement. The two varying situations create a different framework within which the villages can work to make a change. Consequently, Zbeidat, which is suffering from severe water shortages and a higher population density, with increasing needs, is unable to address its challenges. Circumstances such as these compel Palestinians to migrate out of the city, the impacts of which I return to in chapter 5.

Although Bardala has a little more flexibility to redistribute its water, an insufficient supply affects both villages. In great dismay, one of the village council heads said, "What happens [here] depends on politics. It's contingent on Israel. They control everything: land, water, sky."⁴¹ While Zbeidat and Bardala try to maneuver the conditions with the resources at their disposal, the solutions are only short-term. In order for enduring solutions to take place, we must examine the hegemonic structures at work.

The conditions for Palestinians in the Jordan Valley continue to deteriorate and remain beyond the jurisdiction of Palestinian institutions. If Palestinians seek to build or develop their communities in the Jordan Valley, it is up to Israeli discretion. In stark

⁴⁰ Zbeidat, Samir. Fieldwork Interview. 25 Feb 2013.

⁴¹ Halabi, Tayeb. Fieldwork Interview.

contrast to the Jordan Valley, the Rawabi case study provides insight into a situation where development is being attempted. The first planned Palestinian city identifies itself as a sign of fresh hope for economic recovery in the West Bank.⁴² While building restrictions are eased in Area A, water restrictions are not. The ambulatory nature of water means that unlike other boundaries, it is not fixed and Palestinian area designations are irrelevant.

During the initial states of the Rawabi project, the recently resigned Prime Minister Salam Fayyad announced that he would “build, not establish, a state” through economic and development projects, after realizing that the negotiations over a political solution would not prosper. The city of Rawabi is one part to his ambitious nation-building plans.⁴³ How possible is it to separate Rawabi from other dimensions of the conflict? In particular, without sovereignty over its water resources, how can Rawabi acquire access to a reliable water supply to provide for the type of community it seeks to develop?

Rawabi: A Failure in Advance?

Rawabi is an especially interesting case in the West Bank today. The new city is filled with homes built from eco-friendly materials, and parks, and boasts a state-of-the-art public transportation system connected by fiber optic cables. According to its creator, Bashar al-Masri, a Palestinian business tycoon, Rawabi has the capacity to

⁴² McCarthy, Rory. "Rawabi, the new Palestinian city that could rise on the West Bank." *Guardian* 08 September 2009. Web. 27 Feb. 2013, par 1.

⁴³ Abu Amer, Adnan. "Economic Peace Before a Political Solution in Israel, Palestine." *Al-Monitor*. 19 Apr 2013. Web. 21 Apr 2013, par 11.

accommodate 40,000 people, and it is set to generate almost 8,000 new jobs.⁴⁴ Figures 13 and 14 show depictions of the new planned city, which portray the ideals that al-Masri has put forward.

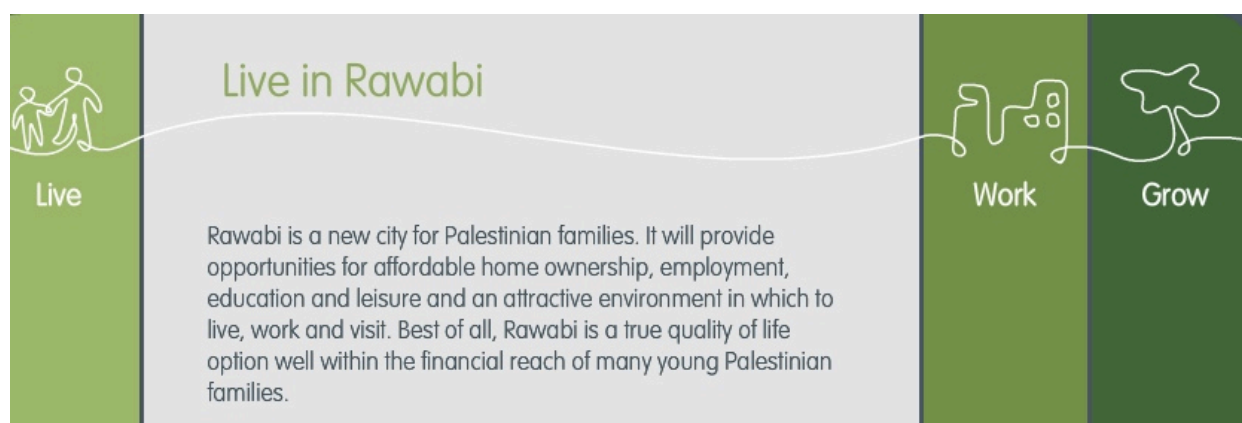


Figure 13: Rawabi housing ad, adapted from Rawabi’s housing website.⁴⁵

The high-tech city within the context of a nonexistent state unsurprisingly sounds like a dream. One of the main practical (and expected) problems for this new town is how to gain access to water and provide a sustainable supply to the kind of community it strives to promote. Following a handful of meetings with a developer at Rawabi, predictably identified Rawabi’s water supply, with no obvious source, to be a concern. The project developers went through procedures identified by the Israelis to obtain approval for their Master Plan and have completed an “impact assessment.”⁴⁶ While following this bureaucratic process with the Israeli authorities, Rawabi spent months trying to negotiate the city’s water source. At the time of writing, the city’s planning authorities were still in talks with the Israelis to determine how water would be piped into the city.

⁴⁴ “A High-Tech City in a Non-Existent State.” *ANSAmед*. 27 Feb 2013. Web. 27 Feb 2013, par 1.

⁴⁵ *Rawabi*. 2011. Rawabi. Web. 27 Feb 2013.

⁴⁶ Wasem, Jalal. Fieldwork Interview. 7 Jul 2012.



Figure 14: 3D graphic of Rawabi housing, adapted from Rawabi's website.

Ultimately, the developer listed three options that the Rawabi team presented to the Joint Water Committee (JWC). One option proposed that the project be linked to Jerusalem Water Undertaking's (JWU) network. However, this option was the most unlikely because it would require that Israel increase its supply to the JWU. The second option was to connect to the Israeli settlement, Atarot's, water network and get a direct supply from Mekorot. Rawabi's developer mentioned the two downsides to this approach: 1) it would mean feeding into an already increasing dependency on Mekorot; and, 2) the contentious relationship with the settlement community could inhibit the proposal's approval in the JWC. Option three would supply water to Rawabi from Sinjil, a Palestinian village northeast of Ramallah. This was considered the least preferred of all options due to the costs and logistics of transferring water from such distance. The third option would require a pipe from Sinjil to Rawabi, which would necessitate infrastructure to cross Area C and Atarot's land. It is also the most expensive option due to the various stages that would need Israeli approval and funding to implement.⁴⁷ The ideal option for the developers was to receive its supply from the JWU, despite its superficiality, as the Palestinian utility would serve as an

⁴⁷ Wasem, Jalal. Fieldwork Interview.

interface between Rawabi and Israel. Involving the JWU in the water distribution process would maintain Palestinian presence in the water distribution process. It would also provide the city of Rawabi with the least costly and most efficient water supply.

During a JWC negotiation session, Israel told the Palestinians that, “if you stop discussing refugees and right to return issues, we will provide water for this project and additional new projects like Rawabi ... [for] other new modern development.”⁴⁸ The implication of the Israeli claim is tremendous. It highlights the interplay between the technical and political domains. It further illustrates the way in which final status issues are inextricably linked to one another. Without an appropriate and reliable water supply, the Rawabi project will struggle to promote itself as a symbol of development in lieu of politics. Moreover, it reveals the role that control over water resources has on the development of a future Palestinian state. The developers from Rawabi were told explicitly at the JWC negotiations that a project similar to the private city would be fully realized, but at the expense of Palestinians’ claims to self determination.

Conclusion

These seemingly technical issues of water supply and poorly maintained water distribution systems are the direct result of clear power differentials between Israelis and Palestinians. This section shows how the distribution of water is used to maintain power inequalities and thwart Palestinian state-building initiatives. Hence, it shows how a seemingly technical issue, such as water availability and distribution, can in fact be a manifestation of underlying political power struggles.

⁴⁸ Wasem, Jalal. Fieldwork Interview.

In the Jordan Valley, the water distribution mechanisms do not take into account the physical layout of the villages in order to ensure a reliable water supply. Jericho and Ramallah, although both declared Palestinian autonomous areas, have struggled to develop water resources to meet the needs of an increasing population. The former, while having its own resource, could not develop its infrastructure and grow in order to increase its efficiency in water supply; and the latter was dependent upon Mekorot's quotas. Rawabi presented a quintessential example of how the lack of Palestinian access to water resources will affect future growth in the West Bank. Israel's effects upon the water sector in this chapter are evident, but by rendering the problems technical, it is not held accountable. To an outsider, without this knowledge, it is assumed that Palestinian mismanagement is the primary cause of problems in the water sector.

While the technical approach seeks to separate out a pragmatic and concrete focus on water issues from the broader ideological claims, it is the latter that calls to mind the fundamentally political part of Lasswell's question about distribution: Who gets what, when, where, how, and why. The technical approach in traditional water science frames Palestinian challenges in the water sector in objective and quantifiable language, in order to solve a problem. As a result, the solutions that are implemented, whether through local initiatives or international funding, create a gap between what is attempted and what is accomplished. The status quo remains unchallenged and the solutions do not match the problems.

Furthermore, politics is assumed too abstract and complex to resolve the water crisis. Abstracted notions put politics beyond the reach of people. However, ideology

alone cannot sustain control. Ideas must be ungirded by material, “hard” power.⁴⁹ The following section looks at how “hard power” manifests itself in the West Bank. The conditions on the ground are tangible results of the politics. Issues that are generally approached as technical shortcomings are also materializations of power and politics.

Hard Power: Antiquated Palestinian Water Infrastructure

“Breathing is the only thing we don’t need a permit for, yet.”
-Aziz Kanaan, Head of Jiftlek’s Local Village Council

High rates of physical losses, or unaccounted for water, in conveyance and network supply systems reduce by one third the water resources available to the Palestinians in the West Bank.⁵⁰ Due to consequences of Israeli military orders implemented after 1967, in particular military order 158, on the development of Palestinian water network and rehabilitation of water installations, water is not being used efficiently in the Palestinian communities. As a result, water loss from poorly maintained water networks is a primary concern for its consumers, who are already struggling to meet their needs within Israel’s water quotas. Therefore, high water losses contribute negatively to the Palestinian water supply.

The head of Jiftlek’s village council in the Jordan Valley, cites the myriad of ways in which movement and access restrictions have affected their daily lives. As a result of impediments, Palestinian water projects are often stuck in emergency mode. Therefore, whatever projects do get administered by JWC and Civil Administration

⁴⁹ Warner and Zeitoun, 807.

⁵⁰ *West Bank and Gaza*, 39.

approval are often short-term relief work. This is mainly due to the difficulties that come with acquiring new systems of water supply or rehabilitating existing ones.

The Palestinian Hydrology Group, in its annual Water, Sanitation and Hygiene report (WaSH), found that the water supply network suffers from the highest rates of loss during the process of distribution.⁵¹ A main cause of water loss is worn out and antiquated pipe networks. The grave deficiencies cause high leakage rates and weak water pressure in the system. Damaged networks are a major problem that stem from both institutional weaknesses and the restrictions posed by military orders on the Palestinian development of the water sector.⁵²

The restrictions imposed by Israeli authorities prohibit Palestinians from accessing the infrastructure in very basic ways. A member of the PWA explained, “Our well potential has decreased over the last fifteen years. We need to rehabilitate, replace, or maintain the infrastructure, but need permits in all Areas, A, B, and C.”⁵³ Further, he clarified that indeed there was a misperception that in Area A access to infrastructure was easier due to greater PA autonomy, but in water, he said, “there are no borders, no administrative borders.”⁵⁴ He was making a point to say that all projects related to water must go through the JWC. Otherwise, to build homes in autonomous regions, as was the case in Jericho, permits are often easier to obtain. An environmental engineer and geographer for the Hebrew University in Jerusalem reflected the same ideas as the PWA representative: “[Palestinians] must go through the JWC and the Civil Administration because water crosses boundaries, one area

⁵¹ Bashir, Talhamy, 'Ata, and Rabi, 45.

⁵² Ibid, 46.

⁵³ Najjar, Yousef. Fieldwork Interview. 8 Jul 2012.

⁵⁴ Najjar, Yousef. Fieldwork Interview.

inevitably affects the other because of interrelations.”⁵⁵ Not only is the fluidity of water an issue, but if one Palestinian well is constructed in close proximity to an Israeli well, the latter’s output could be compromised as a result of the lowered water table. In order to submit a proposal to implement a project, the Palestinian Authority must take it to the JWC. Additionally, if it is located in Area C, it must also get a second approval by the Civil Administration, for all wells, water conveyance, wastewater treatment, and reuse infrastructure.⁵⁶ In some cases, a third obstacle is internal conflicting interests between the JWC and Civil Administration. If a project is granted approval by the JWC, it is not necessary for the Civil Administration also to grant approval.

Initially, the Oslo II agreement aimed to transfer water responsibilities in the Territories from Israel to the Palestinian Authority. However, in practice it did not grant any *real* authority over control and management of water resources within its territory. It indirectly placed restrictions on the PA’s ability to develop the water and sanitation sectors by establishing the JWC.⁵⁷ The military orders for the Palestinian sector were also left unattended in the Oslo proces. The JWC was required to approve all proposed projects in the West Bank before implementation. Article VII, paragraph 3, declares, “Israel may request that the legislation subcommittee decide whether such legislation exceeds the jurisdiction of the PA or it otherwise is inconsistent with the provisions of this Agreement.”⁵⁸ In the JWC and its subcommittees, membership is equally split between the Israelis and Palestinians. Furthermore, all water and

⁵⁵ Feitelson, Eran. Fieldwork Interview. 6 Aug 2012.

⁵⁶ *West Bank and Gaza*, 53.

⁵⁷ Bashir, Talhamy, 'Ata, and Rabi, 22.

⁵⁸ Trottier, 64.

sanitation projects in the Territory must be approved through the act of consensus. However, this is problematic because the Israeli members of the JWC have an effective veto power over any Palestinian project. By virtue of its inequitable structure, asymmetrical licensing procedure, and own military dominance, Israel has been able to implement all projects without the committee's approval.⁵⁹ Consequently, the PA was stripped of its capacities to control and manage its water resources and infrastructure. Instead, it was left with the duty of monitoring day-to-day services. Even these duties, on some level, were restricted by Israeli military action.⁶⁰

As of 2009, 106 water and 12 large scale wastewater projects await JWC approval, while others have been waiting since 1999. Out of \$121 million in projects presented to JWC from 2001 to 2008, 50% by value (\$60.4 million) have been approved, and one third have been implemented or began construction.⁶¹ The approved projects sometimes include "conditional approvals" and must be resubmitted to the JWC once they are revised, which can prolong their implementation. The loss of donor funding due to time constraints is an additional obstacle preventing the implementation of projects. In the case that a project *has* begun, there have been times when it is approved by the JWC, but faces resistance from the Civil Administration, which closes off a project site as a "closed military zone." As I mentioned earlier, conflicting interests between the two bodies can create more hurdles to successfully completing a project pertaining to the water sector.

In the following two case studies, proposals for rehabilitation and new water infrastructure must go to the JWC. Because they are both in Area A, additional

⁵⁹ Bashir, Talhamy, 'Ata, and Rabi, 22.

⁶⁰ Ibid.

⁶¹ *West Bank and Gaza*, 8.

approval from the Civil Administration is required if the project crosses or water resources are located in Area C.

The Jerusalem Water Undertaking: Infrastructure in Ramallah and Al-Bireh

“We are supplying various areas, but need coordination with the Israeli authorities to cross Area C. There are no JWU consumers in C, but we do have infrastructure there. All of our wells are located in C. We need to coordinate with the [Civil Administration] in order to repair or get any new wells. It doesn’t matter even where the infrastructure is, if it has to do with rehabilitation or repairing, we need to take it to the JWC”
-Amar Salhoub, *Jerusalem Water Undertaking*, July 7th, 2012.

Despite the fact that the Jerusalem Water Undertaking is autonomous, the utility still encounters difficulties. While it depends on Mekorot for a majority of its water supply, its local resources are also subject to Israeli policies because they are located in Area C. The JWU’s wells were built before 1967.

In order to meet the needs of a growing population, the JWU has tried to propose a central borehole alongside its wells. A borehole would serve as an alternative to the utility’s main water supply, providing a private resource to be used for domestic or agricultural purposes.⁶² A piped system would necessitate more external funding, but a borehole would function as a community well with a pump, adding additional water resources to the current supply.⁶³ However, an employee from the JWU explained the frustrating process: “It was not so efficient [...]. We shifted locations six times, after each time the process gets stretched.”⁶⁴

⁶² "Geologic Boreholes." *Water boreholes & borehole drilling*. Geologic Boreholes & Systems Ltd, n.d. Web. 1 Mar 2013.

⁶³ Boreholes are pretty straightforward. Drill a narrow and deep hole, fill with a casing with inlet holes at the level from which you want to pull the fluid, and for fairly shallow wells (20' or less), a pump is used to supply suction to draw the water.

⁶⁴ Salhoub, Amar. Fieldwork Interview. 7 Jul 2012.

The borehole was an attempt to address the issues of nonrevenue water, otherwise referred to as unaccounted-for water (UFW). Unaccounted-for water is the difference between the quantity of water *supplied* to an area's network versus the metered quantity of water *used* by the customers. There are two types of water loss that take place: (a) physical losses due to leakage from pipes, and (b) administrative losses due to illegal connections and under registration of water meters.⁶⁵ The percentage of physical losses is influenced not only by the deterioration of the piped network, but also by the total amount of water used, system pressure, and the degree of supply continuity.⁶⁶

Physical losses are attributable to three other factors as well: 1) the inconsistency of supply and the resulting cutoffs, which are most common during the summer months; 2) compromised water pressure due to weak water supply (the JWU faces complications with regularity of supply due to Mekorot's quotas, thus decreasing water pressure); and 3) with the poorly developed water network, water losses also increase. On the other hand, the percentage of administrative losses depends on the degree of effort exerted in identifying illegal connections and in repairing meters. Identifying illegal connections is an internal issue because unaccounted-for water affects the JWU's revenue, not Mekorot's; therefore it is in the JWU's interest to monitor illegal activity. The company still pays for the quantity of water supplied by the Israeli carrier. That which is lost in distribution is a loss for the Palestinian utility. In order to rehabilitate the infrastructure to prevent water loss, the JWU must go to the JWC. Therein lie challenges of developing the water network—the ultimate Catch-22.

⁶⁵ . "Water in the Middle East and North Africa." *Unaccounted-for Water (UFW)*. The World Bank, n.d. Web. 1 Mar 2013. <web.worldbank.org>, par 1.

⁶⁶ "Water in the Middle East and North Africa.," par 2.

Elaborating more on the problem of unaccounted-for water, a Director from the Ramallah Al-Bireh utility acknowledged, “Of course our unaccounted-for water is increasing. Our networks are almost fifty years old. We just took some loans, but usually depend on grants, but due to lack of grants available at the time, the JWU took out a \$5.5 million dollar loan. Our goal is to reach 20% UFW rates, but right now we are at 25%. It’s impossible to have 0%.”⁶⁷ Most of the funding is put toward decreasing administrative losses, due to the difficulty in reducing physical losses. There are no other options available to the JWU other than to rely on grants and soft loans to rehabilitate the water sector and, on occasion, pay Palestinian salaries. This is because the revenue generated within the current framework is not enough to satisfy the several dimensions of maintaining and developing the networks.

The same Director from the JWU explained that one reason for a lack of funding was the Hamas victory in 2006. Following this event, political repercussions of the election victory resulted in the suspension of many internationally funded water projects and a lot of development programs withdrew their support..⁶⁸ As a consequence, the lack of financial aid impeded the delivery of many governmental services. ⁶⁹ “If there are no donor funds, then the cost burden is put on the people, but the people cannot afford it,” the JWU Director commented. The impacts of cutting back funding in 2006 added more pressure to the water service providers because with the outbreak of the second intifada, just a few years earlier, projects were also suspended. After the second intifada, the Israelis increased restrictions on Palestinian

⁶⁷ Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

⁶⁸ *West Bank and Gaza*, 74.

⁶⁹ Tahan, Abdel. Fieldwork Interview.

movement and activities through military checkpoints and roadblocks. For that reason, it became harder and harder to implement crucial water projects.⁷⁰

One such example is the Hizmah well project. In early 2008, the JWU applied for permission to drill a new well in order to supplement its water supply. Hizmah was one of three potential locations for the project, but the most likely to be approved.⁷¹ Although it was in Area C, it was granted approval from the JWC. It also required clearance from the Civil Administration, but according to the JWU: “They keep saying move it 50 meters, 60 meters. ... Then there is the hassle of getting approval for the pump. And so on.”⁷² Approval for the pump was not the only concern, but after each revision that was made to the project, the JWU was required to resubmit its proposal to the JWC. Almost five years later, the JWU is still looking for a site for the well.

Jericho is another example of a city that should be a model for Palestinian autonomy and self-governance. The JWU in Ramallah and Al-Bireh, as well as the Jericho municipality, struggles to find solutions to make sustainable improvements to its water networks. Throughout my fieldwork interviews, frustration with the JWC was a persistent theme. Palestinian governing bodies, on the local and national levels, felt that their hands were tied even in circumstances of “autonomy.”⁷³ They were stuck in a paradoxical scenario in which water infrastructure was inadequate, but the rehabilitation procedures as defined by the Israelis kept them from finding any real solutions.

⁷⁰ *West Bank and Gaza*, 74.

⁷¹ Najjar, Yousef. Fieldwork Interview. 9 Jul 2012.

⁷² *West Bank and Gaza*, 41.

⁷³ Najjar, Yousef. Fieldwork Interview. 8 July 2012.

In the following section, I discuss the details of two water projects in Jericho. One speaks more to the tensions that exist between the JWC and Civil Administration. Although usually Jericho is not required to submit proposals to the Civil Administration as well as the JWC, the Jericho Well 1 project was located in Area C. The second water project in Jericho illustrates how the permit process and restrictions to Palestinian land access frequently yield substandard results.

The City of Jericho

As Jericho is confronted with an increasing demand for water, it desperately needs to rehabilitate and expand its water resources. Further, if it fails to maintain Ein Al-Sultan, the city's primary means of self-sufficiency will be lost. Jericho's struggle lies in sustaining itself as a water resource provider, while trying to augment its water supply from nearby resources.

The "Jericho Well No. 1" project is an example of the municipality's attempt to increase its supply for the area by combining the well's water with Ein al-Sultan's supply. It serves as a quintessential example of confrontation between the JWC and Civil Administration. Jericho Well 1 is in Area C and therefore, requires additional approval of the Civil Administration. Otherwise, Jericho projects are submitted only to the JWC.

The project is one piece of the larger Japanese funded project called the "Corridor of Peace," developed by the Japanese diplomat Hideaki Yamamoto in 2006.⁷⁴ The well project includes an industrial and agricultural park in the West Bank and tries to "encourage greater regional cooperation which, it is hoped, will lead to

⁷⁴ Dudley, Dominic. "Japan's Middle East Soft Power." *The Diplomat*. 13 Apr 2012. 20 Feb 2013. <<http://thediplomat.com/2012/04/13/japan%E2%80%99s-middle-east-soft-power/>>, par 9.

economic growth, greater trust and *eventually peace*.”⁷⁵ It includes cooperative projects with Israel and Jordan in order to establish stronger partnerships. Projects like this, with a similar grandiose end goal, are not unique to the West Bank. “Corridor of Peace” assumes that functional cooperation among Israel, Jordan, and the Palestinian Territories and the creation of supranational task-related organizations is the most promising avenue to achieving peace.⁷⁶ How feasible is it for the Jericho Well 1 project to promote the ideals of the “Corridor of Peace” project? It is the prime example of a technocratic approach, with an assumption that low politics foster greater understanding in higher areas of policy making.

The Palestinian component, Jericho Well No. 1 initiative, seeks to find a water resource for the city’s municipality, to supply the Aqbat Jabr refugee camp within the governorate’s boundaries. Theoretically speaking, Jabr camp should already be receiving its water supply from the Palestinian municipality, but because of increasing demands, Jericho is unable to provide for the camp. More frequent shortages occurring during the summer months in Jericho further reflect the pressure on the city’s demand. Therefore, the Jabr camp relies on Mekorot for its water. The Japanese initiative intends to build Jericho’s capacities as an autonomous Palestinian water provider so that it can be a stronger asset to the “Corridor of Peace.”

Before the Oslo agreement, the Jericho Well 1 was used by Israel. After the Peace Accords in 1995, it was shut down and walled in with a cement barrier, as pictured in Figure 15. Since 2011, the Palestinian Water Authority has been negotiating

⁷⁵ Sheldrick, Aaron and Taju Kato. “Palestinian-Israel Peace Corridor Project May Start Next Year.” *Bloomberg*. 2 Jul 2008. Web. 20 Feb 2013, par 1.

⁷⁶ Lowi, Miriam R. "Bridging the Divide: Transboundary Resource Disputes and the Case of West Bank Water." *International Security*. 18.1 (1993): 113-138, 133.

in the JWC with hopes of rehabilitating the abandoned well and utilizing its supply for Jericho.

The land and hills that surround the Jericho well rests in Area C, which created challenges for the project proposal. Finally, due to the significance of the “Corridor of Peace” project to the region and Japanese International Cooperation Agency (JICA) funding that backed the proposal, the JWC approved Jericho’s utilization of the well. The head of Jericho’s municipality reflected on the benefits of its water supply: “It will be perfect for us, giving us 180 cubic meters per hour, that would solve our problem of increasing demand for at least the next five years.”⁷⁷ Further, he said, “The PWA even got the funding from JICA to make a pipe to Jabr camp and they began to construct...”⁷⁸ In spite of that, a few months later construction was interrupted and the project came to a halt.

Without notice, the Civil Administration declared the project site as a “closed military zone,” and although the city refuted this and provided evidence of JWC approval, Jericho Well No. 1 was stopped. This example highlights the conflicting interests of the JWC and Civil Administration. On one level, the project was given the green light, but even within Israeli water governance, there were internal tensions that prevented progress. Following trouble from the Israeli military, JICA representatives met with the Israeli authorities to discuss the permit process. No promise was made, but JICA and the PWA were granted permission to revise their proposal. The PWA resubmitted the proposal to the JWC to forward it to the Civil Administration. While I

⁷⁷ Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012.

⁷⁸ Bsharat, Jalal. Fieldwork Interview.

was conducting these interviews with the Jericho municipality, the Jericho Well 1 project had been put on hold until additional approval from the military authorities.



Figure 15: Jericho Well 1, photo by author.

The second project in this section is Jericho's wastewater project. It brings attention to the ways in which land access restrictions and Israel's permit process yield substandard results. Jericho has tried to develop its water sector by also seeking funding for a wastewater treatment plant. In 2011, it received funding from JICA to implement this project. Two challenges confronted the project proposal in the JWC: 1) the high requirement set by Israel for effluent quality (the level of treatment of wastewater) required tertiary treatment of wastewater and thus, extra funding; and, 2) the location of the facility because the only available land in Area A was in close proximity to residential areas. Due to potential health implications of building a

wastewater treatment plant near Palestine homes, Jericho had to look elsewhere to build. Palestinian areas in the Jordan Valley are designated as either A or B, while the rest of the Jordan Valley is under Israeli jurisdiction. However, Jericho only has access to land that is designated Area A. “So what were we supposed to do?” asked a hydrologist from the Jericho municipality. “We do own land in Area C, but due to the settler road nearby and the declaration of area surrounding us as a military zone, our request was denied.”⁷⁹

The city was left with two choices: either losing the JICA funding or going forth with building the treatment plant in Area A, close to residential areas. The city opted for the latter, and today it is located approximately 500 meters from peoples’ homes. After the plant was established, the city acknowledged it was, “risky for the communities’ health and sanitation,” and admitted that, “many people opposed [the project] and many continue to complain”⁸⁰ It was better in the eyes of the governorate to have a wastewater treatment plan than not to have one at all. According to the municipality, without a proper cleaning station, the wastewater caused damage to prime agricultural land in the city. The politics led to an inadequate plan, which was implemented due to the fear of losing international funding. In the eyes of the community, the outcome of the plant came across as mismanagement on the city’s side, as well as a frustration with the city’s way of prioritizing international funding. This has resulted in subsequent tensions between the local community and Jericho’s government. The myriad of obstacles hinders the government from providing proper services to its community and impedes Palestinian water sector development. The

⁷⁹ Bsharat, Jalal. Fieldwork Interview.

⁸⁰ Bsharat, Jalal. Fieldwork Interview.

consolidating power of central institutions, such as the JWC and Civil Administration, have diminished the autonomy of Palestinian communities, much like Jericho.

The Palestinian villages of the Jordan Valley are subject to both of the central institutions, on a regular basis. While, Jericho is able to maintain ties with other Area A cities in the West Bank, such as Ramallah, Palestinians in the Jordan Valley are isolated from the other cities and towns in the Territory. This is an outcome directly related to Israel's de facto annexation of the Jordan Valley.

“Everything Here Is Provided by the NGOs”: Jordan Valley's Struggle to Build

“The NGOs are not giving us money for free, it's a political thing. They are giving the Palestinians money instead of political order. It's just an economic agreement. If they don't want to give us money, [they can do that], but they also know what will happen.

Let the occupation end and we don't need the NGOs.”

- Samir Zbeidat, a resident of Zbeidat, July 24th, 2012

“A gift from the American people.” This is one of the many slogans plastered across massive USAID billboards alongside the half undeveloped projects in the West Bank. JICA, the German government, France, Swedish agencies, and various agencies also have a tremendous presence in Palestinian cities and villages. Some are completed, while others have been delayed for over a decade.

In the above quote, a resident from Zbeidat and representative from a Palestinian nonprofit, gave his insights on the abundance of international aid in his village. He pointed out that what the NGOs and international donors are doing is at the cost of political order. By providing superficial solutions in the Jordan Valley's water sector, the causal circumstances are veiled. At the same time, they are the main resources for villages in the Jordan Valley. He says, “If they don't want to give us money, [they can do that], but they also know what will happen.” Without the help of

international agencies, there is absolutely no rehabilitation taking place. Some infrastructure was either damaged during the 1967 war and never rehabilitated or is currently in need of maintenance and is struggling to obtain funding, as well as permit approval. The infrastructure that currently requires rehabilitation is stuck in emergency mode, similar to the point Jiftlek's village head made earlier. That being the case, international organizations are merely taking part in relief work. While "political order" remains absent, the longevity of the work being done is undermined.

To further aggravate conditions on the ground, some projects are left unfinished, comparable to the Jericho Well 1 project. The multi-layered bureaucratic process that is necessary to obtain project approval has staggered or stopped them completely. Projects are most often denied by the JWC or Civil Administration due to issues of land designation. Villages, such as Jiftlek, Zbeidat, and Bardala, are disconnected by Israeli military bases and settlements which restrict a great deal of Palestinian land access. It also strictly limits the physical space available for Palestinians to develop the water resources and expand their communities.

Although Area C interferes with the cohesiveness of the West Bank as a whole, it is especially the case in the Jordan Valley where it covers almost 95%. While Palestinians have control over only 5.62% of the valley, 50% is controlled by Israeli Settlement Regional Councils, and 44.37% is designated, by Israel, as closed military zones. As noted earlier, Areas B and Area C require that Palestinians obtain permits from the Israeli Civil Administration to undertake any type of construction.⁸¹ International donors are also not exempt from this process.

⁸¹ *Restricted Access and Its Consequences: Israeli Control of Vital Resources in the Jordan Valley and Its Impact on the Environment*. Ramallah: The Ma'an Development Center, 2011, 12.

All of my interviewees from the Jordan Valley village councils referred to Zbeidat as the example of “worst case scenario” for a Palestinian area with limited resources, land, and water. Below, the village council head from Ein al-Beida, located next to Bardala in the north, talks about the problems facing Area C building restrictions and points to the situation in Zbeidat as something that could be in Ein al-Beida’s foreseeable future:

Our village is at maximum capacity and soon we are going to have to build illegally just to absorb our growing population. Our neighbor Bardala has exactly the same problem. We both have had families try to build in Area C on the outskirts of the village, but the Israelis have demolished their structures just as soon as they built it. If we do not solve this problem soon, we are going to be facing a similar situation as in Zbeidat where we will be imprisoned on an area of land that is too small for us.⁸²

The council’s head explains that while they are allowed to build in Area B, it is not enough to meet the village’s needs. Palestinians in the Jordan Valley do not have access to Area A and are left balancing their lives between B and C. When their homes in Area C are demolished by the Israeli military, it is because they do not have permit approvals. Eventually, the situation will lead to what has happened in Zbeidat. It cannot expand horizontally, so villagers have resorted to building vertically. The issue with that is the strength of the land. A local villager told me that significant portions of Zbeidat were agricultural and, therefore, unable to support large infrastructure. Over the years, the village has built on its agricultural land that was in Area B. It was easier to get approval to cultivate in Area C than to build on it. So, even with a great deal of restrictions upon Palestinian agricultural practices in Area C, it was better for the village to build homes on more autonomous land than it was to not build at all.

⁸² An Ein al-Beida resident, Sameer qtd in *Restricted Access and Its Consequences*, 13.

The issues of land and water in the West Bank are closely intertwined. Land designations play a tremendous role in issues of water resource access. The division between water as a pragmatic issue versus a political one quickly disappears when empirical accounts show its relationship to Israel's territorial claims, those deeply rooted in ideology.

In Figure 16, the head of the Zbeidat's village council shows the way in which these area designations are manifest on the ground. He points with his right hand to Area B, and with his left, to Area C. His home rests right along the Area B and Area C boundary, on Zbeidat's highest elevation, where he also struggles with water supply. His only access to water is through self-manufactured water pumps, as seen in the previous section on water supply. "There is just a sixteen centimeter difference" he says, as he stands on an invisible line that separates the two worlds: one Israeli and the other Palestinian.

Area C begins directly in his back yard where his date trees are planted, ones that have been removed several times by the military, whose outpost also rests on the hill just a few feet behind the trees.⁸³ For this very reason, Zbeidat is considered "the worst case scenario." It is enclosed by Area C, with a settlement resting directly above it on a hill. Its population density is steadily increasing, with no space to continue building.

⁸³ Masih, Nadir. Fieldwork Interview. 25 Jul 2013.



Figure 16: Area B and Area C in Zbeidat, photo by author.

A resident of Zbeidat who has seen through numerous project failures in the Jordan Valley discussed the state of affairs in his village: “NGOs have been working here since almost 2000, but there has been little change, especially in water, and then millions of dollars are wasted. This is mostly a political problem, so we must talk in politics.” He succinctly noted that “there is literally one party who water supply is contingent on. Water isn’t a development issue, it’s a political one. What am I going to do with a tank if I have no water for it?”⁸⁴ For the last thirteen years, NGOs have been providing for Zbeidat. It has reached a point where the village has run out of space to continue on this trend. In his conversation, this Zbeidat resident explains that water

⁸⁴ Zbeidat, Samir. Fieldwork Interview. 24 Jul 2012.

tanks are not the issue, but rather the absence of politics is the issue. Although problematic in many ways, donor agencies have made their niche in the West Bank and remain a significant resource for Palestinian government bodies. With the obstacles to implementing the ideal project, Palestinian utilities and local governments are left with two options: to either accept no project or accept one that yields suboptimal results. In most cases, as with the Jericho wastewater project, they chose to use the funds in some way, rather than not use them at all.

Another common dilemma for rehabilitating and developing new water infrastructure is: a permit, but no funding. (By the time funding is obtained, the permit can be lost if, say, the Israelis declare the site of the project a “closed military zone.”) Alternately, the dilemma is: funding, but no permit. This latter scenario often leads to loss of donor money because agencies have time limits on projects and funds released. And, in both cases, the outcome is no project. For that reason, not using international funding is a significant loss for the Palestinians, if they are in the rare situation of having a permit and funding simultaneously. It is easier to fall into one of the previous scenarios, so Palestinian government bodies go ahead with projects, even if they produce suboptimal or delayed results.

Below, I discuss two cases of water projects in Jiftlek, a Palestinian village that lies approximately 30 kilometers north of Jericho city. The first shows how a project proposal can be delayed due to additional steps required by the Civil Administration in the West Bank. The second case gives another empirical account of the Catch-22 situation that Palestinians face in addressing problems of water sector rehabilitation. This problem is pervasive in the West Bank and was seen earlier with the Jerusalem Water Undertaking.

In 1999, the PWA was approached by an international development program with the funding to upgrade the water distribution system in Jiftlek. Although Jiftlek is beyond the PWA's jurisdiction, it is the sole fundraiser and representative for the Palestinian water sector. The PWA submitted the project proposal to the JWC and it was not until three years later, in 2002, that it received the first approval from the committee.⁸⁵ After this, the PWA sent Jiftlek's proposal to the Israeli Civil Administration. The Civil Administration includes twelve departments, such as electricity, infrastructure, agriculture, planning, etc. In order to implement the rehabilitation project, the proposal must be granted by each department.

In 2005, conditional approval was given by the Civil Administration because its Department of Agriculture claimed that the project site was of historical significance. It required that the PWA have an examination conducted at the site, by an Israeli archaeologist. The additional expenses were deducted from the project's budget. Following a close survey of the site, the Civil Administration decided that the design of the project must be changed to accommodate the land's archaeological value. As the proposal was revised, the PWA had to resubmit the request to all twelve Civil Administration departments. In this time period, the Palestinians lost the initial international funding that was offered for this particular project, due to the organization's time constraints. Consequently, the costs had to be covered by the Palestinian Ministry of Finance to rehabilitate the waterline in Jiftlek. However, the funds were only enough to cover preliminary costs. The PWA submitted several grants

⁸⁵ *West Bank and Gaza*, 54; Najjar, Yousef. Fieldwork Interview. 8 July 2012.

to various international NGOs, one of which was finally accepted. Altogether, the Jiftlek project took almost ten years to complete.⁸⁶

The prior project rehabilitated a few of the pipes in Jiftlek, but the distribution plan remained the same. Jiftlek, like many other Palestinian villages in the Jordan Valley, have a distribution system that produces a “soccer field effect.” To rectify the problem in Jiftlek, the PWA sought funding from an international relief organization. The project was for a water storage tank in the center of the village, which would distribute water from the main Mekorot line evenly to the Palestinian households. The new project would build a central water tank in the village that would connect to the main line coming in from the Israeli source. Mekorot’s main well and quantity of water would remain unaffected by the project.

Figure 17 shows how the “soccer field” distribution is set up in Bardala, Zbeidat, and Jiftlek, compared to what the new project proposed. On the left, the Mekorot well provides water to Jiftlek, but the first home consumes the greatest amount because it is the first consumer, as opposed to the last home which receives only what is left of the allocated supply. The illustration on the right, in Figure 17, shows the new project that was proposed for Jiftlek. Mekorot’s supply would have been connected to the central tank, and then distributed outward to the homes in Jiftlek. As a result, each household would receive an equitable water supply from the Israeli well.

Once the PWA brought this proposal to the JWC, it was immediately rejected. In the time that it took for this to occur, international funding was lost as well. These two projects in Jiftlek did not intend to increase the village’s supply, but instead to

⁸⁶ Najjar, Yousef. Fieldwork Interview.

rehabilitate water pipes and create an efficient distribution system. With a water quota already too scant for their needs, the resulting water loss was a major concern.



Figure 17: Initial “soccer field” distribution vs. proposed distribution.

A member from Jiftlek’s village council commented on their struggles: “Even the smallest rehabilitation project needs a license in Area C. You need a license to do anything in C, but it is very difficult to get any license there, even for reducing unaccounted for water.”⁸⁷

An additional problem is Israel’s securitization of water resources. Water is an extension of its national security. That is often the underlying purpose for the Civil Administration’s rejection of permits. Using the powers of the 1967 military orders that require permits for all water related installations, Israel monitors and intervenes to control all water sector development.

An unobstructed path for the international donors would make project implementation of the West Bank’s water network an easier process. However, due to the little rehabilitation that has taken place since 1967 and the decades old infrastructure, donor assistance is stuck in emergency mode, providing only basic needs to the Palestinians. Their assistance is invested and reinvested in projects that

⁸⁷ *West Bank and Gaza*, 54.

are inherently unsustainable.⁸⁸ The head of Bardala’s village council commented, “The NGOs are only giving us relief and must ask Israelis if they want to implement a project, and that even rarely gets approval.”⁸⁹ He went on to explain that the NGOs “are providing the pipes here, but these mean little when there is no water in the pipes.”⁹⁰ But due to the critical conditions of water infrastructure in these areas, the PWA and Jordan Valley depend on donor funding for short-term solutions. The director at BirZeit’s Institute of Environmental and Water Studies (IEWS) elaborated further by saying, “Each system has a life period. As soon as it needs rehabilitation and maintenance and expansion there are not enough funds, and if donations are limited, then you say ‘goodbye water!’”⁹¹ It follows that extending the life of pipe, by even a few months, for example, ensures some level of Palestinian access to water, albeit insufficient.

The magnitude of political obstacles in the Jordan Valley has caused Palestinian disillusionment for their future. With the suboptimal projects and plans that take place, there remains no real recognition of the power dynamics. Issues of water are tangled with issues of land, building, agriculture—issues that in their very essence affect Palestinian livelihood. As the resident from Zbeidat remarked, “Lift the occupation and we don’t need the NGOs.” In order to do that, politics will require a significant place in the discussion of West Bank water resources. By eliminating critical elements from the solutions that are often opted for, we fail to consider the

⁸⁸ Zeitoun, 145.

⁸⁹ Halabi, Tayeb. Fieldwork Interview. 24 Jul 2013.

⁹⁰ Halabi, Tayeb. Fieldwork Interview.

⁹¹ Abu Mahdi, Maher. Fieldwork Interview. 28 Aug 2012.

daily experiences that truly speak to the successes and failures of technical approaches.

Rawabi: State-building Without a State

With the challenges confronting Palestinian areas throughout the West Bank, the Rawabi project is an enigma. It is a project that has tried to move beyond a failed peace plan between Israel and Palestine, in hopes of “encouraging private investment and creating incentives for development and growth” in the West Bank.⁹² Its primary developer, Bashar al-Masri, has gone so far as to say that “despite politics, building constructive working relationships with Israelis is vital to building a better future for Palestinians.”⁹³ He wants to create not only a new city, but a new Palestinian society, by working with Israeli businessmen and advisors to see the projects through to fruition. However, in the previous chapter, a developer revealed that Rawabi’s success would come at the cost of relinquishing Palestinian claims to refugees and right of return.

The Rawabi project is an illustrative example that shows the inextricable relationship between the final status issues: borders, Israeli settlements, the status of Jerusalem, water rights, and lastly, refugees and the right of return. These five issues are so contentious that during previous peace negotiations, discussing them in detail has been deferred till the very end.⁹⁴

⁹² Van Hollen, Anna. “A Palestinian City for a New Generation.” *The Pulitzer Center for Crisis Reporting*. 28 Feb 2012. Web. 12 Jan 2013, par 3.

⁹³ Van Hollen, par 2.

⁹⁴ Bakshi, Gitankali. “Israel’s Future Dilemma: The Important of ‘Final Status’.” *Strategic Foresight Group*. Oct 2009. Web. 20 Feb 2013, par 1.

The developer from Rawabi discussed the role Israel plays in any development that may occur in the West Bank: “In Area A, according to Oslo, everything is under Palestinian Authority control except water and the limits of the elevations of buildings: ... from up and down ... water is a redline. Area A, B, and C isn’t related to water. Water is C.”⁹⁵ The reality on the ground is drastically different from that in Rawabi’s publicity. There are political challenges that prevent Rawabi from actualizing in the way Palestine’s former Prime Minister Fayyad had imagined.

The lack of an obvious water resource is only one of the issues that confront the city. The project's future also depends on the Israeli authorities' willingness to grant construction for access roads to the city, which would cut through Area C, in close proximity to Atarot. The only existing route into the city exists because, after years of bureaucratic and high-level diplomatic wrangling, the Civil Administration granted Rawabi's developers a permit for a "temporary" road. The road will require renewable yearlong permits. Technically, the developers will have to destroy the road if the current permit expires and an extension is not granted. Even if the Israelis agree to make the road permanent, one two-lane route, as the proposal stands today, is hardly enough for a city expecting to house 45,000 people.⁹⁶

Conclusion

The high rates of water loss (unaccounted-for water) and restrictions on Palestinian land access have created obstacles to the development and sustainability of Palestine’s water sector. There is a Catch-22 in the rehabilitation and maintenance of

⁹⁵ Wasem, Jalal. Fieldwork Interview. 7 Jul 2012.

⁹⁶ Rosen, Armin. “A Middle-Class Paradise in Palestine?” *The Atlantic*. 11 Feb 2013. Web. 20 Feb 2013, par. 14.

Palestinian water resources. While many Palestinian areas try to address the issues of water loss in their communities, barriers put in place to restore the networks lead to continued water losses. The issue of unaccounted for water only affects only Palestinian internal revenue. Israel is unaffected by corresponding financial losses. That way, the burden is continuously put on Palestinian utilities, creating an increased likelihood of tensions within Palestinian communities. The processes by which internal tensions develop between Palestinians themselves will be looked at in further detail in the following section.

According to a technocratic framework, the issue of unaccounted for water can easily be framed in a way that emphasizes water's physical rather than political valuation. However, when water is given power through its physical association, it is also assumed to have its own *independent* force. This suggests that water is autonomous, that it has more power than people and their institutions. However, water provision is, fundamentally, a political and social matter, and this becomes clear once power is examined at a multiplicity of scales.

**“The Palestinian Authority Has No Authority”:
The Internal Fragmentation of the West Bank Water Sector**

“Cooperation based on the current power relationship is little more than permanent Israeli domination in disguise.” [Benvenisti, 1995: 232]

As a means to address the politics that were obscured by the “technical domain” of the water conflict, the Oslo Agreement established two institutions to administer the Palestinian water sector. It transferred responsibility for the water sector

to the Palestinian Authority (PA), creating the Palestinian Water Authority (PWA) and established the Joint Water Committee (JWC), a joint Israeli-Palestinian institution, to implement Article 40, including water allocation and project appraisal, but only in the West Bank. The Palestinian Water Authority was instituted as an attempt to improve the capacities of Palestinians by supplying the institution they were presumed to lack. However, due to the informal distributions of power and influence, politics in the water sector became increasingly impenetrable and complex.

The fundamental asymmetry of power, capacity, access to information, and interest in the JWC puts into question its status as a truly joint institution. As such, a power imbalance, combined with the observed track record of the JWC, has contributed to Palestinians' loss of trust and confidence in their government, and to poor outcomes for Palestinian people that undermine the rationale for the committee as a "joint" approach to water sector management.⁹⁷ Further, the PWA has also been hamstrung by the high degree of control that Israel continues to exercise over land and water resources in the West Bank. Upon its foundation, the PWA was immediately confronted with a set of formidable challenges, including: a water sector suffering dire problems; lack of access to an adequate water supply to meet the population's needs; a near-total dependence on international donors; and, severe restrictions imposed by Israel on the type, location, and timing of projects which the PWA is allowed to carry out.⁹⁸ Inevitably, the situation has frustrated the Palestinian Water Authority, as much as it has local Palestinian communities. The result has been heightened internal

⁹⁷ *West Bank and Gaza*, 51.

⁹⁸ *Troubled Waters*, 65.

tensions between the local and nation levels, due to the lack of accountability and reliable services from the government.

Moreover, the endorsement of the Oslo agreement, while legitimizing the PWA, obliged it to accept three conditions that would shape the water conflict for the foreseeable future: 1) the level of control that the Israeli side had achieved by 1995 over water in the West Bank; 2) the management of water resources through an asymmetrically structured JWC; and, 3) a relationship that appears to have been one of subordination from the onset.⁹⁹ Rather than functioning in a genuinely cooperative way, the framework that was established perpetuated the status quo, but now with a newfound legitimacy.

The Palestinian Water Minister and head of PWA, Dr. Shaddid Attili, stated that the ongoing water struggle constituted a strong case to revisit Article 40, and to establish a fairer joint water coordination and management system. “The problem is our whole Oslo agreement,” said Attili. “It’s like a house that hasn’t been fixed for 19 years. It was only ever interim. Now we are living in this house, and it’s about to collapse because nothing has been fixed. One of these issues is water.”¹⁰⁰ Article 40 has not been revised since Oslo II in 1995, although it was an interim agreement with the intention of being revised within a five-year period.

The Joint Water Committee: A Cooperation Misnomer

The development of cooperative mechanisms for managing the West Bank’s water resources has often been lauded as one of Oslo’s major successes for

⁹⁹ Zeitoun, 106.

¹⁰⁰ “Palestinian Water Authority Drafts Alternative to Oslo Water Sharing Agreement.” Emergency Water and Sanitation-Hygiene Group (EWASH). 26 Sep 2012. Web. 12 Oct 2012.

cooperation.¹⁰¹ The 1990s, when the Oslo process was taking place, was also a time when discourse surrounding Middle East water politics took a significant shift, as was discussed earlier in this thesis. For its proponents, it marked a turn in water relations between the two sides. However, positionality must be taken into consideration when looking at accounts of cooperation.

Selby argues that routine cooperation between Israeli and Palestinian water managers was taking place long before the onset of the Oslo process, and the distribution of powers and responsibilities changed little between the pre-Oslo and post-Oslo periods. He states that much of what had been patron-client relations under the occupation was suddenly discursively repackaged and represented as instances of “cooperation” between the two sides.¹⁰²

Selby’s points are evident in the JWC’s most operational feature: its licensing procedure, the results of which we have seen in previous chapters. The JWC is unlike any other transboundary resource management scheme because its procedure is not only operative on a technical level, but on political and military levels as well. On a technical basis, the powers are distributed evenly in the committee, with decisions based on a consensus process. However, a close examination of the procedural process in the JWC reveals the extent of asymmetry that exists in the decision making process.

Approximately 73 percent of total West Bank territory is designated as Area C, under the Civil Administration of the Israel Defense Forces (IDF), and by 2004 an additional 6.8 percent had been confiscated by illegal Israel settlements.¹⁰³ Both of

¹⁰¹ Amery and Wolf (2000); Feitelson and Haddad (2000); Haddadin (2001); Zaslavsky (2002).

¹⁰² Selby, 96.

¹⁰³ Diary 2004. *Palestinian Academic Society for the Study of International Affairs (PASSIA)*. Jerusalem: 2004, 281.

these areas fall outside of the JWC's jurisdiction. This leaves only 21 percent of the entire Territory subject to formal symmetrical JWC authority. Therefore, for over one third of the West Bank, the licensing procedure established a set of norms which ensure that Israeli military interests take precedence over both Palestinian development and joint Palestinian-Israeli water management interests.¹⁰⁴ Thus, by default, the JWU's process is subject to a power imbalance.

As mentioned earlier, the JWC has jurisdiction over water resources in the West Bank, not those located within the boundaries of Israel, which reveals the committee's structured inequity even further. The effect of a circumscribed jurisdiction structured into the licensing process is considerable. Data sharing, joint monitoring, licensing activities and other normal resource management activities do not apply to the transboundary resources located inside Israel, nor to the Israeli settlements located inside the West Bank. As a result, their freshwater consumption and wastewater generation rates must be guessed at by the Palestinian side. From a water management perspective, sharing only partial data precludes meaningful use even when it is available.¹⁰⁵ Israel gains an effective veto power due to the the JWC's restricted domain. Because water projects that take place in Israel and its settlements are not brought to the JWC, there is no equivalent Palestinian veto power.

The PWA's power, performance, and capacity are deeply affected by the asymmetry of information that is available to the Israeli and Palestinian parties. One example is its ability to partake in the Joint Supervision and Enforcement Teams (JSETs). Under the Oslo Accords, JSETs were set up to monitor water extraction, but

¹⁰⁴ Zeitoun,101.

¹⁰⁵ Ibid, 102.

the Palestinian teams no longer take part because they are unable to fully execute their role due to Israel's partial data sharing. Without access to the Israeli settlements and limited freedom to enter Area C of the West Bank, where a majority of the wells are located, the Palestinian teams cannot fully participate in the JSET activities.¹⁰⁶

Due to the power imbalance, the Palestinians were left to rely upon the Israeli teams for data, with a great deal of information entirely off limits. A chief program coordinator for a local development group reflected on this challenge for the Palestinians by saying that "information is very important; we should know more, but it is hard to access the information."¹⁰⁷ Instead, the PWA is in a disadvantaged position for water sector planning and management, and cannot access the information needed to go forth on water related actions and decisions. Zeitoun uses an allegory to describe the Israel's restricted domain by saying that attempts at rational water management over a series of "islands" on one half of the resource is as impossible and nonsensical as managing a few small strands of trees within half a forest.¹⁰⁸

The disproportionate degree of control has also aggravated the internal dynamics of the Palestinian water sector. It has essentially left the Palestinian Water Authority with little authority over its own decision making process and thus has strictly limited its abilities in Palestinian communities. It is virtually impossible for the PWA to conduct any integrated planning and management of the resource. At best, its role has been reduced to improving water conditions on a short term basis.

¹⁰⁶ *West Bank and Gaza*, 51.

¹⁰⁷ Washaha, Raslan. Fieldwork Interview. 22 Jul 2012.

¹⁰⁸ Zeitoun, 102.

The Internal Fragmentation

An impassioned PWA official stated, “We are in a state of crisis management,” and, “What the government is doing is ad hoc. We can only give day-to-day solutions, but we are not here for this. We should be here for long-term solutions.”¹⁰⁹ In the interview, he referred to the inability of the government body to implement an integrated water system in the West Bank. With the Israeli measures in place, the PWA is able only to address immediate needs or emergency projects for its constituents. The PWA official alluded to the possibility that the water specifically allocated to autonomous areas of the West Bank was also mismanaged.¹¹⁰ “The Palestinians are to blame here,” he said, “but, our water is occupied, our water services are occupied.”

Even though the PWA is the regulator and implementer of the Palestinian water sector, its role has been compromised by the institutional order that has developed through the Oslo process. The water supply services are in the hands of various local bodies, such as village councils and municipalities. The villages in the Jordan Valley are theoretically under PWA responsibility, but remain limited in their capacity as a majority of the land is in Area C. The municipalities were established through legal bases that existed before the creation of the PWA, which set them farther apart from the national water authority. The physical fragmentation of land resulting from Oslo has prevented any resolution to the fractious character of the West Bank’s water sector. In fact, it becomes even more fractious because the resultant “jungle of providers” has contributed to internal jurisdiction issues along with conflicting priorities and interests.¹¹¹

¹⁰⁹ Najjar, Yousef. Fieldwork Interview. 8 Jul 2012.

¹¹⁰ Najjar, Yousef. Fieldwork Interview.

¹¹¹ *West Bank and Gaza*, x.

Such unclear distinctions between local municipalities, the national government, and the Israeli regime inevitably lead one to wonder, who ultimately makes decisions about water in the West Bank? As they vie for the authority of resources, tensions between the local communities and the national level emerge. The former's lack of confidence in national Palestinian government structures determines the kind of relations that exist today. This is owing to the fact that the PWA has neither developed a singular water system or regulatory elements in the sector that can ensure a cohesive regional model for water supply.

The Jerusalem Water Undertaking

With regard to the water sector in Ramallah Al-Bireh, to some extent two parties are involved. Importantly, JWU is the sole provider of services. However, because the PWA is Israel's counterpart in the Joint Water Committee, it serves as the international representative and fundraiser for the Palestinian water sector.¹¹² For this reason, the JWU maintains a level of partnership with the PWA, which helps establish links to external funds.

Still, there is a unique situation between the PWA and JWU that arises because of their very different legal foundations. The PWA was established through the Oslo process. The JWU was developed before the war in 1966, as a nonprofit within a Jordanian legal framework. During the Oslo process, Jerusalem was declared a final status issue, which put it outside PWA jurisdiction for the intended period of the interim agreement. Therefore, the PWA is not given any effective authority over Jerusalem or its water issues until a full peace agreement is achieved.

¹¹² Najjar, Yousef. Fieldwork Interview. 9 July 2012.

Because the final status issues have been unresolved since 1966, JWU has maintained itself as the primary water supplier for the neighborhoods of East Jerusalem. This part of Jerusalem was captured and annexed by Israel in the war of 1967, and therefore is predominantly Palestinian. The JWU sought to protect its authority over the area and establish itself as the sole water utility for the Palestinians in East Jerusalem. In order to do this, the utility must first purchase water from Jehon, an Israeli supplier. Then, it subsidizes the supply to its customer base in East Jerusalem. Although the JWU becomes a middle man in this scenario, it is still able to claim a segment of Jerusalem as its own. If the PWA and JWU merged, the former would be the senior authority for water issues due to its national governing status. As a result, because the PWA is not given claims to Jerusalem until a final agreement is reached, the customers in East Jerusalem would no longer fall under the JWU, a Palestinian jurisdiction. Instead, they would fall under Israeli jurisdiction and receive their water supply by Jehon, the Israeli utility.

According to a manager at the JWU, “Jehon is trying to take control of the water supply to [the Palestinian neighborhoods in East Jerusalem]. This will be a political issue.”¹¹³ Right now, even though it is more expensive to first purchase from Jehon, it continues to be more important that the Palestinian supply company not lose its customer base to an Israeli company. In this way, the political tensions are much more subversive. The JWU is currently subsidizing the water supply to Jerusalem from internal revenue. However, due to financial constraints, the JWU is in talks with the PWA to cover the subsidy from national funds, so that it may continue to provide for East Jerusalem.

¹¹³ Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

There are two consequences of the current situation for the Palestinian water management sector. On the local level, the internal institutions remain fragmented because a unification of the PWA and JWU comes with the loss of Palestinian authority over a Palestinian area (East Jerusalem), resulting in additional territory that is directly subject to Israeli providers. That way, there is an incentive for the Palestinian institutions to remain fragmented. A framework has emerged that in fact deters the PWA and JWU from joining together. Also, the PWA's role as the organizer and regulator of the sector is reduced to one of merely fundraising for the JWU. The political situation prevents the PWA from meeting the expectations laid out in the Oslo Accords, which were ironically intended to alleviate the challenges. Although it was founded in a perceived time of optimism, the governance structure as it is today has eroded the PWA's capacity building.

In the Jordan Valley, tensions between the PWA and local government councils are based on the foundation that the national authority has not been dependable. With little resources provided to local government and growing frustration due to their rapidly increasing isolation in the Jordan Valley, the villages have also not been able to fulfill their intended roles.

The Jordan Valley

“The Palestinian Authority is very weak and cannot help us. We are very weak and cannot fight Israel. And the water is not enough. What can we do? This is the question in my heart.”
- Nadir Masih, Local Village Council Head, Zbeidat. July 24th, 2012.

Zbeidat, Jiftlek, and Bardala are all classified as Area B, but are geographically separated pockets throughout the Valley, preventing the PWA from creating an effectively planned and integrated water system. The quote above, from Zbeidat's

council head, speaks to his dismay regarding the capacities of Palestinian water governance and his unfeigned concern for a solution. He addresses the Palestinian Water Authority's failure to strengthen the foundation of local government and its lack of effectiveness in working with the local village councils. A high-ranking official from the PWA commented on this point: "Are the LVCs able to manage the water supply based on the situation in which they are living? Unfortunately not. We didn't build a strong institution."¹¹⁴ Even though the PWA is responsible for water management in these areas, it has failed to establish any capacity building programs for the villages. The official went on to explain the PWA's ideal for the local government bodies: "The village councils were part of what we tried to build. Our dream was to make a water utility out of the council, but in this area, the conditions haven't let us establish this. Now we can barely even delegate to them."¹¹⁵

With the few capacities that the village councils *do* have, the PWA feels that it has not done enough on a local level to enforce Palestinian payment of water bills. "The village council should convince the people to pay, say that they are part of the problem, but part of the solution, too" said the PWA official. By not increasing the payment collection efficiency, the PWA is paying the costs of its water debt through its value added tax (VAT), which further compromises the Palestinian government's access to revenue that it could invest in sectors of Palestinian society. There are no resources to carry out any implementation for payment collection in these areas. The councils are an important partner for the PWA since they are in direct contact with the

¹¹⁴ Najjar, Yousef. Fieldwork Interviews. 9 Jul 2012.

¹¹⁵ Najjar, Yousef. Fieldwork Interviews.

Palestinian people in the Jordan Valley and could be the most effective conduit for getting communities to pay for the water supply.

With their limited resources, the village councils are unable to perform at full potential. A resident and member of the local village council in Zbeidat commented, “The head of this LVC is really like the head of the entire half of the Jordan Valley.”¹¹⁶ During an interview, Zbeidat’s head received a call from Jiftlek’s village council head. Jiftlek had lost electricity. Because some communities use electricity to generate water pressure, the loss of electricity can be a serious problem. Earlier in this thesis, Zbeidat’s village head indicated the concerns that water pumps could have on the village. The use of water pumps to generate more pressure affects the electricity that is available for other needs in the village and can create a local crisis. What is critical to the case in Jiftlek is that neither village authority knew who was accountable in the case of a power loss. The lack of accountability is a direct outcome of the extremely fragmented nature of the West Bank’s governing sector. Zbeidat’s head stated, “The PA will not help us because we are not paying our bills [and therefore] we heavily rely on NGOs [for our power].”¹¹⁷

While the PA was not committed to any development or projects in the Jordan Valley, an official from the PWA responded that it was unable to assist during emergencies in the Jordan Valley because of the level of restrictions that were placed on the organization by the Israeli administration. For the same reason, there was little possibility of an emergency proposal to be carried out in a timely manner. In addition, because the local village councils were unclear as to who was accountable for Jiftlek’s

¹¹⁶ Zbeidat, Samir. Fieldwork Interview. 24 Jul 2012.

¹¹⁷ Masih, Nadir. Fieldwork Interview. 24 Jul 2012.

needs, the heads decided to contact an NGO in the area, to see if it could provide some answers. By chance, my field visit to the area was organized by a local Palestinian NGO. Therefore, the organizers connected Jiftlek with the NGOs Director General. From there, the Director General was able to brainstorm options for who Jiftlek should look to as a solution for its power loss. Finally, it submitted an emergency relief proposal to an international agency on behalf of Jiftlek. In exactly this way, greater reliance upon international donors is created, especially in the case of short-term relief work. In effect, the PWA is left out of the decision process entirely.

Building on this, a representative from a local NGO characterized the implications of the internal struggles that take place: “Frankly, we are occupied, even our Authority is occupied. So, what can we do?”¹¹⁸ There is no unified representation of the Palestinian side that would stand for the issues that are taking place. “We have no one to frame a discussion from our side” he said. The fragmented governance is a direct outcome of the Oslo process, which established an inequitably structured treaty and created inequitable arrangements to determine the use of water resources. While some areas are integrated into the Israeli system, other areas that fall under PA jurisdiction are, in reality, managed by a network of local municipalities. A renowned geographer and water scholar from the Hebrew University commented, “There is no [Palestinian] system of carrying water from one place to another, it’s disjointed.”¹¹⁹ It is disjointed as a result of those clauses in Oslo that further enshrine Israeli control, such as the division of the West Bank into various areas. But the clauses that may have

¹¹⁸ Washaha, Raslan. Fieldwork Interview. 22 Jul 2012.

¹¹⁹ Feitelson, Eran. Fieldwork Interview. 6 Aug 2012.

benefited the Palestinian side, like Israel's recognition of Palestinian water rights, were neglected.

Conclusion

Mark Zeitoun, a water academic from the London Water Research Group, says that with the legitimacy of the PWA tied to the agreement, the more powerful side was able to structure the JWC so that it guaranteed the perpetuation of asymmetric water distribution. As well, the great success the Israeli side has had in sanctioning the discourse that surrounds Palestinian water development efforts, and the conflict in general, has cornered the PWA into a position of subordination and subjugation.¹²⁰

The PWA's weak position prohibits it from achieving a solution to the fragmentation of its water sector. In fact, the newly created structures in Oslo actually promote its fractious nature by creating a situation that prevents the consolidation of key Palestinian water governing bodies, such as the PWA and JWU. The undermined position of the PWA has further prompted internal struggles in the water sector, further engendering a lack of confidence from local communities. Instead of creating genuine cooperation over transboundary water issues, inequality of power, freedom, and responsibility between Israeli and Palestinians was reified within the institutional order, thereby giving it a newfound legitimacy.

¹²⁰ Zeitoun, Mark, 150.

CHAPTER V

UNGOVERNABILITY: BY ACCIDENT OR BY DESIGN?

The preceding chapters concerning physical challenges for the West Bank's water sector, such as Palestinian water supply and high rates of unaccounted-for water, highlighted how technical issues have been shaped by political imperatives. As a response to the ongoing complexities of politics, institutions were established between Israel and the Palestinian Authority to oversee water provision in the West Bank. However, the institutions allowed Israel to qualitatively accumulate more control and fragment the Palestinian water sector, contributing to greater internal challenges. I intend to explore those in greater detail later.

The following two sections illustrate the internal challenges in Palestinian society. They also show the ways in which Palestinians have responded to local water sector challenges. As a result, Palestinian society is stuck in continuous cycles of crisis, leading to ungovernable conditions. The three principal obstacles to a reliable water supply have led to two significant Palestinian responses: (1) refusal from Palestinians to make payments on their water bills; and (2) rural to urban migration by Palestinian farmers who lack adequate water resources to sustain agrarian lifestyles.

The challenges that exist within the Palestinian water sector trigger Palestinian responses that are natural to their frustrations. At the same time, they are stuck in perpetual cycles of failure because political circumstances prevent their access to sustainable and longterm solutions. The Palestinian responses are unsurprising in light of the conditions that have developed at the community level. However, as we shall see, they also have significant implications on the what happens at the national level.

Palestinian Debts to Israel: Nonpayment of Water Services

The technical realities, lack of reliable water supply, and poorly maintained water infrastructure, as well as the compromised position of the PWA, have created a sense of disillusionment amongst the Palestinians. In reaction to challenges which their government has been unable to resolve, they have stopped making payments to the PWA for their water. Consequently, the Palestinian water sector is in debt to Mekorot, and in turn, to Israel. As a result, the unpaid Mekorot invoices are paid by Israel, offsetting those charges against the value added tax (VAT) it collects on Palestinian imports.

This chapter first provides a brief background on how Israel withholds Palestinian taxes, often for extended periods of time, and deducts the costs of its services, without first transferring them to the PA. Without tax revenue, the PA is unable to be a dependable resource for its people, creating internal strains within Palestinian society. Second, it discusses one manifestation of Palestinian response to unreliable government services through an examination of the reasons why many consumers have stopped making payments. While affordability is an important factor, there are other significant, politically based reasons for why Palestinians choose to respond in this way. Lastly, the chapter shows how the influence of power works to distort political processes. However, before exploring Palestinian responses in further detail, Figure 18 illustrates the conventional payment structure (without issues of debt).

The municipalities and villages make payments to the Palestinian Water Authority, which in turn pays the West Bank Water Department. Within the governance structure, the PWA is essentially a top-tier administration that was created

during Oslo. It is financially supported by funds from the international donor community. The WBWD is still under the authority of the Civil Administration, and the payments it receives go directly to Mekorot. However, if there is debt from the municipalities and villages, the payments are withheld from the VAT, as mentioned earlier.



Figure 18. Palestinian water payment structure.

The internal dynamics of the Palestinian water sector are deeply affected by the lack of internal revenue and consequential debts to Israel. Palestinian consumers are withholding payment for the water they receive from the WBWD via their local municipalities, village councils, and water utilities. Because the Palestinian water sector is now formally under the purview of the PWA, it is also affected by the lack of revenue. The PWA is responsible for paying for the water, including extraction from its own wells, as well as the quantity bought from Mekorot, and for the distribution costs to its population.¹

Palestinians who have spent years working in the local water sector agree that, following the Second Intifada, the situation of nonpaying consumers worsened.² One representative from the JWU shared:

Payers were better obliging until the Second Intifada. The economy suffered, affordability became a problem, and there has been an accumulation of debt since. It became harder for the Palestinians to pay. We

¹ *Troubled Waters*, 67.

² Salhoub, Amar. Fieldwork Interview. 7 Jul 2012; Najjar, Yousef. Fieldwork Interview. 8 Jul 2012; Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

offered installments, but still, it made little difference. The camps still didn't pay.³

Although he works for the JWC, the representative addressed an issue that is typical throughout the West Bank. Poverty has increased in the territory since 2001, shortly after the uprising began, due to harder economic conditions and the impact of Israeli-imposed restrictions. Many have been left with little option but to contravene the water law in order to deal with severe water shortages, which the PWA has been powerless to prevent or overcome.

Many of my interviews revealed additional, more nuanced reasons for why some Palestinian communities are not paying, and how some municipalities have tried to address the situation within their own areas. In other interviews, the PWA and local NGOs expressed understanding for *how* the political circumstances and Palestinian experiences living under occupation have led to their distrust in any future resolution of water conflict. While some Palestinians do not pay simply because they cannot afford to, many have made the active choice not to pay as a way to harness some power in a situation in which they feel powerless.

The reasons Palestinians are not paying vary: their frustration with the lack of reliability in their water supply; political resistance; or, traditional understandings of ownership, which conflict with present day Israeli policies. As a result of low payment rates, the Palestinian water sector struggles to generate enough revenue to cover the operating costs of distribution. The revenue shortage is otherwise needed for rehabilitating infrastructure or buying additional equipment to meet the growing demands of the Palestinian areas. Due to a lack of internal revenue, Palestinian water service providers depend on external funds. Villages of the Jordan Valley, due to their

³ Salhoub, Amar. Fieldwork Interview.

political and social conditions, do not generate enough funds for the rehabilitation of networks, ergo their heavy reliance on international donors. The JWU and Jericho are also struggling to generate enough revenue to sustain more than their cost of distribution.⁴

As a result, the unpaid Mekorot invoices are paid by the PWA through Israel, offsetting those charges against the value added tax (VAT) it collects on Palestinian imports.⁵ As a consequence, the revenue that the PA might collect through its taxes is not transferred in its entirety by Israel. Israel has a history of withholding Palestinian tax revenue as a consequence of decisions and actions made by the PA. However, the situation is also exacerbated by issues within Palestinian society.

Israel and the Palestinian Authority Tax Revenue

In November 2012, Palestine made a successful bid to the United Nations to upgrade its status from “nonmember observer entity” to “nonmember observer state,” providing it a similar status to the Vatican. Palestinians hoped this would provide leverage in their dealings with Israel.⁶ However, since the statehood campaign, Israel has openly withheld tax revenues from the PA and claimed to do this until at least March 2013 in response to the Palestinian President’s actions.⁷ Currently, Israel has yet to transfer those funds to the PA. Previously, in December 2012 the Israeli Foreign Minister, Avigdor Lieberman, declared that, “The Palestinians can forget about getting

⁴ Bsharat, Jalal. Fieldwork Interview. 1 August 2012.

⁵ *West Bank and Gaza*, 22.

⁶ Ariosto, David and Michael Pearson. “U.N Approves Palestinian ‘observer state’ Big.” *CNN*. 30 Nov 2012. Web. 20 Feb 2013, par 2.

⁷ “Israel to Withhold Palestinian Funds until March.” *Reuters*. 12 Dec 2012. Web. 20 Feb 2012, par 1.

even one cent in the coming four months, [then] we will decide how to proceed.”⁸ Almost thirty European Union ministers criticized this response from Israel and noted that under the Paris Protocol of 1994, and later at Oslo II of 1995, “contractual obligations, regarding full, timely, predictable and transparent transfer of tax and custom revenues have to be respected.”⁹ The Paris Protocol was an annex of a larger agreement between Israel and the Palestinian Authority, which governed economic relations between the two sides. Later, in 1995 the Protocol was incorporated into the Oslo II Accords.

The withheld taxes are also used by Israel to pay off money that Palestinians owe to its Electric cooperation, as well as its water authority. Just a few months ago, the Israeli Finance Minister announced that “NIS 450 million (\$120 million) in tax revenues that were to be transferred to the Palestinian Authority would instead be used to offset PA debts [...]” Many media sources and critics claimed that this move was a punitive measure against Palestine’s UN bid.¹⁰ A similar occurrence took place in 2011 when Israel froze payments to the PA following UNESCO’s approval for Palestine’s full membership.

As Israel withholds taxes as a punitive measure and tool to collect debts, Palestinian society is also affected internally. As the tax revenues are not transferred to the PA, the Authority does not have the cash to pay public sector salaries. These effects on income have led to strikes by teachers and health workers in the Territory who have become frustrated with their delayed and inconsistent salaries. As a result, there is a

⁸ “Israel to Withhold Palestinian Funds until March.” par 3.

⁹ Gardner, Andrew. “EU Criticises Israeli Plans.” *European Voice*. 12 Dec 2012. Web. 20 Feb 2013, par 11.

¹⁰ Zeiger, Asher. “PA claims Israel still withholding tax revenues.” *The Times of Israel*. 18 Feb 2014. Web. 20 Feb 2013, par 2.

great deal of despondency about the PA from its people. Disillusionment has contributed to the refusal of Palestinians to pay their bills, which creates a cyclical problem. The Authority has been unable to provide consistent salaries, water supply, or donor successes in the West Bank. As a result, the government's failure to provide for the Palestinians has led to heightened frustration within society. On the other hand, when the PA does not receive its taxes, its prospects for the financial autonomy and viability of the Palestinian water sector are undermined.¹¹

The Jerusalem Water Undertaking

Over the last forty-five years, the JWU has accumulated a debt of almost NIS110 million (approximately \$40 million) of unpaid water bills. But, through some recent innovations in collection procedures, the utility has managed to collect NIS10 million through settlements with consumers. The JWU stated that current revenues are only enough to cover its operating costs. International funding is directed mostly towards the maintenance of networks.¹²

The refugee camps, under JWU jurisdiction, are one component that influence the utility's low collection rate. While the camps do make payments, their rates are significantly lower, as seen in refugee camps throughout the West Bank. This has created friction between the utility company and the camps. The former attempts to resolve debt issues in its jurisdictions in order to meet growing needs in Ramallah Al-Bireh, while refugees have learned to be pessimistic after decades of fruitless debate about their status and rights. According to the municipality, UNRWA is able only to

¹¹ *West Bank and Gaza*, 22.

¹² Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

pay for water in its own facilities within the camps, such as the schools or community centers, not for the water use taking place within individual Palestinian households. Those additional costs are sometimes covered by international donors, while the remainder is deducted by Israel from the PA's tax revenues.

The JWU has hosted and continues to host workshops in the camps to raise awareness of the challenges of low payment rates, and aims to establish direct relationships with the customers. Despite that, consumers still resist. One of the workshop coordinators shared that, "They often tell us 'improve our living condition and we will pay, or switch places with us and then see what happens.'"¹³ The refugees have found themselves living in a permanently temporary life, one that is increasingly marginalized and impoverished. Their places in the camps were only meant to be temporary. But now, instead of tents and shacks scattered around dirt paths, cementlike structures stand tall, appearing like mini-cities. Camp refugees' frustration comes with living in these circumstances. One way in which that frustration manifests itself is through Palestinians' refusal to pay into a system that has let them down.

As we saw in chapter 2, the JWU suffers from a high rate of nonrevenue or unaccounted-for water (UFW). In addition to real or physical losses, which result from poor infrastructure, the JWU also faces the issue of apparent losses. These losses occur through illegal connections made to the water network. Currently, the JWU has two teams that are in the process of negotiating agreements with the Palestinian police and courts, to promote better enforcement and monitoring of situations like these.¹⁴

¹³ Tahan, Abdel. Fieldwork Interview.

¹⁴ Tahan, Abdel. Fieldwork Interview.

Yet, there are local stories of anger and frustration. In the summer, when the weather is especially hot, the water supply is even more strained and the Palestinians struggle to find ways of subsisting. Their gardens suffer and many have to closely monitor when and how much water they are using. A local Palestinian told me about a well he and his family constructed on their property, in order to store additional water from the utility:

[We] had to secretly build this during the night and [we] did get caught a few times, but what else can we do? Some of my brothers went to jail. But this is better than having no water. Sometimes life throws circumstances at us, causing us to prioritize the most difficult options.¹⁵

His family has made an illegal structure to store water as a way of circumventing unreliability. While he recognizes the paradox of going against “his own side,” for a Palestinian without a reliable water supply the distinction between the JWU and Israel is irrelevant. When a Palestinian doesn’t pay a water bill or builds an illegal well, the JWU is immediately confronted by the consequences. If a water bill is not paid, the utility loses the ability to generate internal revenue. From an illegal well, the JWU faces the repercussions of building illegally in its jurisdiction.

Palestinians are not paying for their water supply for reasons beyond affordability. The PWA, while also affected by recurring debts, commented with surprising candor: “Due to the circumstances arising from lack of sovereignty, the Palestinians look to protect themselves.”¹⁶ Self-reliance is another reason for low collection rates in the West Bank. After living through decades of conflict, Palestinians have seen little improvement in their conditions. Therefore, many have lost faith in their government institutions and also, in this case, the Palestinian service providers.

¹⁵ Khoury, Alaaeddin. Fieldwork Interview. 17 Jul 2012.

¹⁶ Najjar, Yousef. Fieldwork Interview. 7 Aug 2012.

As for the JWU, rather than cutting off the water supply, it has turned to institutional enforcement. The JWU has the highest collection efficiency, with 96%, among West Bank municipalities. It is also currently trying to develop a framework for other Palestinian areas. In October 2011, JWU began negotiations for an agreement with the local police and courts. The agreements focused on enforcement tools, such as one that prohibits Palestinians from leaving the West Bank for international travel unless their dues were paid in full to the utility. The JWU quotes five various cases from the Ramallah Al-Bireh area in which families were leaving for their umrah, the Islamic pilgrimage to Saudi Arabia, but were told to return to the municipality and settle payments.¹⁷

If the debts are not settled with the JWU, the company resorts to cutting off water services and giving Palestinians the option to go to court, letting the judicial process decide the appropriate steps.¹⁸ The JWU rarely cuts off supply to its consumers. While it is not a formal law, the director of the Palestinian Hydrology Group, the largest Palestinian NGO focusing on water and sanitation, explains that it is rather a “customary law, one that is not officially in the books, but according to the customs and usual practices.”¹⁹ In other words, it has not been a conventionally used enforcement tool.

Nonetheless, relying on legal institutions to assist in the reclamation of debt is still a challenge. A representative from the JWU administrative department explained that because “the courts are usually on the peoples’ side, because water [is seen] as essential, they rule in favor of the Palestinians.” He continued, “But, it’s a long process

¹⁷ Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

¹⁸ Tahan, Abdel. Fieldwork Interview.

¹⁹ Tamimi, Abdelrahman. Fieldwork Interview. 20 July 2012.

and people don't have time for this [...] so they prefer to deal with the municipality instead of the courts."²⁰

If a case does go to court and it is decided that the consumer is at fault, a court order is given to make the payment. At this point a new level of confrontation arises. Given that a consumer lives in East Jerusalem, an area best compared with Area C in the West Bank due to Israel's de facto annexation, the (Palestinian) court order ought to be enforced by the Israeli police. This can create severe antagonism between Palestinian consumers and their water service providers. This situation often arises, due to the area JWU serves; therefore, enforcing payments through court is often unsuccessful.

Next, we turn to the issues of payment collection in Jericho. Its case shows that disillusionment in national politics has effected Palestinians internally and throughout the West Bank. Such disillusionment manifests itself in Jericho, like it has in Ramallah Al-Bireh, as well as in the Jordan Valley. The lack of trust that Palestinians have in their government has effected society on the most basic and local levels.

The City of Jericho

As a consequence of population and economic growth in Jericho, there has been an increase in demand on the city's domestic water supply over the past decade. This pushes the municipality to provide extra amounts of water at the cost of spring water that is initially allocated for agricultural purposes.²¹ As water consumption in the city increases, its internally generated revenue remains stagnant. Although we have

²⁰ Tahan, Abdel. Fieldwork Interview. 8 Aug 2012.

²¹ Palestinian Hydrology Group (PHG). *Draft Master Plan for Jericho*. Copy acquired through personal correspondence with Jericho Municipality official, Jalal Bsharat. 1 Aug 2012, 58.

already seen that Jericho struggles to implement long-term changes in its water sector, revenue provides the city with an income to preserve itself.

The head of Jericho's Revenue and Collections department stated that the city is currently at a 60% collection rate for water bills.²² He identified two primary reasons for the low rate: 1) affordability; and, 2) the culture and people's mindset of not paying for what Palestinians believe to be "public property."²³ These notions of water as a public good are similar to those in the Jordan Valley with the Mejelle system. The head of the municipality's water department added, "There is a big gap between the public and government. People do not trust the municipality."²⁴

According to the Jericho Master Plan, put together by the Palestinian Hydrology Group, a large proportion of the population in Jericho is considered financially vulnerable due to low income levels.²⁵ This is especially the case in the refugee camps, such as the Aqbat Jabr camp. The revenue from within the city, excluding refugee camps, is only sufficient to meet minimal operational needs. The remaining costs need to be met by external agencies. This is similar to the situation in Ramallah-Al Bireh.

Although cutting off the water supply to consumers could be considered an effective enforcement tool, the Jericho municipality explained that, "We're a social body, one elected by the people, [so] we cannot just turn off our own peoples' water."²⁶

²² Sharif, Baha'a. Fieldwork Interview. 1 Aug 2012.

²³ Sharif, Baha'a. Fieldwork Interview.

²⁴ Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012.

²⁵ Palestinian Hydrology Group (PHG). *Draft Master Plan for Jericho*. Copy acquired through personal correspondence with Jericho Municipality official, Jalal Bsharat. 1 Aug 2012, 59.

²⁶ Bsharat, Jalal. Fieldwork Interview.

The municipality also fears that by cutting off water supply it will create more distrust between the city and its people.

“We cannot turn off the water, but we are allowed to collect money from the people, using the court as a mediator,” shared an official from the city’s water department. “But the problem here is our inability to enforce the court orders.” As a social body, elected by the people, the municipality's incumbency is also confronted with the prospect of losing support, by sending its constituency to court.

In order to address issues of nonpayment, several changes would be required, such as reconfiguring and increasing the current water tariff, so that consumers would discipline their consumption. According to the city’s Master Plan, the tariff structure would be adjusted based upon a comprehensive evaluation of the socioeconomic circumstances of the city residents and the Municipality’s cost recovery objective.²⁷ The current block tariff system does not address the actual cost of water supply and was not defined to address future needs.²⁸ The current tariff block structure is summarized in Figure 19.

It is a problematic tariff block structure because the consumption ranges are too broad, which results in 78% of Jericho falling in the first block category. The first block category is merely NIS1/cubic meter (\$0.27/m³). This is the lowest water rate out of all the Palestinian administered regions of the West Bank. With an already inadequate collection rate, coupled with the low price for water, the chances for Jericho’s water department to generate necessary revenues are low.

²⁷ *Draft Master Plan for Jericho*, 60.

²⁸ *Ibid*, 58.

Customer Categories According to Consumption (ANNUAL 2009)				
Block no.	Consumption Range (m ³)	Price (NIS/m ³)	Number of Customers Per Block	Percentage of Customers Per Block (%)
1	0 -100 m ³	1 NIS/m ³	3207	78%
2	101 -150 m ³	2 NIS/m ³	497	12%
3	151-250 m ³	4 NIS/m ³	296	7%
4	> 250 m ³	5 NIS/m ³	133	3%
TOTAL			4133	100%

Figure 19: Jericho’s current tariff structure, adapted from the Palestinian Hydrology Group.

Nonetheless, the municipality official explained that the “city feels frustrated with the mayor. Due to politics, he won’t change the tariff system. As a consequence, we are suffering in the water department because how can we tell people to [pay] for water, when we are [practically] giving it to them for free?”²⁹ While he offers a worthwhile point, in the twist of politics and lack of enforcement tools in Jericho city, it is difficult for the city to increase its collection rate. Thus, Jericho has internal revenue problems for its own city but also faces the challenges of minimal collection from the Mekorot supplied areas in its jurisdiction, like the Jabr camp. These issues require that Jericho rely on external sources to cover anything beyond operational costs.

The director of the Institute of Environmental and Water Studies (IEWS) at BirZeit University stated, “If the cost and service of water supply and distribution is not met, the feasibility and sustainability of the water network is threatened.”³⁰ The utilities and local village councils need revenues through tariffs as well as international donations and aid. Currently, the operations costs are covered by a narrow margin, but

²⁹ Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012.

³⁰ Abu Mahdi, Maher. Fieldwork Interview. 28 Aug 2012.

the investment costs are provided by external resources. However, the director commented that if increasing tariffs is the goal, it is mostly low income communities that will be affected. They are already adopting coping strategies such as purchasing additional water from tankers. Rather than paying for coping strategies, household funds would just be redirected to higher tariffs. He argued that there was little benefit to increasing the tariff, because there is still no guarantee of higher collection rates.³¹ The low recovery rates could remain despite an increase in tariffs.

The debt issue deeply affects the resources that the PWA has to invest in the water sector. It further inhibits the Palestinian government from having any significant influence on the decisions that take place on a state level, between themselves and Israel, because they are in a subordinate position. As a result, the Palestinians see their government as subject to the laws of an occupying force and recognize their own powerlessness.

The head of Jericho's water department suggested that it was not only a money issue: "Sure, the PWA is paying, but there is still not enough water [for Palestinians]. It is not that you pay more and then you get more. It is not like this. It has been a fixed quota since Oslo."³² For the city, Aqbat Jabr camp faces difficulties in getting enough water to meet the community's needs. Other West Bank areas that depend on Mekorot's water supply are also confronted by this challenge. The comments of the head of Jericho's water department reveal why many Palestinians resist making payments to the water sector. There is little initiative for them to contribute positively to a water sector that already does not meet their needs.

³¹ Abu Mahdi, Maher. Fieldwork Interview.

³² Bsharat, Jalal. Fieldwork Interview. 20 Jul 2012.

The Jordan Valley

*“You are occupying me and you are asking me to pay you
... the cost of your occupation?”
-Nadir Masih, Head of Zbeidat’s Local Village Council, July 24th, 2012*

Among the several village council heads whom I interviewed, there was unanimous agreement that the villages were not paying their water bills. Palestinian water supply is abstracted from underground aquifers that lie beneath the valley, by Mekorot. The Israeli company then sells the water back to the Palestinians at additional costs, which include pumping, transfer, and so forth. The problem is that Israel has taken local authority away from the Palestinians to drill their own wells, develop their own water resources, and establish their own water networks. So in place of self-sufficiency, they are paying full cost for their water supply, one that is already subjected to strict quotas.

Another challenge for the Palestinians in the Jordan Valley is the disparity between themselves and Israeli settlers. The visual presence of seemingly abundant water resources and Israel’s social incentives in the settlements create a psychic struggle for Palestinians for whom those resources are inaccessible and unavailable. The subsidized water irrigation systems that allow settlements to increase their agricultural production at a cheaper rate is in sharp contrast to the conditions of Palestinian production.

Since shortly after 1967, the Israeli administration defined certain occupied territories as “National Priority Areas” (NPAs), where it aims to expand its population within those areas. Although illegal by international law, Israeli citizens in NPAs are entitled to specific benefits under Israeli law. The entirety of the West Bank has been designated as such, by Israel. The government gives its citizens within NPAs

subsidized housing and education, in addition to industrial, agricultural, and touristic benefits as incentives to live in the area.

With no support from their own government, and no privileges of citizenship, Palestinians are constantly navigating through vulnerable conditions. Their agricultural sector is one example. Palestinian agriculture is subject to a restricted water supply and limitations on agricultural equipment. Its access to the market is also affected by checkpoint delays. Due to road restrictions, produce delivery trucks must take circuitous routes, which either damages the produce during transfer, or costs more to sell than Israeli produce. A member of the PWA admitted, “[Palestinians] are not paying in the Jordan Valley, [we] recognize this. Israel provides social insurance to the settler communities, something that we are not able to do for our people.”³³ The power differential between Israel and the PA remains, and thus so does the PWA’s inability to make any real contribution. Consequently, Palestinians have become especially resistant to the PA, due to its lack of efforts in the area and to the visible contrast in their own sense of livelihood versus those of the settlers.

Further, due to the “artificial amputation” of the Jordan Valley, as referred to by the Ma’an Development group in Ramallah, it is nearly impossible for the Palestinians to function in a cohesive and effective manner.³⁴ The Palestinian villages are obstructed by forty-three Israeli settlements, and checkpoints, combined with Israeli military and free-fire zones, all considered off limits to the Palestinians.³⁵ These villages are increasingly isolated from other Palestinian areas in the Jordan Valley and

³³ Najjar, Yousef. Fieldwork Interview. 8 July 2012.

³⁴ *Restricted Access and Its Consequences*, 17.

³⁵ The Ma’an Development Center. "The Palestinians of the Jordan Valley." Online video clip. *YouTube*. 8 Jan 2012. Web. 15 Oct 2012.

elsewhere in the West Bank, and their condition is essential in determining Palestinian frustrations, causing them to retreat from a system occupying them. They are living in a situation that is often referred to as the “microcosm” of Israeli occupation.³⁶ The Palestinian villages in the JV are little pockets of land disconnected from one another, and suffocated by Israel’s NPAs and other strategic military areas. As an academic in environmental conflict at Hebrew University said, “The Jordan Valley is perceived as Israeli territory by many Israelis,” and therefore the Palestinians are relegated to second-class status.³⁷

With absolute loss of Palestinian autonomy and self-determination, “we are not paying!” was the frequent chant recited by many local Palestinians and members of the local village councils. The Jordan Valley is one of the key agricultural areas in the region. With the climate, fertile soil, and water resources (as a result of the underground aquifers), the valley is most conducive to production. But, no Palestinian areas receive such worthwhile benefits because limited access to water.

Before 1967, Palestinians were permitted to build wells and maintain their water infrastructure in order to access the water resources. Having gone through various stages of rule—Ottoman, Jordanian, and now Israeli—the transition of practicing ownership rights has also created problems for the ways that Palestinians culturally understand ownership versus their Israeli counterparts. My intention is not to make a culturalist assumption that claims that prestate perceptions stand in the way of modern water management practices, or that the Palestinian community, due to its traditional ideas, is not equipped to deal with the new circumstances. Rather, the point

³⁶ See White (2010); “The Jordan Valley: A Microcosm of the Occupation.” *Al-Zaytouna Centre for Studies and Consultations*. (2011); Lorber, (2011).

³⁷ Fischhendler, Itay. Fieldwork Interview. 28 Jun 2012.

is to show how Palestinian traditions have been swept aside as a result of dispossession. Water had never previously been as strongly regulated until the creation of the Israeli Water Law in 1959, which signaled a major policy shift from prestate legal doctrines.³⁸

The pre-state doctrine, *Mejelle*, was established under the Ottoman rule and constituted part of Palestine's legal code under the British Mandate. It also remained a part of Israel's legal code until it was eventually repealed in the 1950s. The *Mejelle* built itself on Islamic notions of gratuitous property rights, Water, like grass and air, was declared a free natural resource, owned by the public. Water resources were not absolute in the *Mejelle* because river and groundwater could not themselves be owned. However, it did permit that a well or portion of a river existing on a specific property belonged to the owner of that property. Based on his roots in the *Mejelle* tradition, the head of Zbeidat's village council fervently stated, "It's under my feet and [the Israelis] just dig it from the ground! This water, it's right here," he said as he pointed to the ground, "and you're telling me to pay you?"³⁹ Today, water is no longer in Palestinians' control, but strongly centralized under the occupying state, and they are unable to dictate how or when their water is supplied.

In Bardala, the village council was forthright about not paying for its water supply. With the PWA's accumulated debt, in part from villages such as his, when asked about the village's relationship to the water authority the council's head stated, "No, they are not helping us. They are not doing anything but telling us to pay. Okay,

³⁸ Alatout, Samer. "State-ing natural resources through law: the codification and articulation of water scarcity and citizenship in Israel." *Arab World Geographers*. 10.1 (2007): 16-37, 24.

³⁹ Masih, Nadir. Fieldwork Interview. 24 Jul 2012.

we will pay, but first give us our deserved supply and even then, we will only pay for the supplying of water, like pumping and the infrastructure.’⁴⁰

In the previous chapter, the issue was that village councils were not given the appropriate resources from their national government to fully realize their potential. While that is true, there is also a level of apathy from village councils, due to their frustration with the PA, thereby creating disincentive for the councils to enforce payment from the consumers.

In addition, due to the strict quotas in place for domestic and agricultural water, the village head showed his dissatisfaction of an inadequate supply, which is aggravated by water losses from an ill-maintained water network. The obstacles are unlikely to foster optimism amongst Palestinians. He also admitted that while he and his community would pay for water, they would never fathom paying for the actual water, but only for the system supplying it. His point reflected the differing perceptions and cultural outlooks with respect to the water issues between Israel and Palestine, which were a recurrent theme throughout my various interactions with informants in the Jordan Valley.

A Subsidy Analogy: An Indicator for Power

The debt issue within the Palestinian water sector highlights the lack of Palestinian sovereignty. The way in which Israel withholds taxes from the PA serves as a measure for the power inequality that exists between the two sides. In a context without coercion, a portion of the PWA’s tax revenues is put towards the cost of Palestinian water supply in the West Bank. According to the ideas of basic economic

⁴⁰ Halabi, Tayeb. Fieldwork Interview. 24 Jul 2013.

theory, this process functions as a subsidy from the government. However, it cannot be a subsidy without sovereignty, which remains the missing piece. The point is not to make an obvious observation, but instead to show the way in which distortions occur under occupation. What could be a simple subsidy from the PWA to its people is rather a means for sustaining a power imbalance.

The Palestinian government's taxes are technically going towards ensuring water supply in the West Bank. But, because the PA is not actively choosing to do this from within its own government, it sets it apart from a subsidy. Instead, the debts are withheld from the PA by the Israeli state. In practice, the Palestinian Authority has accepted that its taxes be taken from the VAT. They have accepted this as a de facto policy because, as a government, with its role as a provider of social services, the PA continues to purchase water in bulk from Mekorot, in order to maintain Palestinian water supply. The situation reflects the PA's perception of water as a basic right, but also, if it withholds supply for the Palestinians, it becomes a facilitator to Israel's use of water as a tool to reinforce an inequitable power dynamic.

As the PA's tax revenues are withheld from Israel to cover water debts, the scenario plays out like a system of government subsidy. However, the underlining and fundamental difference remains: the absence of Palestinian sovereignty and lack of agency. The geopolitical influence of the conflict has created a situation where loss of Palestinian revenue is a matter of subjugation. It is not an active decision made by the PA with Palestinian interests as the foremost consideration, but rather a matter of circumstance.

It is a generally understood principle that the parties involved in giving and receiving subsidies will benefit long term. For example, when Israel provides settlers

with subsidies as an incentive to move to the West Bank, both parties are benefiting. Israel is populating communities in the West Bank as a strategic move. The settlers are receiving social services from the government that provide them access to resources otherwise too expensive inside Israel. For example, a member of Israel's Jordan Valley Regional Council quoted, "It is still cheaper to build a house in the Jordan Valley, cheaper than anywhere else."⁴¹ For this member, "anywhere else" refers to the state of Israel. In fact, an op-ed piece in the New York Times by both an Israeli journalist and a Palestinian journalist discusses Israel's investment of its public construction budget: much of the lack of affordable housing in Israeli cities can be traced back to the 1990s, when the availability of public housing in Israel was severely curtailed while subsidies in the settlements increased, driving many lower-middle-class and working-class Israelis into the West Bank and Gaza Strip—along with many new immigrants.⁴² Therefore, the subsidies meet the interests of the Israelis migrating into the West Bank and the Israeli government.

The situation for the Palestinian Authority differs quite radically. It is a subsidy in the sense that the PA has accepted that its revenue be withheld in order to supply water to its people. In the long term however, the Palestinians and their government are suffering the consequences. Israel's withholding of PA revenue contributes to Palestine's powerlessness and loss of agency in determining how funds are allocated. It is a worthwhile metaphor that illustrates circumstances of sovereignty vis-a-vis subjection.

⁴¹ They also mentioned that until the mid 1990s, the government was building the houses as cheaply as possible for settlers. Ma'an Center interview 11 Dec 2011 qtd in *Parallel Realities: Israeli Settlements and Palestinian Communities in the Jordan Valley*. Ramallah: Ma'an Development Center, 2012, 13.

⁴² Reider, Dimi and Aziz Abu Sarah. "In Israel, the Rent Is Too Damn High." *The New York Times*. 3 Aug 2011. Web. 20 Feb 2013, par 6.

If the PA were autonomous in its dealings, it would be the sole party in determining how subsidies are given to assist municipalities and village councils. Rather than the Israelis deducting funds from the VAT, the PA would intentionally allot money toward Palestinian water supply. However, the situation as it is today is a matter dictated by Israel.⁴³

A Palestinian water scholar suggested that the PWA declare an “optimal tariff,” as a means for Palestinians to reclaim control of *at least* the debt crisis and Israel’s withholding of debt from VAT revenue. That would require the PWA to identify two values: one for the optimal tariff and another based on the consumer’s affordability. His idea was that an optimal tariff should be constructed based on credible social, economic, cost recovery, and environmental criteria. The second value would be determined based on the amount being paid by the Palestinian consumers and the extent to which cost would be enforceable. The difference between the optimal tariff and enforceable payment is what should be absorbed by the Palestinian Authority.⁴⁴

An optimal tariff allows the Palestinian government to gain credibility with the Palestinians, and could possibly serve as a form of “social insurance” in some capacity. It does not address the situation of nonpayers in its entirety, but it enables the PA to reclaim some “symbolic” agency in the process. As there is already little confidence in the Palestinian Authority, such measures could work towards diminishing the gap between the local Palestinian population and the national authority.

⁴³ Abu Mahdi, Maher. Fieldwork Interview. 28 Aug 2012.

⁴⁴ Abu Mahdi, Maher. Fieldwork Interview.

Conclusion

Palestinian resistance to pay for water supply illustrates the importance of how a local issue implicates the various levels of society, eventually exacerbating the interactions between Israel and the PA. From the local household's refusal to pay for water, the issue becomes an area of contention between the two sides, beginning at a micro-level but affecting the macro-level. When individual households do not pay their water bills, the debt contributes to an issue at the community level. As a result, the municipalities and local village councils struggle to generate enough income to fully realize their capacities. While the Palestinian consumers remain frustrated due to their strenuous conditions, the utilities try to provide a water supply without the ability to utilize effective governance techniques, which in turn can foster internal tension. At the state level, the PWA's debts further aggravate its relationship with Israel, which deducts the outstanding payments from the Palestinian tax revenues. Consequently, debt is an additional trigger to prolong tensions between two sides. Ultimately, the problems at the household level continue, due to political and socioeconomic conditions resulting from the conflict between Israel and the PA, creating a fundamentally cyclical problem.

Creating Place for the Displaced: The Challenges of Palestinian Rural to Urban Migration

“As a Palestinian, I would prefer to buy Israeli tomatoes because they are cheaper [than Palestinian tomatoes]. We don't have a subsidy - that is our fault. [The government] should subsidize in response to the struggle. Our farmers will leave because they are investing and investing, but losing.”
- Yousef Najjar, member of the Palestinian Water Authority, July 8th, 2012

The agricultural sector of the West Bank, especially in the Jordan Valley, has suffered as a direct result of the high degree of control that Israel continues to exercise over land and water resources. This section expands upon the current conditions facing Palestinian farmers. Not only is there a growing inability for Palestinian farmers to engage in sustainable agriculture, but as we saw in Bardala, the availability of arable land is also decreasing. The Palestinian farmers are unable to compete with Israel's subsidized water, tax breaks, and cheap land on its expanding agricultural settlements in the Jordan Valley.⁴⁵ For this reason, there is an outward migration of Palestinian farmers from the Jordan Valley into either urban settings or Israeli settlements looking for work. The latter portion of this chapter consists of a reflection on the increasing scale of migration into Ramallah Al-Bireh and Jericho, which has created pressures on the cities' systems.

Agriculture is one of the main means of livelihood for the Palestinian people and takes on significant economic, social, and political roles within their communities. It provides food security and contributes to poverty reduction, especially in rural areas such as the Jordan Valley. For many Palestinians, agriculture is a primary source of cultural pride and emphasizes the connection they feel to the land. Agricultural activity has also stood as a symbol against the occupation by creating a psychological hope related to retention of Palestinian land.⁴⁶ Politics are embedded into the Palestinian means of livelihood because, with its loss comes the loss of Palestinian presence in rural areas. Since Palestinian farmers are paying higher costs for their production while Israeli agriculture is subsidized, they are invariably placed at a competitive

⁴⁵ *Emergency Water, Sanitation, and Hygiene in the occupied Palestinian Territory (EWASH)*. 17 Feb 2013. Web. 20 Feb 2012, par 5.

⁴⁶ *Restricted Access and Its Consequences*, 20; *West Bank and Gaza*, 25.

disadvantage. As a consequence, Palestinians are leaving the agricultural sector and looking for work in the service industry or searching for manual labor in surrounding settlements. Those who are determined to remain in the agricultural sector are moving into Palestinian urban centers categorized as Area A, as the irrigation restrictions there are less limiting. Although a common perception that there are more resources in urban centers, areas such as Jericho are already struggling to meet the needs of their consumer base.

In the opening of this section, a member of the PWA commented on the conditions of Palestinian agriculture. It is ironic that a Palestinian government official would reveal the advantages of purchasing Israeli produce, but in reality, quality produce is more affordable when bought from the Israeli farmers, many of whom are based in the Jordan Valley. The inability to access sufficient resources for field irrigation presents many barriers to the Palestinian agricultural sector. Since they are prevented from building new wells, reconditioning existing wells, and digging deeper wells near springs, Palestinian farmers do not have enough water to irrigate their fields. Furthermore, Israeli farmers are receiving water at subsidized costs. For example, a case study conducted by the World Bank concluded that an Israeli farmer is paying an average of NIS 0.6 per cubic meter of water, while a Palestinian farmer pays between NIS 4 and NIS 12 shekels for the same quantity.⁴⁷ In this way, the Israeli tomatoes that the government official refers to serve as a metaphorical representation of the crisis that confronts Palestinian agriculture *and* the consequent displacement of farmers from agricultural areas.

⁴⁷ *West Bank and Gaza*, 103.

Of all the agricultural land in the West Bank, 62.9% of it is located in Area C, most of which is in the Jordan Valley where Palestinians are unable to expand their production. They are often required to obtain special permits to cultivate.⁴⁸ “The farmers are moving to work in the settlements,” admitted the water authority’s representative, “and it’s the government’s fault here. We should support the people there. We are only giving the farmers promises after promises.”⁴⁹ As mentioned earlier, Palestinian residents of the Jordan Valley have lost faith in their leaders to be able to provide them the resources to build resilient communities. They look to their Authority in hopes that it will be able to build a foundation like Israel has for its settlers. Instead, there are no resources that the Palestinian government can provide to its agricultural sector. While Israel destroys the capacities of Palestinian communities to expand in the sector, it also provides the next reliable source of income through settlement labor.⁵⁰

In Jiftlek and Bardala, agricultural needs are especially affected by the insufficient supply of water and Israeli policies curtailing Palestinian access to the markets. Because there is little potential for Palestinian markets to flourish, Palestinians from these areas in particular are either looking to settlements for work or migrating out of the villages. The head of Jiftlek’s village council explains how many cases of migration take place: “The farmers are going to [the cities] because the land there is Palestinian controlled, it’s easier to buy there, and the distance for tankers to travel is less, so it’s more affordable.”⁵¹ However, due to the nature of the economy in

⁴⁸ *Restricted Access and Its Consequences*, 20.

⁴⁹ Najjar, Yousef. Fieldwork Interview. 8 Jul 2012.

⁵⁰ *Eye on the Jordan Valley*. Ramallah: MA'AN Development Center, 2010, 15. Usually, it is low paid, with no social security, medical care or labor rights.

⁵¹ The price of water transported by tanks has increased exponentially since the beginning of the Second Intifada, by as much as 153%. *Restricted Access and Its Consequences* (2011); Kanaan, Aziz. Fieldwork Interview. 3 Jul 2012.

the cities, it is less likely that migrants can sustain their livelihoods through agriculture entirely. For that reason, many migrants make the change to working in the service sector.

If the Palestinian farmer chooses to purchase additional water from tankers for agricultural use, transportation costs are significantly higher in the Jordan Valley than in the urban center. As I mentioned earlier, the Jordan Valley is incredibly isolated and for a tanker to reach a Palestinian village, it would have to pass through various checkpoints and military crossings, making it a longer and more expensive journey. It would be cheaper to deliver the tanker water to Area A cities as they are more accessible to the West Bank's road network.

In the Jordan Valley, while all the houses are located in Area B, a majority of the farmland is located in Area C.⁵² Among the population, there are demands for additional housing due to the extended family structures that exist, but there is little space to expand. "All the houses are in Area B, but there is no more room to build without encroaching into agricultural Area B," explained a local official from Jiftlek.⁵³ As a result, the Area B that was once used for agriculture is converted into space to build more homes, similar to what has happened in Zbeidat. Another member of the village council explained:

The problem is that the agricultural land in area B has the most [relative] autonomy, [we] can build irrigation systems, structures, get better tools and equipment [...] to sacrifice this more autonomous area of land [is] not an easy compromise for the local community.⁵⁴

⁵² Kanaan, Aziz. Fieldwork Interview. 3 Jul 2012.

⁵³ Kanaan, Aziz. Fieldwork Interview.

⁵⁴ Halabi, Tayeb. Fieldwork Interview.

However, sacrificing better arable land to build more homes also means that Palestinians are forced to cultivate under more difficult circumstances or to choose leaving their villages in hopes of finding alternative means of income in the cities. The restrictions placed on farmers in Area C are extensive. They are unable to cultivate without first obtaining permission from the Civil Administration. If they do not relinquish Area B agricultural land, then the villages are unable to create more living space according to their needs. Both scenarios contribute to outward migration.

In Bardala, the head of the village council told me: “Water is the most important to us. We will leave it if doesn’t get better because then there is nothing left for us.”⁵⁵ He went on to tell me that as cultivatable land decreased due to the shortage of water supply, many people in Bardala also left for different Palestinian cities outside of the West Bank.⁵⁶ “Even the land we have here is too much for the amount of water that is available to us. We don’t have enough water to make use of the land that we do have.”⁵⁷ In this way, Palestinian land in the Jordan Valley is shrinking due to the lack of resources available to sustain itself. On one level, land has been explicitly confiscated in the Jordan Valley and declared an Israeli security zone, but what the Palestinians are left with is, for all intents and purposes, also confiscated due to the imposed restrictions on water supply.

An official from the Palestinian Water Authority explained his perspective on the situation: “Palestinians are an obstacle to the Israelis, especially in the Jordan Valley. Israelis are letting people evacuate themselves in the Jordan Valley, by creating

⁵⁵ Halabi, Tayeb. Fieldwork Interview. 24 Jul 2012.

⁵⁶ Halabi, Tayeb. Fieldwork Interview.

⁵⁷ Halabi, Tayeb. Fieldwork Interview.

conditions causing them to leave ... applying all constraining measures.”⁵⁸ Rather than migrating due to explicit force, the circumstances are such that force manifests itself in latent forms. The entirety of surrounding land in the valley, which Palestinians previously farmed, is now an enclosed Israeli enclave. The checkpoints that rest between these two Area B and Area C designations create challenges for the farmers, who sell their produce outside of the Jordan Valley because they create delays in the transportation of goods.

With the frustrating conditions and limited options for livelihood in rural areas of the Jordan Valley, Palestinians look elsewhere for work. Those who are not going to the settlements are moving into Palestinian cities, but migration into the cities is putting a great deal of pressure on urban areas. For example, Ramallah is already confronted with an increasingly limited supply of water and will struggle to meet the demands of a steadily increasing population. A taxi driver of almost forty years in the Palestinian Authority’s capital once described Ramallah to me as a “small box, with a large donkey kicking inside it.”⁵⁹ His analogy highlights the fact that instead of growing and expanding, the urban center is actually swelling. An increasing population will only make the circumstances more difficult for the JWU utility to meet the demands of its consumers. Jericho, with its climate and unique historical and social significance, is also suffering increased water demand. Although Ein al-Sultan is an autonomous water source, it has not been allowed to develop or grow because of the restrictions that coincide with water infrastructure. Additionally, the municipality is

⁵⁸ Najjar, Yousef. Fieldwork Interview. 9 Jul 2012.

⁵⁹ Akram. 5 Jul 2012.

already allocating less of its water for agricultural purposes so that it can meet the domestic needs of the city.

The effects brought forth by the lack of control on local water resources permeates all sectors, areas, and communities of the West Bank. A Palestinian program coordinator for an international donor agency explained that water was needed in order for his community to grow. He said, “We have needs. We need water for industry and agriculture and domestic purposes. It’s not just for drinking water, we need it for trees, food, we need it for *development*.”⁶⁰ He illustrates the fact that the foundation for growth, sustainability, and progress in the West Bank is directly correlated to Palestinian access to their own water resources. Without it, the West Bank will regress, allowing power imbalances on the national level to persist.

Migration Pressures on Palestinian Urban Centers

The issue of limited resources in the Jordan Valley creates reason for Palestinians to migrate outward. As a result, Palestinians move from rural areas to live and work in urban centers, which creates considerable burden on the municipalities. The challenges of migration affect both Jericho and Ramallah Al-Bireh. However, because the latter has developed into Palestine's administrative, commercial, and cultural capital, it has attracted a significantly larger number of migrants from elsewhere in the West Bank. The population pressures from internal migration strain the cities' public facilities, infrastructure, and their economies, while also heightening internal tensions. A writer from the Arab Thought Forum, an independent Palestinian

⁶⁰ Washaha, Raslan. Fieldwork Interview. 22 Jul 2012. Emphasis own.

organization specializing in local socioeconomic development, quoted a local Ramallah resident on his experiences with the increasing population:

This migration brought us nothing but more pressure on buildings, services, and roads,” he said. “In Al-Tireh, where I live, you can find up to 200 people living in one 10-story building with 30 apartments. They all have their own way of life and customs, and it’s hard to mix with them.⁶¹

Under great population pressure, Ramallah faces a great deal of pressure on its public service facilities, as it has to continue providing space for the incoming communities. The local resident, quoted above, alludes to the increased likelihood of tensions within the city, due to an influx of individuals with contrasting cultural norms and social networks that are otherwise common to rural areas of the West Bank. These factors create a situation that is impossible to sustain and contribute to a divisive environment between Palestinians themselves.

The number of buildings and apartments went from 115 in 2001 to 149 in 2003, and the number of commercial centers doubled in 2003 compared to 2001.⁶² As conditions in the rural areas have not improved, it is safe to assume that these numbers will steadily increase. In order to meet growing needs, the municipality must pave roads, connect electricity, and provide water for the incoming people.

Economic burdens are an additional challenge for the municipalities. Ramallah Al-Bireh and Jericho both lack a self-sustaining economic base. Ramallah serves as the nerve center of a political system precariously reliant on donor money. Most of the money in its economy comes from the PA, the largest employer in the West Bank.⁶³

⁶¹ Geith, Bilal. “Migration Pressures in Ramallah/Al-Bireh Lead to Calls for a Comprehensive Development Plan.” *Arab Thought Forum*. 2003. 5 Jan 2012. Web. 5 May 2013, par 1.

⁶² Geith, Bilal. “Migration Pressures in Ramallah/Al-Bireh Lead to Calls for a Comprehensive Development Plan,” par 5.

⁶³ Lakhani, Leone. “Fears of Bubble Burst after Ramallah Boom.” *CNN*. 10 Sep 2012. Web. 5 May 2013, par 12.

The consequences to this dependency are apparent. With the shortfall in foreign aid and temporary Israeli-imposed financial sanctions, the West Bank government was forced to delay paying salaries several times during the past year. Furthermore, the lack of space and need to develop Ramallah's infrastructure has caused property prices to become exorbitantly high. Due to the large amount of international presence, the droves of diplomats and foreign NGO employees who flock to Ramallah with high salaries pay top-dollar rents, further fueling property prices.⁶⁴ While landlords are enriched, the locals are resentful. Moreover, many landlords refuse even to rent their flats to poorer Palestinian locals.⁶⁵ Combined with adversity between city locals and migrants, the challenges resulting from international presence create another layer of tensions within the city.

“All indications are pointing to this bubble bursting,” commented an American-Palestinian activist from Ramallah Al-Bireh. As a result of pressures on public services, infrastructure, and economy, Ramallah is swelling. With additional social problems, the deepening cleavages in Palestinian society exacerbate existing tensions. The formal job sector growth is also not enough to productively absorb the population coming into the cities, which in effect leads to increasing unemployment. The attempts to incorporate more employees into an already bloated system, with limited resources and weak institutions, will produce devastating results.

The case of Ramallah Al-Bireh signals the harder times ahead for urban centers if demographic trends continue. Migration at increasing rates could lead to a collapse in city systems, given that they are already in a compromised position. Amid rising

⁶⁴ Naylor, Hugh. “Ramallah is booming, but residents wait for the bubble to burst.” *The National*. 25 Apr 2012. Web. 5 May 2013, par 13.

⁶⁵ Naylor, Hugh. “Ramallah is booming, but residents wait for the bubble to burst,” par 13.

internal divisions in the city, insufficient public services, eroding trust in Palestinian political parties, and poor economic conditions for both the PA and locals, urban centers may be plunging into a prolonged phase of ungovernability.

Conclusion

Palestinians in the Jordan Valley and urban centers are living a precarious existence. As land in the valley continues to decrease and farming becomes an increasingly impractical source of subsistence, the Palestinian agricultural sector will dry up slowly, leaving most Palestinian water sources allocated to the cities. As the farmers look to alternative means of livelihood in the cities, they are confronted with a situation that is equally insecure.

Palestinian cities have attracted a growing population, with people moving to urban centers from all across the territory. According to a World Bank report, the Palestinian economy has grown at an average of 7.7% a year between 2007 and 2011, most significantly centered in cities.⁶⁶ However, as we have seen, this “growth” is belied by fragility, and much of the growth taking place is the result of generous international aid. But, sustainability cannot not be based upon foreign aid. As anxiety among the public increases due to internal challenges and inadequate public services, Ramallah, eventually, will likely be a failed system.

Ungovernable conditions in the Palestinian urban centers serve to further undermine the peace process between Israel and the PA on a national scale, a process that has already been stuck for years. While autonomous areas are trapped in a cycle of perpetual failure and the government is unable to promote a resilient Palestinian

⁶⁶ Lakhani, Leone. “Fears of Bubble Burst after Ramallah Boom,” par 16.

society, Palestinians are deemed incapable of being a genuine “partner in peace,” a claim that is frequently made by Israel. In his 2009 Bar Ilan speech, the current Prime Minister of Israel identified economic and social development in Palestine as the key to peace between the two sides. Prior to that, in 2008 as opposition leader, he told Israeli lawmakers, “We have seen this in the world, quickened economic and social development has helped form the conditions for peace and the resolution of conflict.”⁶⁷ However, as we have seen, the challenges that are experienced at the local level are in a cycle of perpetual failure, further impeding the capacities of Palestinians, both individuals and the collective. The inherent contradictions make one wonder: Is this by accident or by design?

⁶⁷ “Full Text of Netanyahu’s Foreign Policy Speech at Bar Ilan.” *Haaretz*. 14 Jun 2009. Web. 5 May 2013; “Netanyahu: For the Sake of Peace, Israel must aid Palestinian Economy.” 12 Nov 2008. Web. 5 May 2011, par 7.

CHAPTER VI

CONCLUSION

The stories in this thesis involved local water management in the West Bank. My aim has been to focus on the processes and outcomes of challenges in the Palestinian water sector, challenges informed by the real life struggles of people engaged with water provision on a daily basis. First, by scaling down the analysis, the power structures and relations surrounding water governance are crystalized. Second, in a gradual progression, each empirical chapter shows the step-by-step process in which local water supply problems aggravate the situation between Israel and the Palestinian Authority, on a national level.

In the Palestinian water sector, poor water supply and antiquated water networks are primary, everyday concerns. Their shortcomings reinforce one another and political barriers prevent sustainable solutions. In order to promote cooperation over water between Israel and the Palestinian Authority, the Oslo peace process established institutions for water resource management. However, Oslo's inequitable structure favors the existing power asymmetry, and politics continue to give shape to issues that are presumably technical in nature.

As a result of technical failures and the weak position of their government, Palestinians have responded to the challenges in highly politicized and predictable ways. Their reactions further substantiate that the three obstacles to integrated water management *are* political in nature. When Palestinians fail to pay their water bills at the household level, it leads to problems at the community level; in turn, the local government is unable to generate revenue. As a consequence, the PWA is in debt to

Mekorot, a parastatal organization. Nonpayment contributes to tensions at a national level between Israel and the Palestinian Authority. This becomes a perpetual cycle: frustrated with poor water service, Palestinians refuse to pay their bills. Israel docks the PWA for the unpaid bills by taking money from the VAT revenue it collects for Palestine. With reduced revenue, the PWA is less able to provide public services, increasing Palestinian frustrations with their own government. Rural to urban migration by Palestinian farmers presents a similar cyclical challenge. While issues of inadequate water supply confront rural Palestinian communities, urban centers are faced with migration pressures resulting from the increasing numbers of farmers leaving the Jordan Valley. The Palestinian cities' are unable to sustain their increasing population. However, the challenges confronting farmers remain unresolved in the rural areas. Therefore, the issues of migration and urban pressures are perpetual. Although issues of water supply, infrastructure, and failed institutions are inherently political, they are often recast in neutral language in order to propose solutions. The Palestinian reactions, however, call attention to the underlying power dynamics and highlight what is obscured by simplified, standardized, and static solutions.

As a result, Palestinian society is stuck in cycles of crisis that make the Palestinian Territories increasingly ungovernable. This continues to undermine the Palestinians' role in the peace process. It a rhetoric used time and time again to discount them in the negotiation process. It can be encapsulated as follows: How can Palestinians be in peace talks if they can't govern themselves? Why should they be taken seriously as real partners in negotiating important issues if they are unable to govern themselves? According to such claims, Palestinians cannot be "partners in peace," as the Israeli prime minister frequently claims.

The process shows how Israel continues to gather more control, through an intentional strategy of contained asymmetry in the water sector. As James C. Scott stated, “The greater the power disparity between dominant and subordinate, the more arbitrarily it is exercised.”¹ The more arbitrary the power, the more easily it can be veiled. Therefore, with power’s many masks, the conditions of vulnerable groups are exposed through the *nuances*.

The discourse surrounding water crisis in the Middle East highlights dominant invocations of state and restricts challenges in the water sector to the technical domain. It is particularly the case when water struggle is characterized by armed conflict or peaceful cooperation. A discourse of this kind is designed to find a solution to water conflict. While technocrats continue to focus on cooperation initiatives in the Middle East, they obscure the complexities as well as the significance of power in shaping water conflict.

In attempts to counter the “water leads to war” thesis, solutions for the Israeli-Palestinian water conflict are reduced to prescriptive and mechanical domains. Furthermore, by concentrating on a violent notion of conflict at the interstate scale, the exploitations that take place in more discursive ways, against nonstate actors, are neglected. Zeitoun makes an important point when he states that, in the Israeli-Palestinian water struggle, ever increasing control of water is not *actually* possible; that there are real limits to which physical control can be acquired.² There are finite water resources upon which Israel can exert its control. However, it does not mean that

¹ Scott, James C. *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press, 1990, 4.

² Zeitoun, 83.

power, itself, is finite. Instead, that power permeates into all aspects of Palestinian life. Power becomes so thorough that it is almost impossible to tamper with.

By rendering problems in the water sector as “technical,” the primary cause of failures is assumed to be Palestinian mismanagement. Institutions in the Palestinian government are deemed corrupt and incapable. On the other hand, there is little incentive to fix institutions if society is ungovernable. Institutions are made up of people and if Palestinian society is in a cycle of crisis, there is little motivation to create transparent and reliable institutions. Without this understanding, the solutions that are implemented to resolve the Israeli-Palestinian water dispute create a gap between what is attempted and what is accomplished. The status quo is unchallenged and the problems do not match the solutions, resulting in a cycle of perpetual failure.

The local challenges of Palestinian civil society are obscured by the technical domain. Furthermore, the water struggle is a process of people, not states. These critiques are not dead, but as critical geographer Jennifer Hyndman rightfully claims, “they have ceased to serve conceptual or political interests.”³ Thus, it remains necessary to challenge state centered scales as pre-given and discrete from other levels of analysis. Rethinking scale of analysis has the potential to subvert dominant geopolitical narratives, actions that might have concrete effects on the lives of people, who are players in such events. This thesis has looked at processes to understand the outcomes. Furthermore, it shows that local insecurities are much more of a challenge because they are easily obscured, but have immense implications.

³ Hyndman, Jennifer. "Mind the Gap: Bridging Feminist and Political Geography Through Geopolitics." *Political Geography*. 23.3 (2004): 307-322.

REFERENCES CITED

- Abu Amer, Adnan. "Economic Peace Before a Political Solution in Israel, Palestine." *Al-Monitor*. 19 Apr 2013. Web. 21 Apr 2013.
- Agnew, John. "The Territorial Trap: The Geographical Assumptions of International Relations Theory." *Review of International Political Economy* 1.1 (1994): 53-80.
- . "Waterpower: Politics and the Geography of Water Provision." *Annals of the Association of American Geographers*. 101.3 (2011): 463-476.
- Alatout, Samer. "State-ing natural resources through law: the codification and articulation of water scarcity and citizenship in Israel." *Arab World Geographers* 10.1 (2007): 16-37.
- Allan, J.A. "Middle Eastern Hydropolitics: Interpreting Constructed Knowledge." *Geopolitics*. 3.2 (1998): 125-132.
- Amery, Hussein A, and Aaron T. Wolf. *Water in the Middle East: A Geography of Peace*. Austin: University of Texas Press, 2000. Print.
- Ariosto, David and Michael Pearson. "U.N Approves Palestinian 'observer state' Big." *CNN*. 30 Nov 2012. Web. 20 Feb 2013.
- Awartami, Hisham. "Artesian wells in Palestine: Present Status and Future Development." *Palestinian Hydrology Group*: 1992. Print.
- Bakshi, Gitankali. "Israel's Future Dilemma: The Important of 'Final Status'." *Strategic Foresight Group*. Oct 2009. Web. 20 Feb 2013.
- "Bardala Village Profile." *Applied Research Institute of Jerusalem*. Feb 2006. Print.
- Bashir, Basema, Michael Talhamy, Allah N. 'Ata, and Ayman Rabi. *Water for Life: The Dilemma of Development Under Occupation : the Obstacles to Achieving the Millenium Development Goals and Water Rights in the Occupied Palestinian Territory*. Jerusalem: Palestinian Hydrology Group, 2006.
- Benvenisti, Meron. *Intimate Enemies: Jews and Arabs in a Shared Land*. Berkeley: University of California Press, 1995.
- Blauner, Robert. "Forward." *Portraits of White Racism*. Cambridge, UK: Cambridge University Press, (1977).

- Blauner, Robert, and David Wellman. "Towards the Decolonization of Social Research." *The Death of White Sociology*. Ed. J. A. Ladner. New York: Vintage Books, 1973. Print.
- Brooks, D, and J Trottier. "Confronting Water in an Israeli-Palestinian Peace Agreement." *Journal of Hydrology*. 382 (2010): 103-114.
- Budds, Jessica. "Contested H2O: Science, Policy and Politics in Water Resources Management in Chile." *Geoforum*. 40.3 (2009): 418-430.
- Dellapenna, Joseph. "Building International Water Management Institutions: The Role of Treaties and Other Legal Arrangements." *Water in the Middle East : Legal, Political and Commercial Implications*. (1995): 55-89.
- Denzin, Norman K. *The Research Act: A Theoretical Introduction to Sociological Methods*. Chicago: Aldine Publishing Company, 1970. Print.
- Diary. *Palestinian Academic Society for the Study of International Affairs (PASSIA)*. Jerusalem, 2004. Print.
- Dolatyar, Mostafa, and Tim Gray. "The Politics of Water Scarcity in the Middle East." *Environmental Politics*. 9 (2000): 65-88.
- . *Water Politics in the Middle East: A Context for Conflict or Co-Operation?* New York: St. Martin's Press, 2000.
- Dudley, Dominic. "Japan's Middle East Soft Power." *The Diplomat*. 13 Apr 2012. Web. 20 Feb 2013.
- Elhance, Arun. *Contested Grounds: Security and Conflict in the New Environmental Politics*. Eds. Deudney, Daniel, and Richard A. Matthew. Albany: State University of New York Press, 1999. Print.
- el Musa, Sharif. *Water Conflict: Economics, Politics, Law and Palestinian-Israeli Water Resources*. Washington DC, USA: Institute for Palestine Studies, 1997, Print.
- Emerson, Robert M., ed. *Contemporary Field Research: Perspectives and Formulations*. Prospect Heights, Ill: Waveland Press, 2001. Print.
- Feitelson, Eran. "The Ebb and Flow of Arab-Israeli Water Conflicts: Are Past Confrontations Likely to Resurface?" *Water Policy*. 2.4 (2000): 343-363.
- ."Implications of Shifts in the Israel discourse for Israel-Palestinian Water Negotiations." *Political Geography*. 21 (2002): 293-318.

- . "Political Economy of Groundwater Exploitation: the Israeli Case." *International Journal of Water Resources Development*. 21.3 (2005): 413-423.
- Feitelson, Eran, and Marwan Haddad. *Identification of Joint Management Structures for Shared Aquifers: A Cooperative Palestinian-Israeli Effort*. Washington, D.C: World Bank, 1998. Print.
- Foucault, Michel, and Colin Gordon. *Power/knowledge: Selected Interviews and Other Writings, 1972-1977*. New York: Pantheon Books, 1980. Print.
- "Full Text of Netanyahu's Foreign Policy Speech at Bar Ilan." *Haaretz*. 14 Jun 2009. Web. 5 May 2013.
- Furlong, K. "Hidden Theories, Troubled Waters: International Relations, the 'territorial Trap', and the Southern African Development Community's Transboundary Waters." *Political Geography*. 25.4 (2006): 438-458.
- Galnoor, Itzhak. "Water Planning: Who Gets the Last Drop?" *Can Planning Replace Politics: The Israeli Experience*. Ed. R. Biliski. The Hague: M. Nyhoff, 1980.
- Garnder, Andrew. "EU Criticises Israeli Plans." *European Voice*. 12 Dec 2012. Web. 20 Feb 2013.
- Geith, Bilal. "Migration Pressures in Ramallah/Al-Bireh Lead to Calls for a Comprehensive Development Plan." *Arab Thought Forum*. 2003. Web. 5 Jan 2012.
- "Geologic Boreholes." *Water boreholes & borehole drilling*. Geologic Boreholes & Systems Ltd, n.d. Web. 1 Mar 2013.
- Giglioli, Ilaria. "Rights, Citizenship and Territory: Water Politics in the West Bank." *The Right to Water: Politics, Governance and Social Struggles*. Eds. Farhana, Sultana. and Loftus, Alex. Taylor and Francis: London, 2011: 139-158. Print.
- Giordano, Mark, Meredith Giordano, and Aaron Wolf. "International Resource Conflict and Mitigation." *Journal of Peace Research*. 42.1 (2005): 47-65.
- Haddadin, Munther J. *Diplomacy on the Jordan: International Conflict and Negotiated Resolution*. Boston: Kluwer Academic Publishers, 2002.
- Harvey, David. *Justice, Nature, and the Geography of Difference*. Cambridge, Massachusetts: Blackwell Publishers, 1996. Print.
- Hassan, M A, K Shahin, B Klinkenberg, G McIntyre, M Diabat, Tamimi A. Al-Rahman, and R Nativ. "Palestinian Water II: Climate Change and Land Use." *Geography Compass*. 4.2 (2010): 139-157.

- “A High-Tech City in a Non-Existent State.” *ANSamed*. 27 Feb 2013. Web. 27 Feb 2013.
- Hillel, Daniel. *Rivers of Eden: The Struggle for Water and the Quest for Peace in the Middle East*. New York: Oxford University Press, 1994. Print.
- “Humanitarian Fact Sheet on the Jordan Valley and Dead Sea Area.” *United Nations Office for the Coordination of Humanitarian Affairs: occupied Palestinian Territory*. Feb 2012. Print.
- Hyndman, Jennifer. "Mind the Gap: Bridging Feminist and Political Geography Through Geopolitics." *Political Geography*. 23.3 (2004): 307-322.
- “Israel Threatens to Cut Water supply to Palestinian Areas.” *Ma’an News Agency*. Ramallah, Palestine. 17 Oct 2006. Web. 5 November 2012.
- “Israel to Withhold Palestinian Funds until March.” *Reuters*. 12 Dec 2012. Web. 20 Feb 2012.
- “Issues Under the Oslo Accords.” *B’Tselem - The Israeli Information Center for Human Rights in the Occupied Territories*. 1 Jan 2011. Web. 7 Jan 2013.
- “The Jordan Valley: A Microcosm of the Occupation.” *Al-Zaytouna Centre for Studies and Consultations*. Dec 2011. Web. 5 Nov 2012.
- Kliot, Nurit. *Water Resources and Conflict in the Middle East*. London: Routledge, 1994. Print.
- Kooy, Michelle. and Bakker, Karen. "Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta." *International Journal of Urban and Regional Research*. 32.2 (2008): 375-391.
- Lakhani, Leone. “Fears of Bubble Burst after Ramallah Boom.” *CNN*. 10 Sep 2012. Web. 5 May 2013.
- Lowi, Miriam R. *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*. Cambridge, England: Cambridge University Press, 1993. Print.
- Lowi, Miriam R, and Mary E. Morris. "Water and Power: the Politics of a Scarce Resource in the Jordan River Basin." *International Journal of Middle East Studies*. 28.1 (1996): 122-125.
- Ma’an. *Eye on the Jordan Valley*. Ramallah: MA'AN Development Center, 2010, 15. Print.

- . "The Palestinians of the Jordan Valley." Online video clip. *YouTube*. 8 Jan 2012. Web. 15 Oct 2012.
- . *Parallel Realities: Israeli Settlements and Palestinian Communities in the Jordan Valley*. Ramallah: Ma'an Development Center, 2012. Print.
- . *Restricted Access and Its Consequences: Israeli Control of Vital Resources in the Jordan Valley and Its Impact on the Environment*. Ramallah: The Ma'an Development Center, 2011. Print.
- Map: *Palestinian Autonomous Area-Jericho*. 1994. Foundation for Middle East Peace Web. 27 Feb 2013.
- McCarthy, Rory. "Rawabi, the new Palestinian city that could rise on the West Bank." *The Guardian*. 8 September 2009. Web. 27 Feb. 2013.
- Mackey, Robert. "The West Bank Archipelago." *The New York Times*. 7 May 2009. Web. 10 Dec 2012.
- Medzini, Arnon, and Aaron Wolf. "Towards a Middle East at Peace: Hidden Issues in Arab-Israeli Hydropolitics." *International Journal of Water Resources Development*. 20.2 (2004): 193-204.
- Naff, Thomas, and Ruth C. Matson. *Water in the Middle East: Conflict or Cooperation?* Boulder: Westview Press, 1984. Print.
- Naylor, Hugh. "Ramallah is booming, but residents wait for the bubble to burst." *The National*. 25 Apr 2012. Web. 5 May 2013.
- "Netanyahu: For the Sake of Peace, Israel must aid Palestinian Economy." 12 Nov 2008. Web. 5 May 2011.
- "The Oslo Accords." *Middle East Research and Information Project*, n.d. Web. 23 Mar 2013.
- Palestinian Hydrology Group (PHG). *Draft Master Plan for Jericho*. (August 2010). Copy acquired through personal correspondence with Jericho Municipality official, Jalal Bsharat. 1 Aug 2012. Print.
- "Palestinian Water Authority Drafts Alternative to Oslo Water Sharing Agreement." Emergency Water and Sanitation-Hygiene Group (EWASH). 26 Sep 2012. Web. 12 Oct 2012.
- Peraino, Kevin. "The Myth of Water." *The Daily Beast*. 28 Jun 2008. Web. 6 Nov 2011.

Rawabi. 2011. Web. 27 Feb 2013.

Reider, Dimi and Aziz Abu Sarah. "In Israel, the Rent Is Too Damn High." *The New York Times*. 3 Aug 2011. Web. 20 Feb 2013.

Rosen, Armin. "A Middle-Class Paradise in Palestine?" *The Atlantic*. 11 Feb 2013. Web. 20 Feb 2013.

Rouyer, Alwyn R. *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*. Houndmills, Basingstoke, Hampshire: Palgrave, 2002. Print.

Saleh, Abdelhaleem Ibraheem. "Impact of Pumping Saltwater Intrusion in Gaza Coastal Aquifer, Palestine." MS Thesis. An-Najah National University, 2007. 28 Nov 2011. Print.

Sayigh, Rosemary. *Palestinians: From Peasants to Revolutionaries : a People's History*. London: Zed Press, 1979. Print.

Scott, James C. *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven: Yale University Press, 1990. Print.

---. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998. Print.

Selby, Jan. *Water, Power and Politics in the Middle East*. London: I.B. Tauris, 2003. Print.

Shaheen, Murad A. *The Influence of the Water Dispute on the Arab-Israeli Conflict*. Diss. University of Keele, 1997. Print.

Shapland, Greg. *Rivers of Discord: International Water Disputes in the Middle East*. New York: St. Martin's Press, 1997. Print.

Sheldrick, Aaron and Taju Kato. "Palestinian-Israel Peace Corridor Project May Start Next Year." *Bloomberg*. 2 Jul 2008. Web. 20 Feb 2013.

Sherman, Martin. *The Politics of Water in the Middle East: An Israeli Perspective on the Hydro-Political Aspects of the Conflict*. Basingstoke: Macmillan, 1999. Print.

Sofer, Arnon. *Rivers of Fire: The Conflict Over Water in the Middle East*. Lanham, Maryland: Rowman & Littlefield Publishers, 1999. Print.

Tahal Group. *Tahal*, n.d. Web. 28 Nov 2012.

- Taleb, Nassim. *The Black Swan: The Impact of the Highly Improbable*. New York: Random House, 2007. Print.
- Tamimi, Abdel-Rahman. "Hydro-Politics: Water and Difficult Dialogues on Resources." *Macalester International*. 23 (2009): 139-156.
- Trottier, Julie. *Hydropolitics in the West Bank and Gaza Strip*. Jerusalem: PASSIA, Palestinian Academic Society for the Study of International Affairs, 1999. Print.
- Troubled Waters-Palestinians Denied Fair Access to Water: Israel-occupied Palestinian Territories*. London: Amnesty International Publications, 2009. Print.
- "UNOCHA Map Centre." *United Nations Office for the Coordination of Humanitarian Affairs: Occupied Palestinian Territory*, n.d. Web. 15 Feb 2012.
- Van Hollen, Anna. "A Palestinian City for a New Generation." *The Pulitzer Center for Crisis Reporting*. 28 Feb 2012. Web. 12 Jan 2013.
- Warner, J.F, and M Zeitoun. "International Relations Theory and Water Do Mix: a Response to Furlong's Troubled Waters, Hydro-Hegemony and International Water Relations." *Political Geography*. 27.7 (2008): 802-810.
- "Water in the Middle East and North Africa." *Unaccounted-for Water (UFW)*. The World Bank, n.d. Web. 1 Mar 2013.
- West Bank and Gaza: Assessment of Restrictions on Palestinian Water Sector Development*. Washington, D.C: Middle East and North Africa Region, Sustainable Development, World Bank, 2009. Print.
- Wester, Phillipus and Jeroen Warner. "River Basin Management Reconsidered." *Hydropolitics in the Developing World*. Turton, A. and R. Henwood (eds.) Pretoria, South Africa: African Water Issues Research Unit, Council for Scientific and Industrial Research (2002). Print.
- White, Ben. "Jordan Valley is a microcosm of Israel's Colonisation." *The Guardian*. 17 Aug 2010. Web. 5 Nov 2012.
- Wolf, Aaron T. "Conflict and Cooperation Along International Waterways." *Water Policy*. 1.2 (1998): 251-265.
- . *Hydropolitics Along the Jordan River: Scarce Water and Its Impact on the Arab-Israeli Conflict*. Tokyo: United Nations University Press, 1995. Print.

Yoffe, S, G Fiske, M Giordano, M Giordano, K Larson, K Stahl, and A T. Wolf.
"Geography of International Water Conflict and Cooperation: Data Sets and
Applications." *Water Resources Research*. 40 (2004): 1-12.

Zaslavsky, Dan. *Water as a Metaphor*. Haifa, Israel, Technion. Israel Institute of
Technology, Faculty of Agriculture. Print.

Zeiger, Asher. "PA claims Israel still withholding tax revenues." *The Times of Israel*.
18 Feb 2014. Web. 20 Feb 2013.

Zeitoun, Mark. *Power and Water in the Middle East: The Hidden Politics of the
Palestinian-Israeli Water Conflict*. London: I.B. Tauris, 2008. Print.