

PLANTING POSITIVE PEACE: ENVIRONMENTAL AND INTERFAITH PEACE
BUILDING IN THE JORDAN RIVER BASIN

by

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DEDICATION

This is dedicated to my supportive parents, Lawrence and Marsha Tisch, and to my close friends Jennifer Bain and Courtney Smith, who have always encouraged me to follow my dreams.

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LIST OF ABBREVIATIONS

Million cubic meters of watermcm
Conflict Analysis and Resolution CAR
Friends of Earth Middle EastFoEME

ABSTRACT

PLANTING POSITIVE PEACE: ENVIRONMENTAL AND INTERFAITH PEACE BUILDING IN THE JORDAN RIVER BASIN

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This thesis describes the positive aspects of Environmental and Interfaith Peace Building programs in the Jordan River basin and the way that they fill the practical gap between water allocations within negotiated peace agreements and the physical implementation of those allocation stipulations. Through a review of traditional Conflict Analysis and Resolution theory, and more modern Environmental and Interfaith Peace Building theory, it is communicated that the peace building programs in the Jordan River basin operate on a plane of theoretical soundness which is respectful of human needs and attempts to alleviate relative deprivation and access to resources in the area. This thesis also reviews negotiated peace agreements and their failures when it comes to water allocation plans, with specific examples such as the Wazzani Spring water pumping station.

CHAPTER ONE

“You are not Atlas carrying the world on your shoulder. It is good to remember that the planet is carrying you.”

— Vandana Shiva

In Conflict Analysis and Resolution, we attempt to understand the world around us as it exists and look for ways to comprehend conflicts that occur between peoples, nations, and international organizations and international legal frameworks, in order to resolve conflicts that occur. Conflict Analysis and Resolution practitioners seek to provide solace and understanding in situations that are torn with hatred, mistrust, and misunderstanding. What is unique about Conflict Analysis and Resolution is the perspective it takes or can take regarding worldview and responsibility or accountability. It reminds people that, contrary to what the situation may be in a person’s mind, individuals are not responsible for the workings of the world, they contribute to them, and can choose to contribute in a positive, constructive or negative, deconstructive and potentially violent manner.

In recent history a paradigm shift has occurred changing the focus internationally from differing associations of power in relation to the way states interact with one another. Classically, power of the state and the insurance of the longevity of that power is the strongest influence in international relations. However, we have reached a Grotian moment in which the paradigms are changing, and the focus is no longer solely on the

power of the state – rather the focus has turned to face the rights and importance of individuals, localities, and communities and their needs, rights, and desires and venues to fulfill them.

The decentralization of international relations and increased importance of localized factors, along with the increasing global trouble with climate and environmental change and degradation due to natural maintenance systems of the Earth and due to human involvement in those processes allow for positive emphasis on environmental peace building, which advocates for individual and community rights in relation to their environment and its sustainability and resilience. Environmental factors have the potential to either cause conflicts or to provide pathways which can be used to promote trust and capacity-building between once-conflicting parties.

In the Jordan River basin such initiatives and programs are already in existence that attempt to foster positive relations rather than tense ones. Through history, the Jordan River basin has been a hotbed of conflict because of its geographical location, religious importance attached to the location specifically, the variation of religious historical perspectives regarding ownership of land and resources, and the scarcity of resources themselves and environmental and climatic situations. Many attempts have been made by Track I diplomats and international influential figureheads and policymakers to attempt to resolve conflicts in the Jordan River basin. These attempts and treaties, however, may pose more problems and the continuation of environmental threats and degradation which affect the everyday lives of local communities in ways that are not seen or understood properly on the higher level of policy-making.

International, bilateral, and multilateral agreements and negotiations also often specify environmental and water resources and their allocation and exploitation as one of the many facets of a peace agreement, rather than focusing on each issue individually as its own entity, separate from border lines and acceptance of political entities. This causes problems regarding ambiguity used in the treaties and adherence to the agreements by the stakeholders. The top-down approach that has been taken regarding the environment and water resource issues has more tendency to help reach a negotiation or a win-win for stakeholders on the aesthetic level, yet it presents problems in the implementation and allocation of resources and environmental improvement projects.

Environmental and interfaith peace building projects in the Jordan River basin offer a bottom-up approach to environmental and water resource use conflicts, stressing the importance of the interconnectedness of environmental and water resources and using that as a tool to foster trust building between groups which were previously conflictual and focusing on ownership. Environmental and Interfaith Peace building projects in the Jordan River basin are theoretically and practically sound regarding environmental and interfaith peace building theory, as well as environmental security theory and relevant scientific and ecological perspectives on fairness and equitable disbursement of and care for resources.

Thinking of the Earth as “no more than a dead machine to be exploited as we wish for our own benefit, without let or hindrance (Harding, p. 19)” is the way global citizens have entered into this state of environmental decline and inequitable disbursement of resources and wealth. A paradigm shift to think of the Earth as the provider of resources

and as a living organism however is occurring in popular thought and media to promote sustainable development and fair resource use, rather than overexploitation and pollution. A new worldview similar to that which is so prominent in Gaia Theory, “recognizing that the material world around us has always been a dimension of sensation and feelings ... and that each entity must be treated with respect for its own kind of experience (Harding, p. 22) is something that could bring about peace and prosperity, and diminish environmental injustices that are factors of structural violence and power imbalances in the world.

This thesis attempts to show that Environmental and Interfaith peace building programs can and do fill a gap that exists in high-level policy making that regards environmental issues. Peace building programs suffice and underpin theoretical paradigms including basic human needs and relative deprivation and security issues in localized communities, regions, and neighbouring situations in a way that respects equitable and reasonable use of and participation in resource allocation.

The second chapter will outline traditional conflict analysis and resolution theory that underpin the importance of environmental and resources issues, with relation to water resources as well. It will also review theories comprehensively and communicate that peace building programs and capacity building programs related to environmental sustainability and regulation possess sound motivation in theory.

The third chapter will communicate the interconnectedness of traditional conflict theory with environmental peace building theory, show how they relate to one another and hold some of the same basic principles while widening and deepening understandings

of concepts such as security and deprivation. This chapter will discuss the evolution of scientific studies and the paradigm shift that has occurred in academic and practical ways on the global field of relations and on local and community level relations. It will also give definitions of resources and property and discuss the importance of clarity in relation to resource allocation and the implementation of exploitation projects.

The fourth chapter will set the stage more concretely for the chosen case study of various programs and projects' strong points and short comings in the Jordan River basin. The geopolitical setting of the Jordan River basin will be reviewed from differing perspectives and historical periods to communicate effectively the difficulties in the region. The Jordan River basin in particular, as a part of the Middle East is highly prone to conflict for a number of reasons. A long history of conflict between different religious groups and their understandings of their right to own and occupy the land in the Jordan River basin, as well as longstanding tensions and feeling of apprehension stemming from the history of conflict regarding power and territorial conflicts will be reviewed. Cases of ambiguity in trans-boundary relations in the form of peace treaties are reviewed as to when, where, and how ambiguity can be a positive, constructive aspect of relations and verbage or be a negative, detrimental means to reach a negotiated solution. Individual cases of resource use and allocation will be reviewed in comparison to their agreed upon stipulations regarding usage. A review and analysis of bilateral and multilateral water relations in the framework of international negotiation strategies and bilateral and multilateral treaties and agreements will be given as well.

In the fifth chapter, examples of environmental and interfaith peace building programs will be portrayed in reference to their geopolitical surroundings, theoretical soundness and support, and success in promoting positive relations and capacity building measures between neighbouring communities which share a long history of conflict and mistrust. This chapter demonstrates how natural resource use and allocation issues can be used in sustainable and resilient ways. This can foster positive and collaborative relations between communities on a localized level and improve their standard of living. An example of issues that may arise and potential detrimental impacts of agricultural and environmental programs will also be provided, however those program slack the theoretical security and peace building foundations that peace building organizations implement.

This thesis aims to prove that environmental peace building programs that are respective of interfaith and historical conflict issues in the Jordan River basin are successful, sustainable, and resilient programs and that their underpinnings can be used as a means to fill the gap that exists in negotiated treaty regarding the authoritative control and utilization of natural resources, especially river water and ground water reservoirs and aquifers.

CHAPTER TWO

In this chapter traditional conflict analysis theory regarding basic human needs, relative deprivation, traditional security, environmental and water security and environmental human rights abuse are all discussed in relation to water conflicts in the Jordan River basin. This is done to show that traditional and more modern Conflict Analysis and Resolution (CAR) has theoretically attempted to understand the contributing factors to environmental and water related conflicts. The theories will be reviewed individually and a comprehensive summary will be given at the conclusion to show that clean water and environmental stability are essential basic human needs, one of the first level of needs, and that being deprived of these essentials can and does cause conflicts in geographical areas in which resources are limited or controlled by hegemonic powers.

Basic Human Needs

When first thinking about what a ‘basic human need’ may be, most people tend to think of food, water, and shelter. However conflict theory has shown that there are higher existential needs that individuals and groups or communities have which extend from and are dependent on the most elementary needs. John Burton was one of the pioneers of peace and conflict studies. He was also one of the first faculty members of S-CAR. He critiqued realism, which was (and still is) a prominent school of thought in IR theory.

Realism focuses on things such as the Rational Actor Model and Balance of Power – it posits that actors are consistently using their power, whether it be political or economic, to maximize their own benefit. Burton’s theory deviates from realism – which has become somewhat antiquated in the midst of conflict theory – instead to focus on Interests vs. Needs. When interests are not met, culture is a factor that can be used to overcome hardships. Cultural interests are relevant when needs are not met, however conflict is more likely when it is needs that are not met as opposed to interests.

Needs differ from interests in that needs are at a much deeper level than interests – they are non-negotiable, and can be looked at as universal. Needs are defined with three categories – security, identity, and recognition. Security includes ‘basic’ needs such as food, shelter, water, and that the individual and his/her family are secure in their persons, or that they are not subject to direct violence. Identity incorporates a person’s ability to exist inside their own religion, culture, language, and all other qualities that make up an individual’s unique identity. The identity factor of needs also includes the legitimacy of one’s identity as it is perceived by the individual and by their surroundings, such as family, community, nation, and state. This feeds in a bit to the third factor – recognition. Recognition is conceptualized as the individual’s need to be recognized as a human being and included in the community surrounding them – the recognition of one’s personhood in oneself, one’s right to be and exist as a person and an individual on the global plane.

Basic human needs theory can be found in Burton’s work, as well as in simple psychological theory through the widely-known ‘Hierarchy of Needs’ (Maslow, 1943, 1954). This hierarchy includes five motivational levels, divided into basic (or deficiency)

needs, such as physiological, safety, love, and esteem, and a need for growth and self-actualization. One must satisfy lower level basic needs before progressing on to meet higher level growth needs. Once these needs have been reasonably satisfied, one may be able to reach the highest level called self-actualization. (Reference Appendix A for a graphic representation.) Maslow's Hierarchy of needs appropriately communicates the concept that the most basic needs must be met first, in order to move up the ladder. If a person is spending their whole day attempting to find shelter or clean drinking water, they may not be as worried about their community's perception of them as a member, since the whole community will probably be occupied with the allocation of water and care of plants, agriculture, and livestock. However, in a society where people do not generally spend more than a minute or two acquiring drinking water, the need for irrigation of crops or hydration of livestock is non-existent, therefore that individual may move up the hierarchy to higher-level needs of acceptance and self-actualization.

Another needs theorist who shares the extrapolated view of needs and the vehement necessity of them is Johan Galtung, in reference to relative deprivation, which will be discussed later. Galtung demonstrates the concept of Basic Human Needs Theory focusing on the idea that each individual has needs that function as the necessities for life which go farther than food, water, and shelter. "A need should be distinguished from a want, a wish, a desire, a demand (Galtung, 303)." These needs are non-negotiable. Johan Galtung goes on to categorize needs in a 'hierarchy,' including four categories. These are: security, welfare, identity, and freedom (Galtung, 309). However it is still important to note in reference to Galtung's hierarchy of needs that the most basic are still food, water,

and shelter. Water can also be viewed as more pivotal than the others, considering water contributes to the availability of food and materials used to make shelter.

John Burton's perception of Basic Human Needs is similar to Maslow's in that it recognizes that needs go beyond just food, water, and shelter. They include both physical and non-physical elements necessary for human growth and development, as well as all those things humans are innately driven to attain. Burton, Galtung, and other needs theorists who have adopted Maslow's ideas to conflict theory perceive human needs as an emergent collection of human development essentials. Furthermore, they contend needs do not have a hierarchical order. Needs are sought simultaneously in an intense, relentless manner, however it can be more difficult to attain higher-level needs without first obtaining lower-level needs. Needs theorists' list of human essentials include:

- Safety/Security – the need for structure, predictability, stability, and freedom from fear and anxiety.
- Belongingness/Love – the need to be accepted by others and to have strong personal ties with one's family, friends, and identity groups
- Self-esteem – the need to be recognized by oneself and others as strong, competent, and capable. It also includes the need to know that one has some effect on his/her environment
- Personal fulfillment – the need to reach one's potential in all areas of life
- Identity – goes beyond a psychological "sense of self." Burton and other human needs theorists define identity as a sense of self in relation to the outside world. Identity becomes a problem when one's identity is not recognized as legitimate, or when it is considered inferior or is threatened by others with different identifications.
- Cultural security – is related to identity, the need for recognition of one's language traditions, religion, cultural values, ideas, and concepts.
- Freedom – is the condition of having no physical, political, or civil restraints; having the capacity to exercise choice in all aspects of one's life.
- Distributive justice – is the need for the fair allocation of resources among all members of a community.

- Participation – is the need to be able to actively partake in and influence civil society.

(Marker, 2003)

When these needs are not met for an individual or a group, it is a cause of conflict.

‘Human needs theorists argue that one of the primary causes of protracted or intractable conflict is people’s unyielding drive to meet their unmet needs on the individual, group, and societal level. For example, the Palestinian conflict involves the unmet needs of identity and security. Countless Palestinians feel that their legitimate identity is being denied then, both personally and nationally. Numerous Israelis feel they have no security individually because of suicide bombings, nationally because their state is not recognized by many of their close neighbors, and culturally because anti-Semitism is growing worldwide. Israeli and Palestinian unmet needs directly and deeply affect all the other issues associated with this conflict. Consequently, if a resolution is to be found, the needs of Palestinian identity and Israeli security must be addressed and satisfied on all levels (Marker, 2003). This concept will be discussed in more detail in Chapter 4.

Needs differ from interests in Burton’s and other needs theorists’ perspectives in so far as that needs are definite, and are pursued constantly and relentlessly on all levels of human interaction, whereas interests are a person’s desires in a society that can be negotiated and compromised. An individual’s interests are usually focused on attempting to have a harmonious society, doing things for the greater common good. However, being that there are different religious, cultural, and political groups in any society, interests can deviate from person to person or group to group, depending on their affiliations.

Social structures' needs or interests can outweigh individual or group interests as well. For example, an individual may hold beliefs that are in line with the republican political agenda and vote republican, but if the majority vote goes to the democratic party, that individual's interests will be usurped by the democratic party's agenda.

Conflict is less likely in this case than it would be in other situations, because here the individual is in a cultural society that promotes communicating interests through the political structure, as opposed to a culture that exists in a place which lacks the governmental or state structure necessary to communicate interests in a peaceful and equitable manner. In such cases, a lack of structure can lead to the use of aggression or force as a means to satisfy either an interest or need. This may be evidenced by the recent Egyptian revolution or by the continued violence in the Israeli-Palestinian area.

Relative Deprivation

Relative deprivation is undeniably linked to basic human needs in that it is essentially an individual or group existing in a state not being able to meet needs, for whatever reason, be it marginalization, subjugation, or inconvenient geographical location. Ted Gurr explains relative deprivation as the discrepancy between what people think they deserve, and what they actually think they can get. Gurr's hypothesis, which forms the foundation of his book *Why Men Rebel* (1970), is that "The potential for collective violence varies strongly with the intensity and scope of relative deprivation among members of a collectivity (p. 24). Relative deprivation is framed as the "perceived discrepancy between value expectations and value capabilities is sufficiently general to comprise or be related to most of the general 'preconditions of revolution' (p. 37)." In the

Jordan basin case, preconditions of revolution could include identity clashes, border clashes, blurred geopolitical lines, water and environmental resource scarcity, and power imbalance.

Why Men Rebel is a classic of Conflict Analysis which explores why people engage in political violence (riots, rebellion, coups, etc.) and how regimes respond and is extremely relevant in the global political field even today. Relative deprivation stipulates that if there is a significant discrepancy between what people think they deserve and what they think they will get, there is a likelihood of rebellion. A number of other variables influence the use of violence as well, for example the culture, the society, and the political environment. The culture must at least accept, if not approve, violent action as a means to an end. Political violence is also more likely if the current leadership and/or the socio-economic/political system is seen as illegitimate by its constituents. Another factor is whether violence is considered to be a viable remedy to the problem (Conflict Research Consortium Staff). Relative deprivation can be applied to needs or interests, depending on the conflict being analysed. An individual or collectivity may be deprived of one or more of their needs or interests, which can and will cause them to turn to aggressive action in order to ensure that their needs are met to their satisfaction. In the Jordan River Basin, it is relevant to both individuals and communities, considering the circumstances, which will be discussed in further detail in Chapter 4.

A sense of frustration can emerge from deprivation of needs in detrimental, aspirational, or progressive ways. Detrimental frustration occurs when either a person's or group's status begins to decline, or when the ability to achieve expectations declines.

Aspirational frustration occurs when aspirations rise yet capability to achieve aspirations or expectations stays the same. Progressive frustration can be thought of as a dynamic that occurs when the economy is growing, values and expectations rise but capabilities fail to rise at the same rate. The last of the three types of frustration is evidenced in the period of time after the Lebanese civil war when the economy began to boom yet Lebanese national access to water resources stayed static, or failed to rise at the same rate.

Security

Historically, the concept of security has changed through time in conflict literature and in reference to International Relations Theory. Michael Butler discusses this change in the concept of security stating that changes have “particularly affected the pursuit of collective security and attempts to manage the threats to security posed by inter-state and intra-state conflict (Butler, p.27).” The changing nature of the international political field has prompted a change in the definition of security from the traditional realist perspective, with its appreciation for power, pessimism regarding human nature, and belief in the notion of war as the continuation of politics by other means. New concepts of security are respective of human rights, environmental, identity, and economic sustainability needs along with others. The rise in activity and influence of entities like non-governmental organizations and activist groups, as well as the exponential increase in the ability and ease of access to technology have influenced this change in the definition and scope of security as well.

After World War II, definitions typically focused on the subject of realpolitik that developed during the Cold War between the United States and the Soviet Union. As tensions between the superpowers eased after the collapse of the Soviet Union, academic discussions of definitions of security significantly expanded to encompass a far broader range of threats to peace. Butler discusses this change in the definition and scope of security respective of different levels including systematic, state, and individual levels (Butler, p.37). The individual level communicates most strongly that security can be described as a relative, ambiguous, subjective, and fluid concept in general. This is due, in part, to the relatively more diverse array of threats to the security of individuals that exist in comparison to states or to the international system. Humanitarian suffering, crimes against humanity, torture, ethnic cleansing, and genocide are all threats to the well-being of individuals and groups that an individualistic approach to security must be concerned with (Butler, p.38). These kinds of threats are such that they put individuals and groups in situations of deprivation and render people unable to meet their needs.

Generally, threats to individual security are of a social nature, and, according to Butler, tend to fall into four main categories. These are as follows:

- Physical: threats leading to pain, injury, ailment, or death
- Economic: threats to property, economic opportunity, or material resources
- Political: denial of civil rights, restriction on political participation or liberties
- Status: threat to one's place within the social order

Factors that impinge upon one individual's security usually impinge upon the security of numerous others as well; an outbreak of disease, the existence of a burglar in a one's neighborhood, a policy of 'ethnic cleansing' declared by a government, or insufficient access to clean water for drinking and crops are all effective examples.

For the purposes of this study, security threats which will be focused upon affect not only the individual level, but the state and systemic levels as well and include, particularly, environmental threats associated with the political implications of resource use or pollution. By the mid-1980s, this field of study was becoming known as "environmental security". Despite a wide range of semantic and academic debates over terms, it is now widely acknowledged that environmental factors play both direct and indirect roles in both political disputes and violent conflicts.

Environmental Security

Environmental security examines the threat posed by environmental events and trends to individuals, communities or nations. It may focus on the impact of human conflict and international relations on the environment, or on how environmental problems cross state borders. When people don't have enough food, water, shelter, or the natural resources needed to live, that creates unstable situations. This is in accordance with the basic human needs and relative deprivation theories previously discussed. Although those theories focus on the less tangible aspects of needs and interests, they are on a higher level of the hierarchy of needs than food, water, and shelter. The more basic needs must be met first in order to support the ability to reach higher level needs. The

most basic needs being unmet can occur alongside of higher-level needs being unmet as well, such as cultural, religious, and national needs and interests.

Environmental security incorporates many different ideas and schools of thought, it can be thought of as a cross-pollination of disciplines, such as sustainability, climate change as a security issue, water security, food security, and the resilience of agriculture. Environmental security involves and reflects the ability of an entity, whether a nation or a society, to withstand environmental asset scarcity, environmental risks or adverse changes, or environment-related tensions or conflicts. Resilience as a concept is paramount here, at different levels, from a particular piece of equipment to an organization to the resilience of a whole community and a society. Resilience can be defined as the ability of both infrastructure and social capital for a community to withstand a particular event or disaster.

The UN Millennium Project is an independent international think-tank which has issued annual 'State of the Future' reports since 1997. The Millennium Project conducted a global assessment of the different definitions of environmental security and attempted to create a synthesis definition. Few countries have an official definition of environmental security that unifies thought and action. The relevant international organizations have not created a definition to guide policy. For example, the United Nations Environment Program and the World Health Organization do not have definitions for environmental security and the United Nations Development Program only refers to it briefly in its 1994 annual report on human development on page 28:

"Environmental threats countries are facing are a combination of the degradation of local ecosystems and that of the global system. These comprise threats to environmental security."

The Millennium Project provides eleven different definitions of environmental security, the third of which being of the most practical use for this study, states:

“3. The term ‘Environmental Security’ refers to a range of concerns that can be organized into three general categories;

- i. Concerns about the adverse impact of human activities on the environment – the emphasis here is on the security of the *environment as a good in itself*, for the sake of future generations, as the context for human life.
- ii. Concerns about the direct and indirect effects of *various forms of environmental change* (especially scarcity and degradation) which may be natural or human-generated on national and regional security. Here the focus is on environmental change *triggering, intensifying or generating the forms of conflict and instability* relevant to conventional security thinking. Research suggests that interstate war is less likely than diffuse civil violence. A subsidiary question is: what can conventional security resources do to address these threats? Suggestions include: using intelligence data gathering and analysis assets, promoting technology transfer and dialogue through military contact programs, using the army corps of engineers to help tackle specific environmental problems, etc. A related question is, can military training, testing and war fighting activities be made less harmful to the environment.
- iii. Concerns about the *insecurity individuals and groups* (from small communities to humankind) experience *due to environmental change* such as water scarcity, air pollution, global warming, and so on. Here the focus is on the material well-being of individuals and there is no presumption that this is a traditional security issue or that traditional security assets will be useful.

Combining these we might conclude that *the condition of environmental security is one in which social systems interact with the ecological systems in sustainable ways, all individuals have fair and reasonable access to environment and goods, and mechanisms exist to address environmental crises and conflicts.*

Staff Commentary – a very good definition covering, in fact, interrelationships between environmental security and sustainable development, equity issues, and conflict resolution (Environmental Security Study).”

This definition of environmental security recognizes the interrelated nature of crisis in human and environmental systems and supports the argument that the right to a healthy environment is a fundamental human right and basic human need.

While environmental security has been marginalized in general security studies, the rapid pace of change in population, way of life, and global environment (i.e. ‘global warming, climate change) has caused a redefinition of the notion of environmental constraint. Although, many of today’s environmental crises lack tangibility – it is difficult to see them, to define them, to understand their origins, and their consequences – they are none the less relevant to the individual, national, and systemic issues in the modern international political field. Vulnerability in the changes in the biophysical realm is also a factor of social relations.

Environmental security is a paramount concept when it comes to the issue of peace building in the Jordan River basin. The climate there is extremely vulnerable to changes and to droughts. Many of the local communities are vulnerable to climate change because of the situation regarding the national territories and watershed of the Jordan River, which is perhaps the most physically and politically stressed river basin in the world (LSE) . Linkages between climate change, adaptation and human security have been and are currently being studied in the region. Marginal agricultural communities are likely to experience climate change as a process of short-term coping and longer-term adaptation (LSE). The security of these agricultural communities relating to their

environment and climate is at risk, making the Jordan River basin an optimal case for the study and implementation of peace building projects.

“The headwaters of the Jordan River are classified as a Mediterranean climate, with 400-800 mm precipitation annually. Most rainfall in the region occurs from December through March. The Jordan River travels through a semi-arid climate before reaching its terminus at the Dead Sea, whose southernmost shore enters a desert climate with less than 200 mm of annual rainfall (CGGE).” The climate of the Jordan River basin is such that it depends heavily on the river and groundwater reservoirs and aquifers for irrigation and other domestic necessity uses. While some groups of people in the more urbanized areas may not feel the effects of climate change or water scarcity, the rural and peripheral communities are at the highest risk of being deprived of their expectations of water resources available.

Environmental Human Rights Abuse

Some groups or communities of people are at a higher risk for relative deprivation in relation to water and environmental resources than others. There exists a sociocultural context of selective exposure to hazardous and degraded environmental settings that constitutes a form of human environmental rights abuse (Johnston, p. 113). One’s social class or geographical location is can be a factor that reveals the disproportionate amount of increased difficulty in relation to environmental degradation or resource scarcity. Persons who are of higher social class or status are more likely to have the means to provide or acquire the necessary environmental resources to maintain their standard of living, in the case of a drought or crisis. Communities of people who

exist on the periphery of what we refer to as ‘modern society’ do not have these same conveniences and are therefore at a higher risk of deprivation when climate changes, drought occurs, or crisis erupts.

These peripheral parts of society, such as rural farmers, have been the subject of much research and study. Michael Renner discusses the interrelationship between Environmental Decline, Social Conflict, and the New Age of Insecurity in *Fighting for Survival*, part of The WorldWatch Environmental Alert Series. He makes an argument for human security as it relates to the environment and other factors by stating:

“It is becoming clear that humanity is facing a triple security crisis: societies everywhere have to contend with the effects of environmental decline, the repercussions of social inequities and stress, and the dangers arising out of an unchecked arms proliferation that is a direct legacy of the cold war period. We are at a historic juncture in our understanding of security. The cold war represented the most extreme expression of “national security” – states’ desire to protect their borders and territories from foreign invasions, which led over the centuries to the creation of ever larger standing armies and the development of ever more sophisticated weapons. The emerging issues of the post-cold war era, by contrast, point to a different meaning of security that is much closer to people’s tangible concerns. As the 1994 *Human Development Report* points out: “It will not be possible for the community of nations to achieve any of its major goals – not peace, not environmental protection, not human rights or democratization, not fertility reduction, not social integration – except in the context of sustainable development that leads to human security.” Concerns about “human security” are as old as human history, yet they are now magnified by the unprecedented scale of environmental degradation, by the presence of immense poverty in the midst of extraordinary wealth, and by the fact that social, economic, and environmental challenges are no longer limited to particular communities and nations (Renner, p. 18).”

Human actions and a history of social inequity leave some people more vulnerable than others. Powerless groups and their rights become expendable in the name of national security, national energy, and national debt. Environmental degradation and decline is of such a large magnitude that it threatens human sustainability. For example, Israeli

national interests have in the past and will likely continue in the future to usurp the needs of localized communities of people whose livelihoods are based on agriculture and animal husbandry. This will be discussed further in Chapters 4 and 5.

National interests can be expanded to cause or be related to other factors that contribute to human environmental rights abuse. According to Barbra Rose Johnston regarding *Human Rights and the Environment* (1995), human environmental rights abuse occurs for a variation of reasons, or an extrapolation of national interests and the way they affect marginalized peoples. People could be living in the ‘wrong’ place, i.e. near economic or strategic resources, in which case residents are often displaced and alienated. Their lives are spent far from the densely populated regions, in the peripheral regions. These people experience increasing difficulty in maintaining individual, household, and community health. People could also be in the way of ‘progress’ or ‘national needs.’ This occurs when ‘national’ needs supersede individual and community concerns; people find themselves forcibly relocated while governments and industry build dams, expand export-oriented intensive agriculture, develop international tourist facilities, and set aside ‘wilderness’ to save the biocommons and attract foreign ecotourist dollars (Johnston, 1995, p. 113). Examples of these situations abound, however one can be found in the case of the Wazzani Spring water pumping station, which is discussed in Chapter 4.

At another level, human environmental rights abuse occurs because it is socially, politically, and legally acceptable to protect the health of some people, while knowingly placing other humans at risk. Thus, women and children, racial, ethnic, and other powerless groups experience a contradictory application of occupational health and safety

regulations, and of environmental protection measures. Information about hazardous materials can be purposefully withheld from others. It has become appropriate in society to keep marginalized peoples marginalized, or to ignore the fact that parts of the world exist in extravagance while other parts are in extreme poverty.

The present approach to defining and minimizing environmental risk gives little attention to psychosocial trauma, or to spiritual/cultural concerns. Assumptions are given by the westernized notion of property and individualism that places economic issues, concerns, and methods in the center, and reduces the importance of, or even fails to consider the less quantifiable and longer term problems experienced, such as psychological or spiritual trauma (Johnston, 1995, p.114).

Conceptual distancing mechanisms are used to legitimate the exploitation and relative deprivation and abuses of basic human needs of marginalized groups in favour of the increased capacity of more popular groups, further integrated into modern society and economy. Responses to human environmental rights abuse exhibit some common themes, such as the central role of the community and the systemic changes that flow from it. The central role of the community in maintaining and sustaining resource integrity, and the increasing alienation of the community from local resources as a result of development efforts (Johnston, 1995, p.120) need to be recognized when seeking to secure human environmental rights. Assuring a healthy future relies on the ability of citizens and communities to know the risks and benefits of human environmental rights and make a conscious decision regarding what path to take.

Achieving these rights requires the creation and use of mechanisms that radically transform the structural arrangement of power at macro and micro levels. That is: the employment of mechanisms that allow people living with the problem to gain greater control in devising the nature of the crisis, devising equitable responses, and prohibiting the reoccurrence requires a change in the institutional and negotiation structure, turning away from top-down idealisations of issues and favouring bottom-up approaches. At the same time, mechanisms should be employed that allow institutions and organizations who played a significant role in creating the problem to acknowledge their culpability and (through their efforts to respond) to carry a greater share of the burden for resolving the consequence (Johnston, 1995, p.120). Essentially, each human and each community has a right to respond to human environmental crises in an equitable manner, whether it is because the right to a healthy environment is attributed to basic human needs, interests, or basic human rights. To avoid deprivation of marginalized communities, institutional structures need to change to allow for greater advocacy of human and environmental rights and the security of said rights.

Water Security and Water Politics

Water politics, also called *hydropolitics*, is politics affected by the availability of water and water resources, a necessity for all life forms and human development. The first use of the term, *hydropolitics*, came in the book by John Waterbury, entitled *Hydropolitics of the Nile Valley*, 1979. Vandana Shiva is one advocate for the global water crisis, who has asked whether or not water is the ‘next oil’ in terms of availability

and demand. Her works and the Global Oneness Project will be discussed further in Chapter 5.

The availability of water is decreasing with climate change and modern development needs increase the demand for water. Many sources have predicted that clean water will become the "next oil"; a simple Google search will prove this. The water crisis is an expanding world-wide problem, and the increasing scarcity of fresh water resources may lead to national and international conflicts. Overexploitation exists in several regions, including the Jordan River basin. Problems related to water resources need to recognize the interrelation between the multiple functions and uses of water. Problems related to the supply of fresh water resources, especially safe drinking water, cannot be addressed properly without recognizing the interrelation between the multiple functions and uses of water. These include but are not limited to: human consumption, sanitation, washing and bathing, cultural or religious rituals, and economic purposes such as agriculture, livestock, industry, tourism, and transportation. Water is also an integral part of the ecosystem for wetlands, coastal areas, mangroves, humid, arid and semi-arid areas.

Summary

Conflicts regarding water resources can occur either from scarcity of the water itself or be a result of adaptation, allocation, and acquisition strategies which societies pursue regarding the water resource. Water scarcity can be driven by demand for water, supply of water, or be the result of structural inequalities. These three factors are all present in the Jordan River basin area, as the demand for water is high due to the

population and increased population growth due to the relocation of refugee groups and religious or cultural communities' movement. The supply of water is low in the Jordan River basin area in comparison to the amount needed and the different uses of water in the area – for agricultural, industrial, and sanitation and cleanliness purposes.

Additionally, the power imbalance in the region presents a structural inequality for different groups of people who need access to the water resources, whether they differ from one another because of their religion, geographical location, cultural identity, or social class.

Traditional conflict analysis theory shows that water as a resource is one of the basic human needs and is parallel to other more existential needs regarding sense of self and inclusion in ones' own society and environment. Environmental security is a factor of individual and group needs, as well as global needs and desires for the sustainability of life in localized regions or on the planet as a whole. Environmental Human Rights Abuse occurs when people's access and ability to use their geographically relevant resources for their daily lives is impeded upon, whether it be because of structural violence or relative deprivation. Water security is a paramount factor in many areas of the world, and especially in the Jordan River basin, as current water allocations are insufficient to provide 'equitable' and 'reasonable' shares of the resource to all the communities and political entities of the region.

CHAPTER THREE

Environmental Dispute Resolution

Traditional Environmental and Interfaith Dispute resolution focuses on a Neo-Malthusian premise, and stipulates that conflict over increasingly scarce resources can be expected as a result of population growth. Environmental Dispute Resolution has given rise and legitimacy to the notion of water conflicts and even water wars (Fischhendler, p.91). People have a tendency to exploit the resources available to them in their geographical vicinity, and conflict often arises when claim is laid on public or shared resources. Conflict is especially likely to arise because of contested claims and allocation projects surrounding shared resources, and even more likely when those resources are scarce to begin with.

Conflict arises and erupts for many different reasons, in every corner of the globe. These conflicts have a wide variety of effects on people, communities, states, regions, and the international political field. Oftentimes conflict erupts in areas or communities surrounding natural resources, due to use and/or ownership issues. “Historically, human response to vast areas of valuable resources unfettered by legal rights recognized by the dominant culture usually has been appropriation by governments and individuals, followed by exploitation as soon and as rapidly as physical force and technology would permit (Buck, 1991, p.1).”

More often than not, the localized effects of conflict are so intricately interwoven that it becomes difficult to ascertain the origin of the problem. However, in many places around the world, agriculture and environmental factors are so important in people's every-day lives and economies that their degradation or misuse becomes apparent very quickly. This is the case in the Jordan River basin, where access to clean water and water for the irrigation of crops and hydration of livestock is limited, at best. When environmental factors begin to deteriorate, conflict arises rapidly. "Wars often involve land," said Jon Unruh, Associate Professor of Human Geography and International Development at McGill University. In fact, according to the United Nations War-torn Societies Project, in 40 percent of post-conflict countries clashes eventually resume, and land is the leading cause (Robertson, p.10)." When speaking about agriculture and environmental factors and the needs, rights, and necessities associated with them, land and the resources it holds is a paramount element. Land acquisition is a key factor in Jordan River basin disputes.

Resources and Property

A resource is anything that is used to meet the needs of an organism. Some resources are *natural resources*, that is, material that has economic or social value when extracted from its natural state. Others are *spatial-extension resources*, which have value because of their location. For example, geo-stationary orbits are not natural resources because they are not extracted or converted from their natural state; they are,

however, spatial-extension resources in that they may be used to meet telecommunications needs (Buck ,p.6).

Resources are located in fixed spatial dimensions known as *resource domains*. For example, fish are a natural resource found in the ocean resource domain. Geostationary orbits are resources found in the space resource domain. In some situations, the domain and the resources are coterminous. For example, when sailors use the oceans as roads to transport people and goods, the oceans themselves are a resource. When the sailors are fishing, the oceans are also a resources domain and the fish stocks are the resource.” (Buck, p.3) In the same fashion, the Jordan River itself is a resource as the water of the river is a contributor to a higher crop yield and economic success.

Property is not used here in the ‘vulgar and untechnical sense of the physical thing with respect to which the citizen exercises rights recognized by law.’ It is instead ‘an aggregate of rights which are guaranteed and protected by the government.’ Property rights may be held by individuals or by groups of individuals such as communities, corporations, or nation-states. The property right to a resource is not a single right but rather a bundle of rights, such as rights of access, exclusion, extraction, or sale of the captured resource; the right to transfer one’s rights to a second person; and the right of inheritance. The specific composition of each bundle of rights varies (Buck, p.3).

People have a tendency to exploit the resources available to them in their geographical vicinity however they may. The term ‘exploit’ is used specifically here to refer to the pointed investigation and extraction of natural resources in order to turn a profit from them, whatever form they may take. The resource varies from place to place,

in the same way that geography or culture may vary. These resources may include precious gems – such as diamonds in Sierra Leone or rubies in India, technological resources - oil in Saudi Arabia or coal in the American Appalachian Mountains, or simply water – such as in the Jordan River Basin.

When you first think of water, it might not occur to you that it is as precious a resource as it has become. ‘The Earth is 70% water, isn’t it?’ some may ask. While the planet Earth’s surface may consist of approximately 70% water, it is much more difficult to find clean drinking water, not salt water, in many places, and in others it is difficult to find any water at all. The time in which we live has been described by some as a “*Grotian moment* (named for Dutch scholar and humanist Hugo Grotius): ‘a time in which a fundamental change of circumstances [creates] the need for a different world structure and a different international law (Buck, p.2).’” Others concur that the late twentieth century is a time of fundamental change. If we are indeed facing a Grotian moment, the story of the recent changes in international law and the dependency increasing to non-traditional centres of power and motivation should provide key indicators of impending change.

Interfaith Environmental Peace Building

Traditional methods of conflict resolution center around a pursuit of the cessation of violence, or what can be referred to as ‘negative peace.’ However, contemporary conflict resolution and peace building practices aim to promote what can be called a state of ‘positive peace,’ or a complete transformation of conflict. To achieve

this positive peace, the conflict needs to be analyzed a bit more deeply, to truly understand the participants in the conflict, what their conception of 'peace' is, and then try to find a way to work towards that peace.

Johan Galtung discusses peace and conflict in "Violence, Peace, and Peace Research," and his interpretation and definition of positive and negative peace is strongly applicable to the intermingling of interfaith and environmental peace building being studied herein. Galtung discusses the complex nature of conflict and states that "an extended concept of violence leads to an extended concept of peace. Just as a coin has two sides, one side alone being only one aspect of the coin, not the complete coin, peace also has two sides: absence of personal violence and absence of structural violence (Galtung, Violence Peace, 18)." These two sides of peace are referred to as negative peace and positive peace respectively. The absence of personal violence does not lead to a positively defined condition, whereas the absence of structural violence is what Galtung referred to as 'social justice,' which is a positively defined condition, including an egalitarian distribution of power and resources.

This positive peace shares aspects and can be aligned with the principles of environmental and interfaith peace building, because it addresses structural violence which includes basic human needs of dignity, shelter, resources, sense of belonging, etc.

Interfaith Peace building attempts to incorporate religious communities and their uniqueness and differentiations into the peace building process. Environmental Peace building advocates for environmental protection and cooperation as prominent factors leading to peaceful relations. Interfaith and Environmental Peace building techniques can

be intertwined to form a more holistic quest for resolution of conflict and transformation into a peaceful state. Interfaith Environmental Peace building incorporates the advantages of environmental peace building and sustainable development together while acknowledging the importance of bringing together different religious and cultural communities. It can be facilitated in post-conflict situations, latent conflict, or situations of negative peace where structural and cultural violence are likely to still be present.

When bringing religious leaders into peace building projects, it is a definite benefit that they come with a community or congregation that supports them. When people already support each other and their local leaders in religious and community affairs, this makes it easier to share information about environmental initiatives and rally people behind said initiatives. The networks are already in existence. This is especially true when the people believe and understand the value of their local environmental quality as it relates to every-day life and the likelihood of conflicts reoccurring.

Religious differences have proved to become main factors in conflict in the past forty years. In *God's Century: Resurgent Religion and Global Politics*, the unexpected importance of religion in conflicts on the global stage is made evident through brief case studies including Hindu, Muslim, Jewish, Catholic and Buddhist actors.

“What is remarkable about all of these cases is not only that religion has resurged in its political influence but that it has resurged with the help, rather than the opposition, of the very same forces that secularization theorists thought would spell its demise: democracy and open debate, rapid progress in communication and technology, and the historically unprecedented flow of people, ideas, and commerce around the globe (Toft, p.7).”

Religious Peace building has therefore entered into a paramount stage in the conflict resolution field, since the importance of understanding conceptions of peace through the

eyes of the very religious is key to being able to resolve conflicts. This dramatic increase in the importance of religion has been facilitated by religious people's desire for freedom – not just freedom as individuals to practice and express their faith, but freedom for their communities to assemble, worship, publicly profess their beliefs and programs, and, in the case of some religions, to convert others to their faith (Toft, p.10). The increase in the importance of religion in conflicts on the current global stage can also be attributed to the lack of availability of unclaimed land and resources – a paradigm shift has occurred such that conquering physical space is no longer as relevant as it once was, therefore conquering intangible space and ideological realms has become prominent.

Disciplinary Interconnections

The paradigm shift that has occurred since the end of World War II has made interdisciplinary knowledge and interaction more important than it was before. Not only are actions and movements more ideological, but the way that humans treat and use the planet and its resources for their advantage has changed dramatically, with the shift towards use and abuse rather than unity and respect. Vandana Shiva makes a very compelling and obviously well-researched case in her book “Soil Not Oil.” She details intricately the interconnectedness of three of the largest crises facing the world today – climate change, peak oil, and food insecurity. Shiva also makes a strong argument supporting localized, sustainable and organic small farms, as opposed to the mechanistic and profit-driven industrial model of agriculture we see in the world today.

Shiva clearly communicates the disassociations between our global society's idea of ‘development’ and ecologically-friendly humanitarian development. The obvious

logical flow that she presents is absolutely impeccable, informing her reader of the goals and motivations that drive the international industrial machine and how they are so obviously in opposition to the natural sustainability and energy force which the Earth holds in and of itself. “Reductionist, mechanistic science creates scarcity by blinding itself to the connections that support and maintain the cycle of life, the energy flows that are based on self-organization (p. 135).” The rise of industry and consumerism has shifted the lens away from respect for the Earth to respect for the ‘almighty dollar.’

Shiva makes a strong case for a concept that fits the positive theoretical definition of environmental peace building systems. She states that:

“Biodiverse, organic farms and localized food systems offer us security in times of climate insecurity, while producing more food, producing better food, and creating more livelihoods. The industrialized, globalized food system is based on oil; biodiverse, organic, and local food systems are based on living soil. The industrialized system is based on creating waste and pollution; a living agriculture is based on no waste. The industrialized system is based on monocultures; sustainable systems are based on diversity (Shiva, p. 109 - 110).”

All of the points here mentioned are the same as positive aspects of permaculture that I have been focusing on for my thesis. Environmental peace building because fights structural and cultural violence that stem from none other than the mechanistic monster that is the Western world’s conception of development, which is imposed in a top-down manner on many people receiving foreign aid. Shiva acknowledges that this systemic flaw is what has brought far too many Indian farmers to commit suicide.

Shiva also points out that agro-ecological practices such as agroforestry and permaculture do not come at the expense of food security. “When the benefits of biodiversity are taken into account, biodiverse systems have higher output than monocultures. And organic farming is more beneficial for the farmers and the earth than

chemical farming (p. 113).” She also points out that the idea of small, local, biodiverse and organic farms are not only full of positive benefits, but that “in a period of climate change, peak oil, and the end of cheap oil, people in the industrialized world are talking of ‘re-ruralization’ as a way to reduce emissions and dependence on oil by reducing food-miles (p. 39).” Reflecting on that statement makes me reminiscent of the increasing presence of and enthusiasm for people to have their own greenhouses in their yards, and rooftop gardens in heavily urbanized areas, repurposing egg shells as seed starter pots, and countless more examples.

Shiva’s philosophy of Earth Democracy is reminiscent of Gaia theory. She even mentions it during the book, stating that “Earth Democracy begins and ends with Gaia’s laws – the law of renewability, the law of conservation, the law of entropy, the law of diversity. In Earth Democracy, all beings and all people are equal, and all beings and all communities have rights to the resources of earth for their sustenance (p. 46).” The interconnectedness of the paramount points of her ideas with Gaia theory make a strong interdisciplinary linkage between traditional conflict analysis and resolution, human needs and rights, and ecological and environmental disciplines, revolving around the idea of renewability, sustainability, and the power, energy, and systems of the Earth. The similarities between Earth Democracy and Gaia theory are something that should bring them together because the main idea is still the same whether you call it Earth Democracy or Gaia theory.

Shiva calls for a change, not only a paradigm shift but a change in the way we live, the way we consume, and the way we treat the Earth and inevitably, each other. This

worldview is similar to that which is so prominent in Gaia Theory, “recognizing that the material world around us has always been a dimension of sensation and feelings ... and that each entity must be treated with respect for its own kind of experience (Harding, p. 22) is something that could bring about peace and prosperity. I think that acknowledging the importance of the living, breathing, self-regulating entity that is the Earth is something that can really bring about solidarity, even a form of liminality. People of different social status or rank can come together and all participate in the building and maintaining of a permaculture system, which will help them to relate to one another in a kind manner and will also provide good resources like food and clean water. The idea of permaculture as a peace-building tool is a practical, tangible interpretation of the Gaia Theory.

Recognizing the idea that the shared responsibility for the earth fuels Interfaith Environmental sustainability and collaboration efforts could serve as a powerful factor to legitimize, mobilize and recruit much larger communities of people in a region as religiously influenced and environmentally wanting as the Middle East. Any country needs water to survive and develop. On the margins of one of the most arid environments on Earth, the available water system has been stretched to support not only the indigenous population but thousands of immigrants (Asser).

In Israel's history, it has needed water to make feasible the influx of huge numbers of Jewish immigrants. In the 1967 war Israel gained exclusive control of the waters of the West Bank and the Sea of Galilee. Israel allocates to its citizens, including those living in settlements in the West Bank deemed illegal under international law, between three and

five times more water than the Palestinians. Palestinians say this is crippling to their agricultural economy. Since water resources cross political boundaries, they necessitate improved conservation and recycling by both sides (Asser). Interfaith Environmental Peace building efforts in this area could provide an avenue for more sustainable use of water in the region and equitable distribution, while promoting peace.

International political anxieties “have gone with the wind of change that has been transforming the political landscape of the Northern World since 1985 – a new global threat that appeared which has now become the object of private worries and public debate, nongovernmental action and world conferences: the depletion of the environment (Brock, 1991, p.407).” The fear that the natural basis of human civilization may be destroyed through the dynamic of this very civilization is evident. The biosphere may be thrown out of balance, with unforeseeable consequences for all existing social systems; non-deliberate environmental destruction will darken the expectations of present and future generations just as much as the prospect of any deliberate war.

However, environmental change can give rise to new hopes, precisely because it tends to affect us all (at least in the long run), and it may force societies to seek cooperation and such cooperation may establish ties that could outlive acute crises and conflicts (Brock, p. 407). “Environmental effects are synergistic, and environmental problems cannot successfully be tackled discretely, one by one. Their successful resolution would require a concerted, equally synergistic response unprecedented in international or domestic politics (Prins, 1990).” The Gaia Theory could provide such a synergistic response which can become prominent in everyday thinking. “Gaia serves

very well as a synonym for a mode of thought capable of connecting seemingly disparate spheres such as science, religion, politics, education, health care, crime prevention, (Harding, 59)” and agricultural systems. Holistic thinking is a concept that is important here, being similar to animistic systems of thought that have had a firm place in many cultures throughout the world’s history. The “holistic, integrative strand in Western culture, espousing an animistic understanding . . . ran along the reductionist scientific mainstream (Harding, p. 29).” However, for most non-Western cultures experiences of the living qualities of nature have been a direct source of reliable knowledge.

Evolution of Science and Practice

Unfortunately, the history and evolution of science and factual knowledge as we know it today has had a tendency to separate any form of personification or of personal experience, intuition, feeling, sensing and thinking from the more broadly accepted ‘facts.’ The ‘Neo-Comtean Scheme of Consilience’ (please reference Appendix B.) as it relates to the evolution of modern provided helps to make it evident that the ‘hard sciences’ tend more to rely on facts and evidence, and the ‘soft sciences’ tend more to rely on interpretative qualities.

As you move up the triangle, from the hard sciences to the soft sciences, the physical world and the cultural sphere have an inverse correlation in relation to their importance in the specific science. One example is that money is important to people only because we give it value and we universally respect that value, yet the laws of physics such as gravity are important to people because without them we would merely float away into outer space. But gravity holds us down. Contrary to the aforementioned

absence of culture, of feeling, from ‘hard sciences,’ Harding suggested that, to form a better appreciation of Gaia, one should “experience gravity as the love that the Earth feels for the very matter that makes up your body, a love that holds you safe and prevents you from floating off into outer space (Harding, 56).” This holistic view of science allows feeling and personal experience back into the realm of ‘hard science.’

This interweaving of seemingly disparate ideas is something that I toyed with during my undergraduate research, as previously mentioned. I had focused on the disconnect between environmental science and environmental policy, finding that factors such as timeframes, educational and training backgrounds, personality types, and use of the proper ‘disciplinary vernacular’ were things that contributed to the disconnect between these two parties working for toward the same goal – sustainability and environmental soundness. I was pleased with my research and findings, but I couldn’t help but wonder what kind of situation could arise that would bring these two different groups together and help them understand each other better?

Human actors – individuals, corporations, governments – always pursue a spectrum of “interests” concerned with their own viability in a world full of other actors (human or non-human) and self-organized systems, each of which is in turn pursuing its own “interests” in interaction with others. In this world of individuals all looking out for their own specific sets of interests and needs, conflict and compromise of interests of the different participating individuals or systems is necessary to be able to come to any kind of conclusion. The plurality of form and style in thought, language, and visibly on paper create a surplus of meaning for the aforementioned actors – their “understanding of a

phenomenon remains inadequate till the excess in its meaning is revealed and comprehended (Singh, Rustam 1997),” through simultaneously feeling the presence of an event and putting it in its compartmentalized place in the brain, in the plethora of interests. But how would someone go about creating an experience that was appropriate for people of different disciplines? Or further, of different cultures? And further extrapolating – how could someone create a project that could bring together cultures that have been in conflict with one another in order that they better understand each other and work together, creating a form of synergy?

Social systems can be considered hierarchical, both functionally and structurally. Socio-ecological systems in a political ecology approach combine the concerns of ecology and political economy to represent an ever changing dynamic tension between ecological and human change (Angleselstam). Could it be that socio-ecological systems representing the tension that is so apparent on Earth today between humans and ecological systems could have the potential to alleviate said tension?

Permaculture and Environmental Interfaith Peace Building

Interfaith Environmental Peace building promotes collaboration between members of different religious groups to attempt to achieve a ‘holistic’ peace, which emphasizes the importance of the interdependence of the parts that make up the whole, not only in systems but extrapolates to the entire planet, and the celestial bodies. Attitudes like this are found in Gaia theory, and various cradle-to-cradle practices in which waste is eliminated and productivity or quality is increased.

Functionalism in I.R. opposes realist perspectives that the state is a rational actor interested only in self-preservation and empowerment, to the detriment of other states, or the classic zero-sum game. From a functionalist approach, states can transform the game from a win-lose option to a situation where all actors can benefit. Implementation of this idea can be found in the industrial and economic interdependence coming from the European Coal and Steel Community (ECSC). The ECSC Treaty was signed in 1951 in Paris and brought together France, Germany, Italy, and the Benelux countries together in a community with the aim of organizing free movement of coal and steel and free access to sources of production. The ECSC was a main predecessor to the formation of the EU, and helped to lengthen the shadow of the future between these European nations and foster a sense of trust and interdependence (Europa). Functionalism, in this manner, could also be brought down to local level applications through a practice such as permaculture, because it also offers the same transformation of the zero-sum game into a situation with a long shadow of the future, an increase in trust and increase in interdependence. Permaculture has the added economic benefit evident in the ECSC example, because it provides for some of a community's basic human needs.

Permaculture provides for some of the more fundamental needs expressed in Galtung's hierarchy of needs. Galtung states that needs and satisfiers of those needs "do not fall from heaven, and they do not exist from eternity to eternity: they are produced in and by a social context and are dependent on that context (Galtung, 307)." The most basic or obvious of needs are the need for nourishment, water, and shelter. Permaculture is much more than an agricultural system, it is a system of living. The agricultural

component of permaculture meets all of our needs as humans (i.e. nutritious foods, building supplies, medicines, fibres, etc.) by designing systems that mimic the way that natural systems work, such as those we see in forests (NeverEndingFood).

“The framework of permaculture as peace building creates an integrated model of peace building, and instead of increasing collaboration between separate actors, permaculture serves as a dynamic holistic environmental peace building theory that addresses political, social, and structural issues (Felix-Romero, 162).” Permaculture as peace building has the potential to counteract structural violence against certain groups, as was mentioned earlier in the case of *Shady Practices*. Going about a permaculture project with a peace building framework encircling it can be and is a method of conflict transformation and an example of bringing functionalist I.R. principles down to the local and community level.

The Gaia Theory refers to the Earth not as a dead entity for people to use and abuse as a tool, in the way that ‘hard sciences’ view its workings, only through the lens of facts and numbers. Instead, the holistic view that is so prominent in Gaia theory is a personification of the Earth, giving it life and breath, continuity and persistence. Through the perspective of Gaia Theory, “it is now becoming increasingly clear that the mechanistic view is literally killing the Earth as it was configured at the time of our birth as a species, and that in these desperate times our most urgent task is to find a way of re-weaving the ancient covenant with Gaia (Harding, 57).” The personification of the Earth in Gaia theory continues, calling all people to “try to catch glimpses of the rich interconnections that are the very substance of her life (Harding, 59).” One of the more

impressive personifications of the Earth in my eyes was in a connectedness exercise, specifically referring to the fact that existing on our ‘mother planet.’ This personification of the Earth is utilized in Gaia Theory to help connect people with their environment in a way that incorporates sentiments one would have for their mother: love, respect, truth, care, and a sense of devotion or responsibility to please. Many different persons claim to have had a ‘revelation of Gaia,’ the wording of this phrase somewhat reminiscent of people having a religious or spiritual experience.

While this does not align exactly with the identity theories we studied in class, I think that it does show that there is an aspect of an active, participatory identity coming from Gaia Theory – that we are first persons living on an animate Earth which is capable of self-cleansing and sustaining in some of the same ways that the human body performs those same functions, and the other parts of our identities or sacred circles we have come after the sacred circle that is Gaia.

Permaculture as a peace building tool has the potential power to transform the self-conceptions of people involved in these projects, as well as confidence-building and community empowerment. One study documents a “transition from permaculture innovations addressing local environmental conditions to permaculture innovations contributing to self-empowerment and community building...in which interviewees spoke about environmental conditions followed by permaculture’s community impact, health, permaculture’s personal impact, food security, permaculture improvement, and living conditions (Felix-Romero, 61).” The positive effects of permaculture on all these

aspects of the participant's lives is obvious, showing that permaculture as a peace building tool can positively affect a person's sense of self and sense of community.

Environmental identity presents a new dimension of how we identify ourselves. Based on principles from ecology, an environmental identity can be defined as “a sense of identity that transcends the individual and encompasses one's position as part of a living ecosystem (Environmental Identity).” This idea very much acknowledges the importance of our environment as it relates to our sense of self, which is also important in a number of Freud's writings. In *Group Psychology and the Analysis of the Ego*, Freud states that the gradual gathering up “from the influences of the environment the demands which that environment makes upon the ego (Freud, Ch. VII),” and goes on to conclude that these influences contribute to the development of the ‘ego ideal.’ In a lens from Gaia Theory, this ego ideal would be one that acknowledges the interconnectedness of everything on the mother planet. In Environmental identity, Clayton laid out an ‘Environmental Identity Scale (EID),’ which is designed to measure the extent to which individuals identify with the natural environment and environmental causes (Clayton, 2003). On this scale, I would imagine that someone who has experienced a ‘personal revelation of Gaia’ would have high scores on the EID. Some sentiments that are in close correlation with prominent environmental attitudes are ecocentrism, apathy, and the universal values factor – these are similar to the aforementioned sentiments one would have while understanding the Earth as it is portrayed in Gaia theory.

Similar research regarding the positive and negative aspects of permaculture as peace building was conducted in a dissertation by a GMU Philosophy student, Jessica

Felix-Romero, focusing on the idea in the specific case of El Salvador. The following is an excerpt from that text:

The hybridization between environmental peace building and structural peace-building creates a plethora of new opportunities to build positive peace. The skills of observation required to work with natural systems is complementary to the skills needed to work with conflict systems... Permaculture is revolutionary in its approach to achieving self-sufficiency and it is political by combating the root causes of structural violence. Permaculture works precisely under the conditions of scarcity to create abundance by using local resources. It is teaching people how to analyse their local conditions, use local resources to address their resource problems, and provide for their basic needs... The power of permaculture as a conflict resolution tool lies in the application and therefore the transformation of a nature-based systems-thinking approach to larger social issues within communities and ultimately in society... When women feel empowered to become community leaders in a traditionally male-dominated society, transformation has occurred. When people feel like they can survive crisis because of the skills they have learned through permaculture, transformation has occurred (Felix-Romero, 165-170).'

Permaculture is a peace-supportive problem-solving approach for addressing local environmental challenges that is culturally appropriate for subsistence farmers, and has been shown to be helpful in post-conflict situations where resources can be scarce.

Permaculture supports the ideals of functionalism as previously stated by bringing people together to work to benefit the common good, in so doing it not only lengthens the shadow of the future and increases interdependence between peoples, but helps them to build the foundations for a relationship in their natural environment – an idea unique to permaculture as peace building.

Eco-localism is another paradigm that is fittingly applicable to the idea of permaculture as a peace-building tool. As detailed by Fred Curtis in his 2003 article, *Eco-localism and sustainability*, eco-localism can be described as an economic ecological hybrid in which ‘place matters’. Place here refers to unique locations with their particular ecosystems, communities, and resources. ‘The local place defines and is defined by its particular natural environment, culture, community, history, and economy – none of which are replicable in a different location. Eco-localism is the economics of the local community, with the goal of establishing a healthy community economy. Eco-localism values social and environmental responsibility, health of the community, stewardship of nature, affection for and commitment to place, fidelity, propriety, sufficiency, independence, interdependence, security and self-reliance (Curtis, 2003).’

The values and practices of eco-localism are very similar, and in some cases the exact same, as the philosophy of permaculture. There are many different philosophies of permaculture – one in particular resonates with me quite well. It was published by Maddy Harland in her article *What is Permaculture*. They are as follows:

1. Observe and Interact
2. Catch and Store Energy
3. Obtain a Yield

4. Apply Self-Regulation and Accept Feedback
5. Use and Value Renewable Resources and Services
6. Produce No Waste
7. Design from Patterns to Details
8. Integrate Rather than Segregate
9. Use Small and Slow Solutions
10. Use Value and Diversity
11. Use edges and Value the Marginal
12. Creatively Use and Respond to Change

Environmentally sustainable development addresses the main concerns of creating and sustaining productive agricultural systems. This is a paramount challenge in many post-conflict situations, considering the damage that happens to not only agricultural systems in particular but to the environment as a whole. Permaculture can therefore offer a pathway by which interdependence can promote peace.

One final framework to consider when conceptualizing permaculture as a peace building tool is the field and definition of environmental peace building. In 2009, the United Nations Environmental Program (UNEP) report, *From conflict to Peacebuilding*, was successful in broadening the concept of environmental peace building. It now includes working directly with the environment in post-conflict situations. “In peace building, it is critical that the environmental drivers and impacts of conflict are managed, and that tensions are defused, and that natural assets are used sustainably to support stability and development in the longer term (UNEP, 19).” Three reasons that the UNEP provided for supporting the idea that the environment and natural resources can concretely contribute to peace building are that it supports economic recovery, helps to develop sustainable livelihoods, and contributes to dialogue, cooperation and confidence-

building (UNEP, 22). These factors seem to be the common interweaving thread between environmental peace building, interdependence and functionalism, and permaculture philosophies themselves.

Summary

The definitions of resources and property and the allocation of those is much more difficult in this time, considering in the majority of locations throughout the globe all land has been laid claim, and there is no conquering to be done. However, in the case of the Jordan River basin, the claim on land is still contested, and this has effects not only on the political landscape, but on the allocation of resources within contested property areas. The dispute over property is one that is necessary to view in a multilateral fashion, respective of multiple dispute resolution theories. The state of affairs revolving around water scarcity and the necessity of water as a basic human need as well as a resource for extrapolated facets of society is only a part of the Jordan River basin conflict, yet it seems to be one that continues to feed the cycle between peace and conflict.

The fact that there are multiple different religious groups in the Jordan River basin who hold opposing views of history and rights to land and resources compounded on the triple-threat Grotian period the international political field exists within today fosters conflict rather than cooperation in the region. Interfaith environmental peace building can be used to bridge the gap between peoples and nations, whether it is specifically related to permaculture or to various other means of tangible environmental sustainability projects. The disciplinary interconnections in environmental and interfaith

peace building can offer solutions to the consistent lack of a solution in the Jordan River basin, and can be used as a building block upon which policy can be built.

CHAPTER FOUR

Geopolitical Setting – Jordan River Basin

Water resources occupy an important role in the negotiations of the Middle East peace process. Conflicting plans for the utilization of scarce water resources and a long-standing presence of tension and distrust in the Jordan River basin in particular make the planning and implementation of projects to ‘equitably’ use the Jordan River and its tributaries a difficult task with many opportunities for the issue to spiral into violent conflict. In this section, the geopolitical setting of the riparian nations will be reviewed.

The Jordan River basin, its water, and the utilization of it are central issues of both the ‘Arab-Israeli’ and ‘Israeli-Palestinian’ conflicts, as well as bilateral and multilateral relations between all the riparian political entities – The riparians of the international Jordan River basin are Lebanon, Syria, Israel, Jordan, and Palestine/the West Bank (Amery, 317). The Jordan River basin drains an area of 18,000 km². The headwaters of the Jordan River start in southern Lebanon (Hasbani River), northern Israel (Dan River), and Syria (Baniyas River, though the springs are now controlled by Israel). These three spring-fed rivers merge at a point south of Israel’s northern border to form the upper Jordan Basin. The upper Jordan River empties into the Sea of Galilee (also known as Tiberias or Lake Kinneret), the main storage reservoir in the basin. South of the lake the Jordan joins its main tributary, the Yarmouk River. The Yarmouk rises in Syria

and Jordan and forms the international border between those two states. South of the confluence with the Yarmouk, the Jordan River flows through the Jordan Valley to the Dead Sea, where it forms the border between Israel and the West Bank, now partially under Palestinian control. The river flows through the transition zone from the Mediterranean subtropical climate of Lebanon and the Galilee region in the north to the arid conditions of the Negev Desert and the Rift Valley to the south. As a result, the annual flow of the river varies from around 200 million cubic meters (mcm) per year in dry years up to 1000 mcm in wet years, with an average of around 500 mcm (EXACT, 2005) The river, despite its relatively small discharge of water, represents an important component in the water budget of the regional riparians (Fischhendler, 94 – 6).

The Hasbani River is one of the three tributaries of the Jordan River. The river's largest tributary is the Dan River whose flow varies from 173 to 285 mcm per year, averaging 250 mcm. The Hasbani River's flow ranges between 63 and 190 mcm, averaging 121 mcm. According to the American-mediated Johnston agreement of 1955, Lebanon is entitled to 35 mcm of water a year from both the Hasbani and Wazzani. For years this agreement was informally adhered to by the Jordan River riparians. Lebanon had tried to make use of its proclaimed share of the Hasbani, but was prevented by political instability in the area and by Israeli objections (Amery, 317).

The Jordan River basin area in particular has been host to a long chain of conflicts between nations because of the historical significance of it as a geographical region which plays an important role in Christian, Jewish, and Muslim faiths and their respective denominations. In modern history conflicts have ebbed and flowed between tensions and

peace agreements. Hydropolitical dynamics and spatial variables almost triggered a water war between Israel and Lebanon because the latter was building a pump on the Wazzani Spring, a tributary of the Jordan River. The convergence of a regional drought, history of violent confrontations between the two riparians, distrust, varying development needs and territorial disputes almost culminated in a war between these east Mediterranean neighbours. While most international water disputes in the Middle East will be resolved peacefully, some are likely to trigger violent confrontations threatening political stability in the Middle East in the next few decades (Amery, 313).

Case One – Wazzani Spring Water Pumping Station

Dr. Hussein A. Amery, an Associate Professor at Colorado School of Mines has written extensively about water management and politics in the Middle East and Lebanon and *Islam and the Environment*. In an article entitled *Water Wars in the Middle East: A Looming Threat*, Dr. Amery discusses the hydropolitical dynamics and spatial variables regarding specifically the escalation of tension between Israel and Lebanon regarding the construction of a water pumping station ‘for local use only’ on the Wazzani Spring, a tributary of the Jordan River.

Dr. Amery lays out the Lebanese national context of hydropolitics with a review of the Israeli establishment of a ‘security zone’ in the southern territory of Lebanon, which had the specific goal of preventing guerilla attacks from Hezbollah which originated from that Lebanese territory and Syrian militants within. “In the years since 1978, the area of this occupied zone expanded and contracted a few times. It was largest in 1982 (until 1985) when Israel expanded its hold to control 45% of Lebanon’s area and

smallest, around 9%, in 2000, the year Israel's army quit the area. Before the security zone was occupied by the Israeli army, it had around 300,000 residents. Only about 77,000 people stayed during the decades of guerilla and civil wars. In 2001, one year after the Israeli army abandoned southern Lebanon, about 5000 had decided to return and rebuild their homes and fields that had been abandoned, evacuated or destroyed during the Israeli occupation (Amery, 315)."

After the southern areas of Lebanon were liberated of Israeli occupation, the central Lebanese government focused on attracting investors to fund the rehabilitation of the southern villages. The Council for Development and Reconstruction (CDR) has been working to implement projects earmarked to provide drinking water networks in south Lebanon and preparation for a water treatment plant and a waste water treatment plant where water can be recycled for irrigation purposes (Amery, 315). At the micro level, the Lebanese government started a program whereby residents of the south who were displaced during the conflict were entitled to receive a reconstruction compensation grant which prompted hundreds of families to return to their native villages (Amery, 316). However, a number of these villages have to be completely rebuilt, which makes the return of civilians to them slower. Regarding the rehabilitation of these villages, Dr.

Amery states:

"Why would former residents return to their wholly or partially destroyed villages which they had been long forced to flee? The villages in question, unlike the ones deeper in the once-occupied zone, remain even after the liberation of the zone an active front line where military operations persist. This seemingly irrational act of returning can in fact be explained by the geographical concept of territoriality and the meaning people attach to space (Amery, 316)."

This issue of territoriality and the attachment to geographical space is one that depends heavily upon the culturally contextual and techno-politically contingent territories and their peoples. Identity on individual, community, and regional levels ties heavily to geographical space and the ownership of that space in the Jordan River basin area of the Middle East. Dr. Amery emphasizes this by referencing the “complex state of power, geography and identity,” recognizing that “territory is a regime of practices triangulated between institutionalizations of power, materializations of place and idealizations of ‘the people’ (Amery, 316).” Cultural and historical linkages to geographical space exist not only on the part of the Lebanese people but of all the riparians of the Jordan River basin, and therefore evoke feelings and swirling tensions from all parties.

Dr. Amery goes on to state that Israel and Lebanon have not signed a peace treaty nor reached any kind of understanding over environmental or security matters since the Armistice Agreement of 1949, and that Israel and Lebanon are therefore not legally bound by any agreement over water allocation and quality. He acknowledges that the water issues require bilateral resolution, but favors a basin-wide multilateral approach (Amery, 317). The style and tone that are taken in this section of the article are obvious examples of distrust and tension between Lebanon and Israel, and in some ways all the riparian political entities. Dr. Amery portrays the situation as one in which Lebanese and other riparian’s water rights have been usurped by Israel’s desires and water usage.

Lebanon announced plans to install a water pumping station on the Wazzani Spring in early 2000, and began implementation in early 2001 after receiving a degree of permission, contrary to the interests of Israel. The situation reached the newspapers and

officials were “bewildered by the political storm over the pump (Amery, p.318).” The uproar was then used by the media to ‘cultivate a certain public hysteria,’ while governmental, non-governmental, and ecological/environmental groups and agencies were crying out for a solution. “Saguy, who was the former OC Intelligence chief, warned Lebanon against taking unilateral action and said: ‘There is no water in the Middle East. Therefore, understandings must be reached. If not, [the water issue could] turn into a war on a forceful confrontation’ (O’Sullivan and Keinon 2001, cited within Amery).

The media coverage of the water pumping station on the Wazzani Spring oscillated between belligerency and concern, and made reference to conflicts revolving around water in the area in the 1960s. The media also “exaggerated the issue by erroneously referring to water diversion from the Hasbani River, when the tiny, near-dry Wazzani Spring (which feeds the Hasbani) was the site of the pump (318). Israel defended its claim to the waters saying that a diversion would violate international conventions – all this during a fragile political and environmental time. Severe drought that had faced the eastern Mediterranean countries for about five years, and post-war rise of economic and quality of life in Lebanon. The Lebanese people were at this time in a state of relative deprivation, and issues of political, economic, and development needs and tensions converged.

During the 1990s Lebanese military resistance to Israeli occupation had intensified, making the situation in the security zone ripe for conflict. Israel’s air force and army frequently bombed various military and civilian targets inside Lebanon, most of

these attacks occurred without an overt military mobilization. Hizbullah-related bases and buildings, Lebanese power stations, television relay stations, bridges, highways and Syrian military positions inside Lebanon, and other strategic locations were frequently targeted. (Amery, 320-1)

Israel has been responding to attacks by Hizbulla fighters on its troops in the Sheba farms by hitting back at the guerilla organization's positions, and by using verbal warnings to the governments of Lebanon and Syria – the latter had over 30,000 troops inside Lebanon. Israel, however, decided in early 2001 to change the rules of the retaliation game, and its magnitude. It bombed a Syrian radar post inside a Syrian military base deep inside Lebanon (Amery, 322).” This escalation of the tensions could have easily spiraled into a war, and shows how quickly the rules of engagement change.

Israel and Lebanon should theoretically be more inclined to peaceful negotiation of conflicts rather than war, since they are both ‘democratic states.’ However, democracy does not always foster peace between political actors. Israel and Lebanon also show credible international institutions, increased international integration and coordination which nudge them towards peace, however, these two democratic states do not have any institutions that regulate their relations – not even a peace treaty. “They, however, have a significant reservoir of distrust and ill-feeling (Amery, 320).” Choice verbage, as actual physical water reservoirs caused such uproar and political turmoil.

Dr. Amery states that “The political storm over the Wazzani pump could be understood as a hydropolitical deterrence on the part of Israel. It was trying to reassert its political position which experienced a perceived decline in the credibility of its deterrent

power after its unilateral exit from south Lebanon. Israel also wanted to send a clear message to the Palestinians, Syrians, and certainly to the Lebanese that unilateral tampering with international watercourses is unacceptable and its consequence could be violent confrontation (321).” He goes on to stress the importance of the multi-layered geopolitical landscape of situations which must be reviewed and respected in relation to the specific issue of the water pumping station. Bitterness on both sides regarding military occupation, land acquisition and maintenance, and perceptions of intentions and desires were factors that combined to turn a local water management issue into a major yet temporary crisis.

Dr. Amery concludes this work by laying out the challenges and constraints of sharing the international waters of the Wazzani and Hasbani which are: the apparent lack of hydrological, physical, and socioeconomic data, lack of an institutional framework, and the difficulties with the enforcement of the international water law. He states that for a hydrological inventory to be complete, all riparian states and political entities will need to cooperate. Missing data from one actor or another can skew perceptions and appropriate actions. A politically independent international institution could assure the continuous collection, sharing, and analyzing of data, as well as aid in the development and approval of water development plans in the Jordan River basin and mediate conflicts between the riparians. “The institutional void is related to the geopolitical discord that taints relations between Israel and Lebanon (Amery, 323).” Lastly, international law requires that international waters are used by states in a manner that is equitable and

reasonable with respect to the other states. However these sensible buzz-word terms are in the eye of the beholder.

Case Two – Ambiguity in Water Conflicts in the Jordan River Basin

The Middle East is an area where the struggle over resources such as water and oil continues. Leaders of many Middle Eastern states believe that they will gain resources and influence through war rather than through diplomatic means. “In the Middle East, it will still be true that war will pay in a way that it will not in most other regions. Victory may bring land that offers more resources – either water or oil. Had Iraq won the Gulf War, it would have had more oil. If Israel retains significant portions of the Golan Heights and the West Bank, it will have more water. Both oil and water will become increasingly pressuring issues in the Middle East in the coming decades. Each could trigger conflict (Maynes, 1998).” The existence of oil, scarcity of water, and blurred geopolitical boundaries are not the only factors that can contribute to conflict in the eastern Mediterranean. As was mentioned by Dr. Amery, the intangibility of concepts such as ‘equitable’ and ‘reasonable’ in international water law can be cause for conflict as well.

In *Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli-Jordanian Water Agreement*, Itay Fischhendler discusses the tendency for unclear use of language in international water law and in potential plans for peace talks and water usage projects in the Jordan Basin, specifically between Israel and Jordan.

Fischhendler begins the history of Israeli-Jordanian water agreements in 1951, three years after the establishment of Israel, at which time Israel and Jordan both

announced unilateral plans to develop water usage resources on the Jordan Basin. Israel planned diversion of the Jordan through a carrier to the Coastal Plain and Negev Desert. Jordan planned to irrigate the Jordan Valley by moving the Yarmouk into a canal 75 km long (the Ghor Channel). As Israel started implementing its plan, a series of border clashes erupted between it and Syria, which escalated into an armed conflict in 1953.

Given the rise in tension and conflict and U.S. national interests in the area, U.S. President Dwight Eisenhower appointed Eric Johnston as a special envoy to the region, with the mission to reach a regional agreement between the riparian states on the division of the waters of the Jordan and Yarmouk Rivers. Johnston proposed a water plan (The Main Plan), but it was quickly rejected. In 1955, he returned with a revised draft (the Unified Plan) that attempted to reconcile the differences between the Israeli and Arab intentions. Two different summaries of the new plan were distributed, one to the Arab countries that confined Israeli use of the Yarmouk to 25 mcm per year and the other to Israel, which stated that it could pump 40 mcm per year. The Israeli Prime Minister approved the plan in October 1955, however the Arab League did not approve their version and the Unified Plan therefore collapsed (Fischhendler, 97).

Jordan then took unilateral action in devising its 'Greater Yarmouk' project, which included the construction of two dams for storage and hydro-electricity production. Jordan and Syria also began construction of a diversion plant to prevent the Jordan River headwaters from reaching Israel, however those plans were delayed due to disagreements and lack of funding. Meanwhile, Israel proceeded with its plan to integrate all the country's water resources into a comprehensive countrywide network called the National

Water Carrier, completed in 1964. The multiplicities of unilateral water development plans and projects created tension among the riparian states and led to an exchange of threats amongst them. Between 1964 and 1967, these political clashes developed into several military confrontations. After the Six Day War of 1967, the geopolitical map of the Middle East changed dramatically. Israel gained not only in reference to land and borders, but to water resources by acquiring one of the three Jordan River headwaters (Fischhendler, 98).

Later, in the mid 1970's, Jordan revived the plan to build a large storage facility on the Yarmouk whilst it was facing water shortages in its main cities of Amman and Irbid. In 1987 Jordan and Syria signed an agreement allowing Jordan to build the Unity Dam (Al-Wehdah Dam) in return for providing Syria with hydro-electricity generated by the dam. The Unity Dam opened in 2011 and has a body volume of 1,480,000 m³ (Ozaltin.com). Despite past friction, the Israelis and Jordanians often met to discuss and regulate water-sharing on the Yarmouk, which had to be frequently adjusted because of the lack of maintenance of the Yarmouk intake at the diversion point. These meetings served to create working relations and mutual respect between water experts on both sides. Yet, as long as the high politics of the regional conflict over territory and refugees was not resolved, talks over water were never institutionalized into a treaty and remain restricted in scope (Fischhendler, 96 – 7).

Fischhendler found that the issues of ambiguity as it relates to water resources and conflicts in the Jordan basin “rather than being a random error in decisionmaking, is occasionally intentional, employed either by using vagueness that ignores an issue or

words that can mean different things (Fischhendler, 105).” Ambiguity can be used as an indication of the intensity of disagreements that occur during the negotiation process, in three different ways. Some of the ambiguity used allowed each side to present the treaty differently at home, fostering domestic support from each side. Other ambiguities were provided to give wiggle-room to adjust the resource allocation in the future, or in the event of a crisis, which would not require renegotiation of the treaty. The use of ambiguity to “address the sovereignty and asymmetrical power trap (Fischhendler, 106)” is a positive aspect that can allow for the resolution of disagreements over Transboundary water issues in the basin area where they can ignite conflict.

While adopting ambiguity allowed Jordan to sell the agreement at home and establish symmetrical relations between Jordan and Israel, and while both Israel and Jordan were able to claim victory in their domestic political realms, the ambiguity in reference to the allocation of water resources can set the field for conflict in the future. Addressing the power imbalance in the Jordan basin with ambiguity may be positive, as “it may serve as a shield from domestic opposition for the weak (Fischhendler, 106).” Fischhendler recognizes that there is a “need to further examine whether such ‘constructive ambiguity’ is not, in fact, destructive, as it may have detrimental implications at the management phase of the regime. Special attention should be given during the implementation phase of the agreement to the volatility of the virtual power symmetry presented by the treaty (106).” In some cases, ambiguity in the resolution of conflicts revolving water resources can increase the likelihood and evidence of resolution of conflict. However, ambiguity in reference to specific water allocations could be a

reason for conflict in the future. Environmental peace building may offer an answer to this gap, and will be discussed further in Chapter 5.

Bilateral Water Relations

Dr. Munther Haddadin – a Courtesy Professor at Oregon State University and Water Resources Consultant based in Amman, Jordan – discussed the role of *Water in the Middle East Peace Process* in an article in the Geographical Journal, in which he “defines the water issues between Israel and each of its neighbouring entities: Jordan, the Palestinians, Syria and Lebanon, and reviews what has been addressed in the peace negotiations thus far.”

The Middle East peace process began at the Madrid Conference on 31 October 1991, and was divided into a multilateral and bilateral conference. The bilateral conference consisted of the Arab Core Parties (Lebanon, Syria, and Joint Jordanian-Palestinian delegation) each negotiating separately with Israel to resolve issues. The multilateral conference focused on discussing five topics with the aim of enhancing the work of the bilateral conference. The topics were: Palestinian Refugees, Water Resources, Regional Economic Development, Regional Security and Arms Control, and the Environment (Haddadid, 324).

During working phases of the conference, Israel and the Palestinians initiated a parallel secret track negotiation in Oslo, Norway, outside of the framework of the Madrid Conference.

The Oslo secret talks culminated in a framework agreement between Israel and Palestine Liberation Organization (PLO), signed between them at the White House on 13 September 1993. The PLO and Israel exchanged political recognition and the joint Jordanian-Palestinian delegation split up into two separate entities and continued to negotiate with Israel in accordance with the

Madrid formula: the return of the Arab lands captured by Israel in 1967 in return for a comprehensive and lasting peace. The multilateral conference convened in Moscow on 28 January 1992, and the Water Resources Working Group met in various venues in eight rounds. Little benefit or few benefits came out of its work, primarily because Syria and Lebanon chose not to participate in the multilaterals, and because the bilaterals that these talks were meant to reinforce stalled on three of the tracks: the Syrian, the Lebanese and the Palestinians (Haddadid, 324).

Water issues had been among the crucial issues of the dispute and the peace agreements.

Many conflicting plans for utilization of the Jordan River waters can be tracked to the end of the nineteenth century (Haddadid, 324). The United States interest in the peaceful management of water-related conflicts and the Johnston Mission is included along with the details of the Johnston Plan and the Revised Unified Plan. The June War of 1967 is reviewed as a claimed water war as well. Haddadid then reviews water issues to be settled:

Of the four bilateral tracks of negotiations, only Jordan and Israel achieved a final settlement of the water issues between them. The water agreement is the subject of Article VI of, and Annex II to their Treaty signed on 26 October 1994. It will be reviewed below. The Palestinians and Israeli arrived at an interim water and sewage agreement as part of an overall Interim Agreement signed in Washington DC on 28 September 1995, and its features will also be reviewed below. No water agreement or other agreements have been reached between Israel and either Lebanon or Syria. The outstanding water issues in those tracks are addressed below. (Haddadid, 327)

The issues in the negotiations and their relation to water resource allocation implementation and management will be briefly reviewed in the following pages.

Jordanian-Israeli Issues include Jordan's Jordan Valley project and allocation of the Yarmouk River, which was also of interest to Israel, is one of the problematic issues of Jordanian-Israeli relations. Jordan believed it was entitled to the waters of the Yarmouk while Israel took advantage of the lack of a diversion structure after the June War.

Additionally, Israel's diversion of saline springs to the Lower Jordan to the detriment of Jordanian farmers and Israeli occupation of Jordanian territories caused tension.

Palestinian-Israeli issues included Palestinian territories which have an 'equitable' share in the waters of the Jordan and its tributaries but there are groundwater aquifers underlying Israeli-Palestinian territories that need to be shared between the two riparian parties. Israel had been developing and been dependent on those waters for years in the absence of an agreement with the Palestinians on allocation. During the Madrid Conference and parallel Oslo Talks, the two sides agreed to coordinate ownership and management of water and sewage resources and systems in the Permanent Status Agreements.

“Israel undertook to supply the Palestinians during the Interim Period with a total quantity of 28.6 mcm per year, as detailed under paragraph 7 of the said Article. They also assigned the responsibility of drilling more wells in the Eastern aquifer to the Palestinians to supply the additional water. Israel undertook to provide technical data to the Palestinians for that purpose. Further, the two sides agreed to set up a Joint Water Committee to implement the provision of the water and sewage interim agreement. They further agreed to establish a Supervision and Enforcement Mechanism for supervision over and enforcement of their agreements in the field of water and sewage. The authorities of such a mechanism were detailed in Annex III, Article 40 of the Interim Agreement (Haddadid, 328-9).”

Syrian-Israeli issues regarded Israel's occupation of the DMZ's and the Golan Heights on the Syrian front impeded Syria's access to the Banyas water and to Lake Tiberias. An apparent water issue became a serious border issue between Israel and Syria to be settled through bilateral negotiations along with other thorny issues, such as the withdrawal to the 4 June 1967 lines, demolition of the Israeli settlements on the Golan, and full peace with Israel. On the water issues, Israel was operating under the allocations of Johnston's

plan, however because of the strategic ambiguity of this agreement, allocation issues were still present between Syria and Israel.

Lebanese-Israeli issues existed regarding the Lebanese share of the Hasbani and its tributary the Wazzani, defined in Johnstons allocation and discussed previously as exemplified in the case regarding the local Wazzani water pumping station (Amery). This local water pumping station is used for domestic purposes in two neighboring villages, while the large remainder of these waters is taken up by Israeli needs. Another less public issue is the trans-boundary groundwater reservoirs underlying the Israeli and Lebanese territories. The regulation and exploitation of these reservoirs should be addressed in any future peace treaty. “Lebanon’s bilateral negotiations with Israel have been linked with the progress in Israeli negotiations with Syria. However, Israel did withdraw from South Lebanon under pressure from armed resistance of the Lebanese militias, and no bilateral negotiations have taken place between Lebanon and Israel since they were stalled after the Oslo Accord in September of 1993 (Haddadid, 329).”

Jordan and Israel were able to resolve their water dispute through negotiations due to their joint will to reach a peace agreement and the water needs of each side which truly pressed for an amicable solution. The water negotiations between Lebanon and Israel over the Jordan basin were not expected to be complicated, however there was doubt regarding the groundwater aquifers. On the Syrian track, the definition of ‘border’ or ‘water’ issue was blurred; however the most complicated issue was the negotiations between the Palestinians and Israelis over the groundwater aquifers (Haddadid, 338).

Summary

Ambiguity is used positively during the negotiation and peace agreement phases of relations between the Jordan River basin riparian states and political entities allowing them each to save some face with their people and with the international community, this same ambiguity can be detrimental in the physical implementation and management of water resource allocation in the basin. The provided policy, negotiation, and implementation examples provided above show that these agreements may not always lead to a resolution of conflict over water and resource allocation, due to the ambiguity required because of the deep distrust and feelings of animosity in the Jordan Basin. These actions are taken from a top-down approach, attempting to implement plans regarding water that come from the ideas of national and international policymakers and negotiators, and they neglect the needs of local communities, except in the case of the Wazzani Spring water pumping station. In the following chapter, a different approach to the peaceful resolution of water and environmentally-based issues will be presented.

CHAPTER FIVE

In the previous chapters, it has been demonstrated that environmental and interfaith peace building in the Jordan River basin can provide for a bottom-up approach to peace building that respects the wishes and needs of local communities, while bridging the gap that exists when treaties are signed at the international level regarding the allocation and implementation of water use plans for the basin and its riparian political entities. Traditional conflict resolution theory stipulates that human needs are pursued simultaneously whether they are high or low level needs, however lower level needs are the more primary, such as the ability to acquire and use water, to have clean drinking water, and to irrigate farmlands and hydrate livestock. If people are deprived of their need for water resources, whether this be on an aspirational or expectations basis, they are likely to become frustrated and pursue violent action as a means to fulfill their needs.

It has been demonstrated through the portrayal of the geopolitical setting in the Jordan River basin and through the use of specific case studies that traditional Track I or Track II diplomatic solutions to water allocation or mis-use in the region have not proven to be effective on a local level, and have not proven to foster peace in the region. A different approach, one that involves more Track III diplomacy and relations and incorporates environmental and interfaith peace building theory and practices can and could continue in the future to promote positive relations among the riparians of the

Jordan River basin, and could someday lead to the transformation of the conflict into one of a true positive peace.

In the following segments, I will give examples of Environmental Peace building and Interfaith initiatives that exist already in the Jordan River area, and an example of a successful Environmental Peace building Organization whose tactics could be applied in the Middle East.

Friends of Earth Middle East (FoEME)

Friends of Earth Middle East is an Environmental Peace building organization which involves people from the different religious communities in the Jordan River basin to promote environmental awareness and conservation efforts. Their mission is to “bring together Jordanian, Palestinian, and Israeli environmentalists” for the “promotion of cooperative efforts to protect the shared environmental heritage” and “seek to enhance both sustainable regional development and the creation of necessary conditions for lasting peace in the region.” FoEME is also a Member of Friends of Earth International – the largest grassroots environmental organization in the world. FoEME therefore exhibits characteristics stipulated in environmental and interfaith peace building, and promotes ideas from the interdisciplinary realm including Gaia theory and ecological respect or a holistic, resilient interpretation of the use of and care for resources in the basin area and among the riparian states. Friends of Earth Middle East is involved in many various projects in the Jordan River basin area to promote interfaith environmental collaboration which can help foster peace. The projects include: Good Water Neighbours, Jordan River Rehabilitation, Protecting Ground Water, FoEME

EcoParks, Jordan River Peace Park, Dead Sea, Red-Dead Conduit, Climate Change, Mt. Aquifer, Water and the Peace Process, and Sustainable Development Strategies (FoEME).

One of the more well-known areas of success that FoEME has is their EcoParks. FoEME has developed three EcoParks; whether to preserve biodiversity, or as a powerful tool for environmental education, they are important community based projects. They were developed on the basis of successful plans for previous projects. EcoParks integrate the principles of sustainable development into country policies and programs and helps to reverse the loss of environmental resources and biodiversity in the region (FoEME). FoEME has developed three EcoParks: Sharhabil bin Hassneh EcoPark, Ein Gedi EcoCenter, and Auja Environmental Center.

The Sharhabil bin Hassneh EcoPark and the Ziglab Initiative have been created as pilot projects whose goal is to establish a model for preserving ecologically important habitats within the Jordan Valley. This park is considered as an extension of the Neighbours Path that provides an open space for the community which will implement and foster values and objectives of the Neighbors Path on the local and regional level, as well as at the international level by working towards the Millenium Development Goals. The Sharhabli bin Hassneh EcoPark is also involved in carbon offsetting and wetland protection in Jordan. An account of the successful implementation of the Eco-Park follows here:

“The Eco-Park, implemented successfully by the NGO (FoEME) has received in 2007 a further support from the Jordan Valley Authority that decided to extend the [geographical] area under administration of FoEME for the Eco-Park ... This decision has been taken because the local communities as well as the authorities

had seen that after one year of the presence of the fenced Eco-Park, the biodiversity increased becoming rich while the vegetation developed and expanded. The environmental awareness campaigns involved a huge part of the local communities as well as of the schools of the area. The Eco-Park is becoming an important point for *eco-tourism* in the northern part of the valley. After only one year, the strong difference between the land within the boundaries of the park, where plants are growing richly, and outside the fence where the area is subject to erosion and under the threat of desertification, were clear. Today, the local and national authorities, as well as the civil society, strongly support the Eco-Park. For this reason it has been expanded further. This is a clear sign of the success of this project, recognized and supported by all the stakeholders, authorities, and the actors involved in the area (Hussein, p.55).”

The geographical expansion of land allocation for the park, the quality of life inside vs. outside the park’s designated area, and the support from stakeholders show that the Sharhabli bin Hassneh EcoPark is a successful program that not only supports the environment but fosters collaboration between the stakeholders of the program, which can be a concrete building block for further peace.

The second EcoPark with which FoEME is involved is the Ein Gedi EcoCenter. It began with the creation of a Mini Zoo for children in the 1970’s. Today, the EcoCenter has several different mud structures, a wetland that recycles grey water from a nearby kindergarten building and then irrigates trees nearby, and plans are being made for the installation of solar-powered lighting (FoEME). This center aims to educate students from the Middle East region, and other visitors as well, on ways to reduce our impact on the environment and promote green solutions for daily needs, while also promoting collaboration of persons from various backgrounds to help meet these goals.

The third and final EcoPark FoEME works with is the Auja Environmental Center, located north of the Jehricho in the Jordan Valley, West Bank inside the Auja village which is famous for its spring, which is estimated to provide 9 mcm per year out

(FoEME). “Understanding the unique potential of the area and the need for educating visitors of the importance of the site, its connection to the Jordan River and Rift Valley, and the need to both protect the nature reserve and wisely utilize scarce water reserves (FoEME)” are the factors that led to the construction of the Center for Environmental Education and Eco-Tourism Development located in Auja.

Another success of FoEME is the Good Water Neighbors project, mentioned in the previous description. The Good Water Neighbors project uses a series of walking trails, called Neighbors Paths, to raise public awareness of shared water and environmental concerns, promote cross border cooperation for solving environmental problems, and develop the potential for local eco-tourism (FoEME). The Good Water Neighbors Methodology “is an original idea that is based on identifying cross border communities and utilizing their mutual dependence on shared water resources as a basis for developing dialogue and cooperation on sustainable water management (FoEME). [It] has created real improvement within the water sector by building trust and understanding that has led to common problem solving and peace building among communities even in the midst of conflict.” The Good Water Neighbors project initially included eleven Israeli, Palestinian, and Jordanian communities participating in Phase I of the program. Phase II expanded the communities involved from eleven to seventeen. Further expansion now includes 28 communities, supporting FoEME’s efforts in all the regions shared water resources; the Dead Sea, Jordan River and the Mountain and Coastal Aquifers (FoEME).

The Good Water Neighbors has addressed the issue of trust-building and extending the shadow of the future to foster peaceful relations since the outset, partnering communities to be chosen with neighboring communities on the other side of the border or political divide to work on common water issues. The Good Water Neighbors program works with community members and regional leaders to improve the water situation through education and awareness activities, information sharing, dialogue, and cooperative ventures (FoEME).

The documented successes of the Good Water Neighbors program of Friends of Earth Middle East is a solid example of a bottom-up project being used not only to increase awareness of environmental importance and the interconnectedness of environmental issues through the different religious and ethnic communities in the Jordan River basin area. Trust-building that occurs between the different groups can also help ease negotiations further on and on higher tracks of diplomatic measures.

Arava Institute for Environmental Studies (AIES)

The Arava Institute for Environmental Studies (AIES) is a form of Environmental Peace building which involves different religious communities through an educational lens. AIES describes themselves as the “premier environmental education and research program in the Middle East, preparing future Arab and Jewish leaders to cooperatively solve the region's environmental challenges (Arava).” Students at AIES study a range of environmental issues from a trans-boundary and interdisciplinary perspective while learning peace-building and leadership skills. Their student body comprised of Jordanians, Palestinians, Israelis, and international students from around the world. The

Arava Institute for Environmental Studies offers students a unique opportunity to study and live together for an extended period of time; building networks and developing understanding that will enable future cooperative work and activism in the Middle East and beyond (Arava).

One of the areas of success for AIES is their EcoPaths, which focus on three central themes: journey, challenge, and hope. EcoPaths intend to promote a “sustainable Israel through educational and environmental outdoor experiences (Arava).” Eco-Paths organize journeys where participants challenge themselves physically and advance the principles of peace and environmental activism. The EcoPaths project holds similar values and practices as the Good Water Neighbors and EcoParks projects to promote intercultural and interreligious peace building centered around environmental issues.

Another example of AIES’s success is the Arava Center for Sustainable Development, located in the Southern Arava region of Israel’s Negev Desert. It is a partnership between three research and academic institutions which are conducting critical research in water resources management, sustainable agriculture and renewable energy, with emphasis on arid land ecosystems (Arava).

Their activities focus on community participatory implementation of appropriate technologies in the fields of water, alternative energy solutions, and agro-technologies and best agricultural practices (Arava). This Center for Sustainable Development holds the values of Environmental Peace building as a high standard of operation.

United Religions Initiative

The United Religions Initiative is a “global grassroots interfaith network that cultivates peace and justice by engaging people to bridge religious and cultural differences and work together for the good of their communities and the world (URI).” URI envisions a world at peace, sustained by engaged and interconnected communities committed to respect for diversity, nonviolent resolution of conflict and social, political, economic and environmental justice. They implement this mission through local and global initiatives that support their member groups and organizations, called Cooperation Circles, of which there are more than 525. Their action areas include peabecuilding, youth, chindren, environment, women, and global advocacy (URI).

A group inside URI’s Cooperation Circles came together at the Rio +20 United Nations Conference for Sustainable Development in Rio de Janeiro, Brazil for a ceremony at the summit. The Reverend Canon Sally Bingham – environmental activist and Episcopal priest, founder and president of The Regeneration Project, a faith-based focus on the environment – is quoted as saying “ecological stewardship is a priority for religious people. And if it isn’t, it should be (URI).” She works with Interfaith Power & Light with more than 14,000 congregations in 39 states whose initiatives are based on the idea of a shared responsibility for protecting the world’s resources. The three project areas of this organization actively help places of worship to become more energy efficient, encourage the use of locally-grown food sources in church suppers, and to help religious communities in Cambodia, Ghana and Tanzania rebuild their forests. These

initiatives are a solid example of the ease of incorporating religious and environmental initiatives together, as Rev. Bingham says she's 'never had difficulty reconciling her environmental activism with her role as an Episcopal priest,' (URI) rather that they fall hand-in-hand.

Another activist within URI's Cooperation Circles is Ms. Heidi Rautionmaa who works with Faiths Without Borders, based in Finland. She stated that "religious and spiritual traditions have a vested interest in human welfare, have worked long against poverty and have much to add to the conversation on sustainability... Topics such as privatization, industrial pollution and water rights are deeply moral issues (URI)."

In June of 2012, these Cooperation Circles brought together members of many different religions, spiritual beliefs, and indigenous traditions to discuss the relationship that water has as being not only necessary to life but sacred to every system of belief. Practitioners "didn't realize at first that one of the unintended consequences of our work would be bringing us together with Jews, Buddhists, Mormons and many others. If there's one thing we can sit in agreement about, it's that we're all stewards of creation (URI)." This is a clear demonstration that, not only does environmental peace building lend itself to support religious peace building, but that religious resolution practices bring with them solidarity in environmental issues.

Religious organizations have the unique ability to comment on the political issues affecting the environment from a non-partisan perspective, and the universality of ecological issues can help those who might otherwise be divided by their views to find

common ground. “Spirituality, with its holistic, religious dimensions, can promote the understanding of the intrinsic value of water – which can prevent its prodigal use (URI).”

Vandana Shiva also present at this ceremony and Rio +20, and during a presentation stated that we have been living in “masculine times” which have brought many separations, whether they be political, social, or cultural. Shiva stated that “We must go beyond anthropomorphizing the Earth and portending the globalization of greed. We must re-localize the struggle and globalize compassion and cooperation (URI).” One way to do this is through Interfaith Environmental Peace building, as has been shown above.

GreenFaith

GreenFaith is an Interfaith Environmental Peace building and education organization that acts to inspire, educate, and mobilize people of diverse religious backgrounds for environmental leadership. GreenFaith is an interfaith coalition for the environment that was founded in 1992. They work with houses of worship, religious schools and people of all faiths to help them become better environmental stewards. GreenFaith believes in addressing environmental issues holistically, and is committed to being a one-stop shop for the resources and tools religious institutions need to engage environmental issues and become religious-environmental leaders (GreenFaith).

Their programs include certification, fellowship, and environmental justice. They provide Leadership-level environmental programs for houses of worship, environmental training and leadership for clergy and lay leaders. This offers religious leaders a unique opportunity for educational, spiritual and vocational growth and skill development in religious environmentalism. These programs integrate historical perspectives, scientific

information, socio-economic considerations, religious, ethical, spiritual and practical dimensions. They also provide hands-on programming and advocacy that educates and activates faith communities around the topic of environmental justice (GreenFaith).

GreenFaith is an example of an organization that has successfully incorporated interfaith cooperation initiatives with environmental activism and education. While GreenFaith is different from the other organizations mentioned in this study as it is located in the United States and not the Jordan River Basin, it is still a strong proof that religious and environmental peace building efforts can combine together to form a more holistic conception of peace and prosperity, pulling from the strengths of both disciplines. While the degree of consensus between Religious and Political Authority may be independent from one another or highly integrated (Toft, p. 27), depending on the geographical location and form of government, it is still true that religious leaders hold a substantive form of authority in themselves and can use that to further environmental conservation and sustainability efforts.

Arguments Against Interfaith Environmental Peace Building

The most obvious argument against the integration of Environmental and Religious Peace building is that this type of work is only really applicable in either preventative measures, or in ‘latent,’ post-conflict situations. It therefore needs a certain ‘ripeness’ that could potentially be viewed as over-ripe. However, it is important to note that places with environmental degradation that detracts the livelihoods of local people

as resulted from conflict are likely to regress back into conflict if their basic human needs and grievances are not addressed.

It may be possible that Interfaith Environmental Peace building holds too many paradigms and underpinnings simultaneously, or that it is in contestation with more modern interpretations of development, and traditional interpretations of peace (as negative peace). There have been examples of negative outcomes from environmental conflict resolution. Some projects have the potential to be detrimental if they are based on a misconception of local circumstances and wrongful motivations for intervention. However, this holistic understanding of indigenous people's conceptions of peace and desire for intervention is something that Religious Peace building adds to environmental efforts.

There are a plethora of examples of conflicts arising and hardships being imposed upon people by agri-business and initiatives that benefit outside actors, rather than benefiting local citizens. Monsanto and their genetically modified seed commodities have been featured in countless journal articles regarding suicides of Indian farmers. Yet these programs were implemented without any of the underpinnings that Environmental and Religious Peace building promote. Interfaith Environmental Peace building can attempt to better the livelihoods and situations of many communities globally. Agricultural programs that are approached in a 'masculine' way, with the goal of profit, are detrimental to local farmers, however agricultural programs such as EcoParks are positive examples of the ability to rehabilitate land and resources in a sustainable manner.

Competing Case

One example of a less-than-successful case of permaculture as a peace-building tool comes from a derivative or contributor to modern ideas of permaculture, depending on your perspective: agroforestry. Agroforestry contributes to contemporary permaculture in the sense that agroforestry is considered one of the three principle land-use sciences, with the other two being agriculture and forestry (Wojtkowski, p. 356). Agroforestry is an integrated approach of using the interactive benefits from combining trees and shrubs with crops and/or livestock, and in that way it is also a derivative of permaculture which develops sustainable agricultural systems which mimic naturally occurring ecological systems.

The case about which I am speaking is one entitled “*Shady Practices: Agroforestry and Gender Politics in the Gambia*” by Richard A. Schroeder. His book, which details the time Schroeder spent in the Gambia during his work, field research, and introduction of agroforestry practices and their apparent effect on the gendered politics of the home and family relationships of Gambian peoples. *Shady Practices* “offers a fascinating and timely analysis of ecology and gendered politics in The Gambia, weaving together an amazing story of men and women caught up in struggles over livelihood strategies, land use, resource tenure and domestic relations and obligations (Thomas-Slayter).” Schroeder’s book does not only focus on the villagers of the Gambia’s North Bank community of Kerewan – he also includes national level agencies and international donors with their changing, sometimes contradictory, policies and programs for achieving sustainable development and environments. Historically, the gender division of labor in

this region has seen men taking charge of the growing of groundnuts (peanuts) and the coarse grains (millet, sorghum, and maize), while women have grown rice and vegetables. The men's plants were grown on upland fields during the rainy season, and the women's grown in swamps and low-lying areas, with the bulk of their produce strictly for home consumption. The male domination of groundnut production, the country's main source of foreign exchange, translated into control over most of the cash income generated through agriculture, and contributed to power struggles that occurred between the men and women during two decades of drought which began in the 1970's (Thomas-Slayter). Drought-related ecological changes, investor changes, and the commercialization of agriculture that occurred led to competition between male and female crop systems. Gardens were competing with orchards, and women with men. However, by implementing agroforestry and planting orchards and woodlots directly on top of gardens, the male/female differences in agriculture were perpetuated, and the women more easily taken advantage of by the male landowners.

It is important to note that this case is one that is similar to the idea of environmental peace building, however it is missing paramount paradigmatic underpinnings to respect the local community and their needs and to promote the fostering of trust and interconnected wellbeing.. Although, it is clear that the agroforestry projects that were arising in the Kerewan community were motivated by the commercialization of agriculture and the greedy economic interests that was serving. This project was not at all intended for promoting the transformation of the structural violence

occurring in the Kerewan community. This case speaks clearly of the aforementioned issues of contrasting interests.

There is not a plethora of theoretical arguments against permaculture as a peace-building tool. The related literature focuses on topics such as “*36 Problems That May Arise in Preparing for, and Implementing Community Visioning Initiatives*” (IPCR 1000Communities2), or on specific cases of unsuccessful permacultural projects. The problems that are detailed revolve around misunderstandings and perceptions of a view of human nature, whether it is cynical or positive, and the fostering of a healthy relationship with the local and regional ecosystem and the Earth as a whole. The need for “forgiveness and reconciliation between people, communities of people, and even nations, in the world today (Pasti)” should be promoted.

Summary

Existing Environmental Interfaith Peace building programs in the Jordan River basin have thus far proved to be positive and successful, especially in the case of the EcoParks, Good Water Neighbours Program, and educational institutes that promote environmental awareness and sustainability. The paradigmatic underpinnings of environmental and interfaith peace building programs implemented by non-governmental organizations and educational and interest groups allow for and foster positive interrelations and collaboration between differing religious communities.

Further research should be conducted, studying specifically the interconnectedness of these Track II and Track III projects and their effectiveness on

changing perceptions of building peace at the Track I and international influential levels. The involvement of leaders of programs with local and regional policy and treaty negotiation and implementation should be studied further, to come to a better understanding of the political effects of practical environmental and interfaith peace building practices in the Jordan River basin. The bilateral and multilateral relations of neighbouring communities and the nature of their relations to one another should be compared close to the EcoPark and Neighbours project areas, as well as a comparison of bilateral and multilateral relations of neighbouring communities where there is an apparent lack of peace building programs should also be studied to quantify the peace building effects of these programs.

However, it is clear that a paradigm shift has occurred or is occurring which allows for a focus on the importance of localized involvement in and with local ecosystems, and the recognition of the interconnectedness of the global ecosystem as a whole. A shift from consumerist and self-centred paradigms of power and wealth to sustainable community-based agricultural and environmental improvements and peace building is evident in the given cases. These cases also address the more traditional theoretical issues such as the ability to feel involved in one's community, to not exist in a state of deprivation of basic needs and more existential desires in relation to one's self and one's community, as are emphasized by Maslow, Galtung, Butron, and others.

Environmental and Interfaith peace building programs are springing up all over the world, and to good avail for their local communities and ecosystems. The increased use and increased importance of ecosystem-respective practices and ways of life can

provide positive building blocks for a movement towards a more peaceful local community, nation, and eventually a more peaceful world.

CHAPTER SIX

Environmental interdependencies between communities and countries and river basins and regional areas can be a force for confidence building, trust building, and peace building, not just natural resources and conflict links. One of the shortcomings of the entire debate on natural resource climate security and conflict is the issue of empirical evidence. How we should proceed is to have an honest dialogue on that and to manage the transfer of knowledge between one agency and another.

Interdisciplinary approaches to conflict resolution that are respectful of ecological and development work acknowledge the need for resilient development projects. These projects need to be and are responsive of the needs of the local communities in relation to their identifiable characteristics, histories of conflict, and natural resource use and allocation needs. Resilient and effective development and sustainability efforts can and are also implemented in a way that attempts to promote a larger sense of community as is supported by many modern thinkers, academics, and advocates, among them James Lovelock and Vandana Shiva.

Attempts have been made in the past to designate the control and allocation of fresh water resources in the Jordan River basin. However, the fact that these agreements are contingent on more comprehensive peace agreements causes problems for the water use situation. Nations in the area are not always, if ever, prepared to sign comprehensive

agreements. Their needs may not be met by the agreements, territory returns may not be stipulated, or they may not agree with the terms of peace. When the agreements are not signed, sometimes the water allocation portions of the agreement are used as soft law, or as a guideline for water allocation and use. The plans that are distributed to either side of the conflict, Arab and Israeli, have certain ambiguities and differences in allocation specifications that make the soft plans difficult to implement in the working stages of extraction.

Environmental peace building projects in the Jordan River basin attempt to close this feasibility gap between policy and procedure. They incorporate theoretical underpinnings and programs that attempt to foster positive, collaborative relations and emphasize the shared, Transboundary nature of water resources. In this way, water resources can be used as a cause and force for positive peace, rather than another reason to initiate conflict.

This thesis has shown that environmental and interfaith peace building projects in the Jordan River basin can bring about collaborative and positive relations between communities and neighborhoods on the basis of environmental improvement and the recognition of the Transboundary nature of environmental problems. Environmental and interfaith peace building does this is the space in which negotiated treaties attempt to yet fail to provide tangible rules or guidelines for use and allocation. Implementing management systems of water resources in the Jordan River basin using environmental interfaith peace building guidelines and perspectives could become an institutionalized manner by which all the riparian nations and political entities of the Jordan River basin

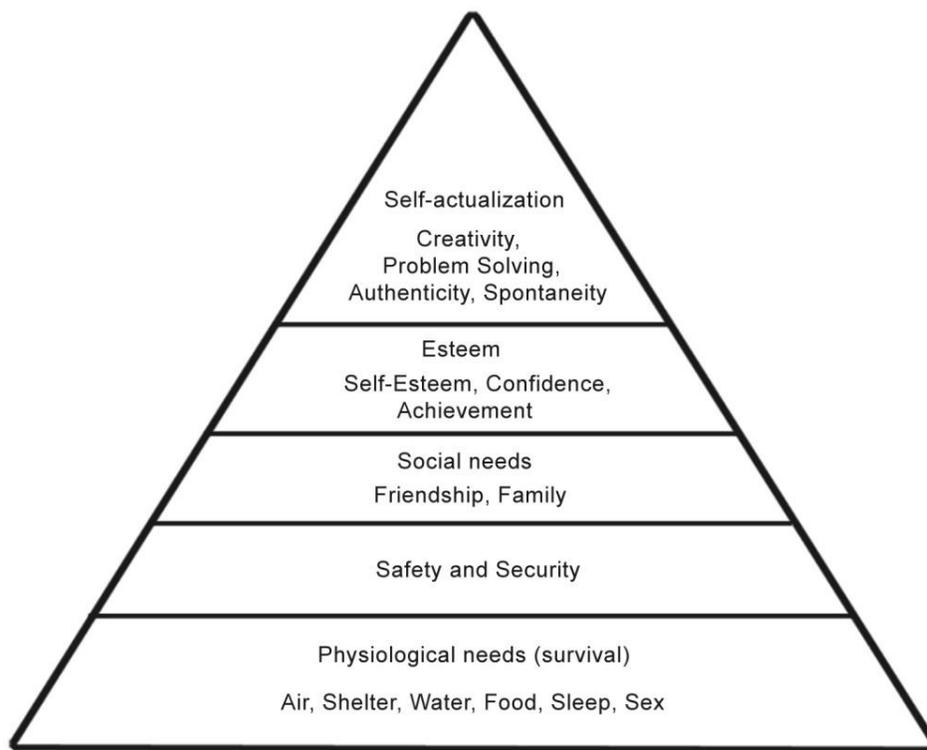
will truly receive 'equitable' shares of water resources in respect of all their neighbouring states.

"All of the world's problems can be solved in a garden."
- Geoff Lawton, *permaculture designer and educator*

"In nature's economy the currency is not money, it is life."
- Vandana Shiva, *Earth Democracy: Justice, Sustainability, and Peace*

APPENDICIES

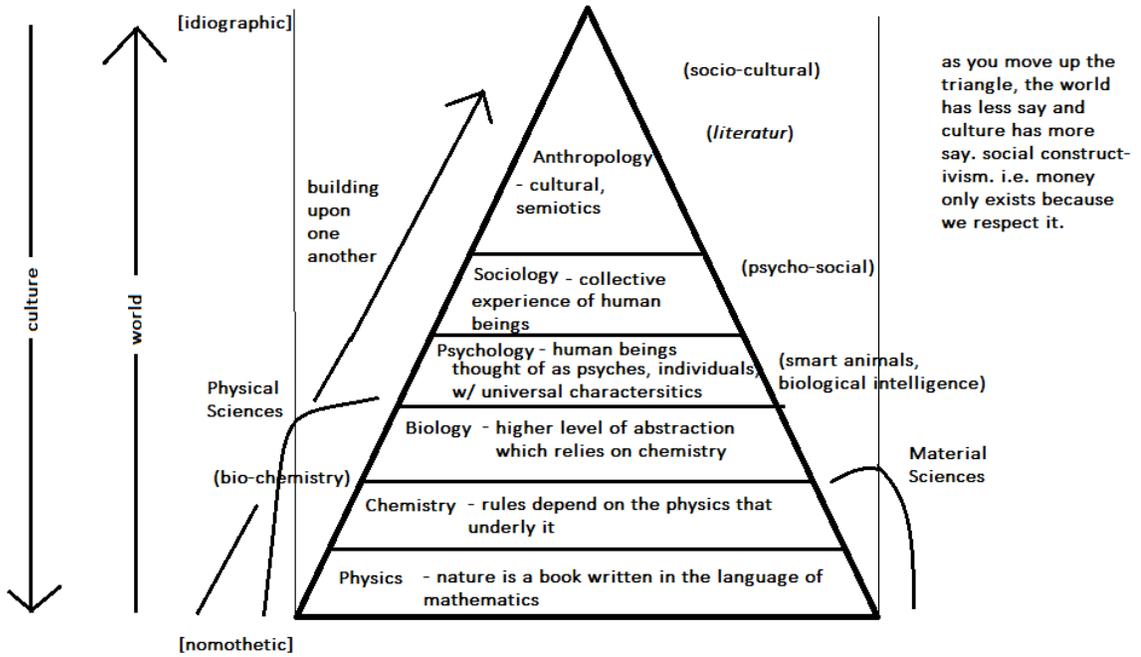
A: Maslow's Hierarchy of Needs Graphic Representation



(Photo
retrieved from communicationtheory.org)
<http://communicationtheory.org/maslow%E2%80%99s-hierarchy-of-needs/>

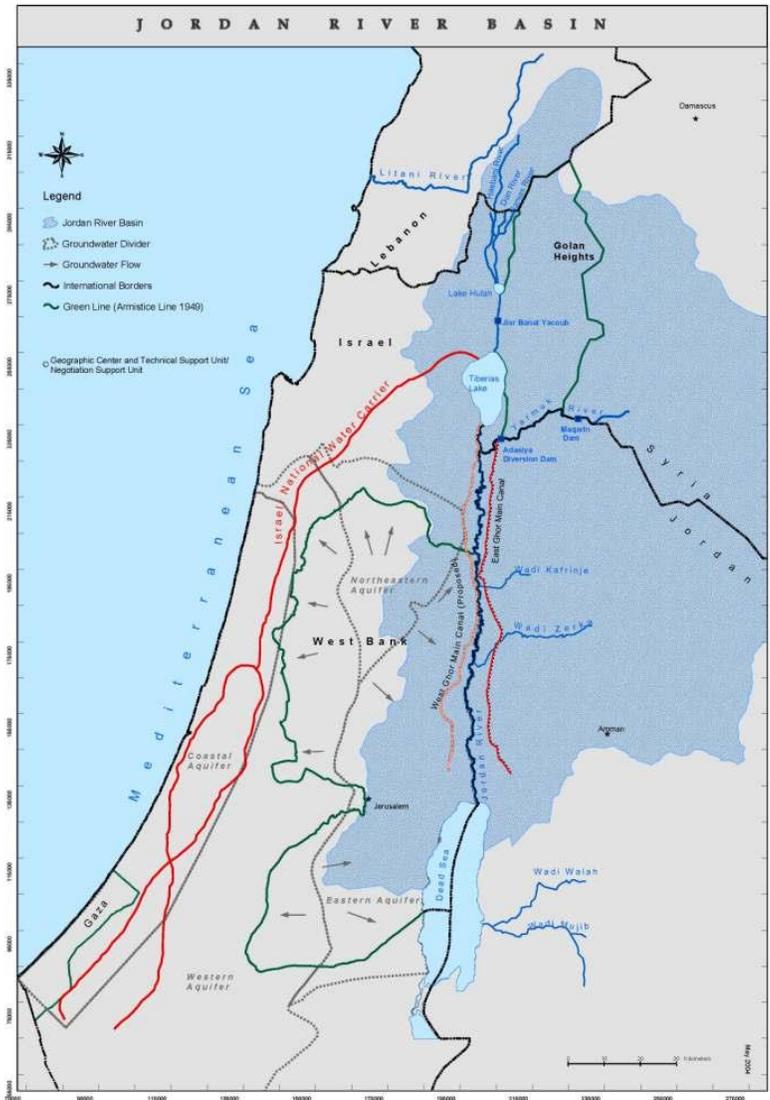
B: Neo-Comtean Scheme of Consilience

Neo-Comtean Scheme : Consilience



(Simmons, 11 March 2013)

C: Map of the Jordan River Basin



(Photo retrieved from FoEME.wordpress.com)
<http://foeme.wordpress.com/2013/01/31/water-treaties/>

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Michelle Elaine Tisch graduated from Battlefield High School, Haymarket, Virginia, in 2008. She received her Bachelor of Arts in International Relations with a Minor in Environmental Geography in 2012 from Old Dominion University, in Norfolk, VA. She was employed as the Lead Peer Mentor with Old Dominion University's Student Success Center for two years during her Bachelor's studies. This thesis is submitted as partial fulfillment of the requirements for the Dual Degree Program with George Mason University and the University of Malta for Conflict Analysis and Resolution and Mediterranean Security for the 2012-2013 Academic Year. Michelle lived in Malta for the duration of the courses for this degree program. She hopes to begin a career in post-conflict peacebuilding and reconstruction in the near future.