

College of Saint Benedict and Saint John's University

DigitalCommons@CSB/SJU

Honors Theses, 1963-2015

Honors Program

1997

The Application of International Water Law to the Disputes Over Freshwater in the Middle East

Jason Woolwine

College of Saint Benedict/Saint John's University

Follow this and additional works at: https://digitalcommons.csbsju.edu/honors_theses



Part of the [Political Science Commons](#)

Recommended Citation

Woolwine, Jason, "The Application of International Water Law to the Disputes Over Freshwater in the Middle East" (1997). *Honors Theses, 1963-2015*. 639.

https://digitalcommons.csbsju.edu/honors_theses/639

Available by permission of the author. Reproduction or retransmission of this material in any form is prohibited without expressed written permission of the author.

**The Application of International Water Law to the
Freshwater Disputes in the Middle East**

A THESIS

The Honors Program

St. John's University/College of St. Benedict

In Partial Fulfillment

of the Requirements for the Distinction "All College Honors"

and the Degree Bachelor of Arts

In the Department of Political Science

by

Jason Woolwine

May 1997

Project Title: The Application of International Water Law to the Freshwater Disputes in the Middle East

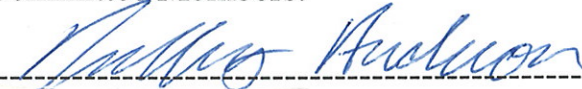
Approved by:

Project Advisor:




Professor of Political Science

Committee Members:




Assistant Professor of Studies



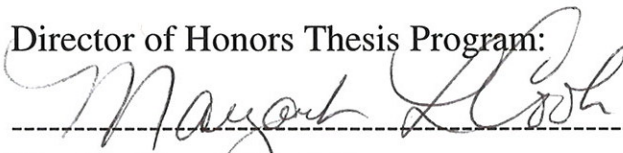
Associate Professor of Political Science

Department Chair:



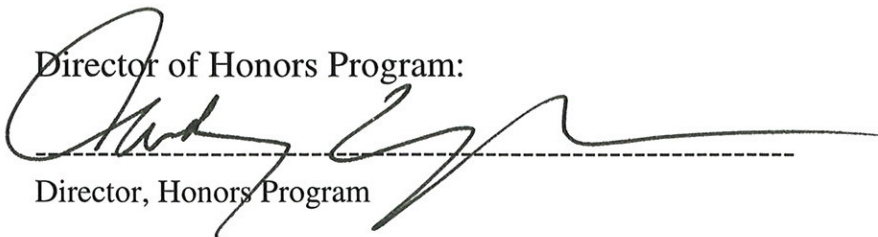
Chair, Political Science Department

Director of Honors Thesis Program:



Director, Honors Thesis Program

Director of Honors Program:



Director, Honors Program

INTRODUCTION	Woolwine -2
UNILATERAL AND MULTILATERAL ACTION	Woolwine -5
NEED FOR ACTION	Woolwine -5
GAME THEORY	Woolwine -7
POLITICAL REALISM	Woolwine -13
DEVELOPMENT OF INTERNATIONAL LAW	Woolwine -15
NAVIGATION VS. NON-NAVIGATION	Woolwine -15
THEORIES ON USE	Woolwine -16
WORK OF INTERNATIONAL LEGAL ORGANIZATIONS	Woolwine -20
ILC DRAFT ARTICLES	Woolwine -22
GROUNDWATER LAW	Woolwine -25
ISLAMIC LAW	Woolwine -29
STATE SUCCESSION	Woolwine -35
WEST BANK CASE STUDY	Woolwine -42
BACKGROUND	Woolwine -42
APPLICATION OF DRAFT ARTICLES	Woolwine -49
EUPHRATES CASE STUDY	Woolwine -56
BACKGROUND	Woolwine -56
APPLICATION OF DRAFT ARTICLES	Woolwine -65
NILE CASE STUDY	Woolwine -69
BACKGROUND	Woolwine -69
APPLICATION OF DRAFT ARTICLES	Woolwine -77
CONCLUSION	Woolwine -82

INTRODUCTION

The American satirist and writer, Mark Twain, once remarked that, "Whiskey is for drinking, but water is for fighting over." There is no region in the world today where Mark Twain has been proven more correct than in the Middle East. This region of the world has found itself to be the center of attention when the issue of oil has been discussed. Yet very little focus by the leaders and the peacemakers of the West has been placed on the one issue that threatens the region the most --- water. It is water in fact that plays a central role on par with issues of oil, Zionism, Arab nationalism, Islam, and the Kurdish question in the politics of the region. Relationships among countries of the region were, and continue to be significantly affected by and played out in the use of water and the policies that surround their use. While many ways to resolve the conflicts over water, such as unilateral and multilateral projects to increase the amount of water, the most universal approach is that of international law. Although there are conventions in international law to deal with problems such as water disputes, its effectiveness is questionable. It is exactly because of its unsatisfactory status that one must ask the question: is the international law on the non-navigational uses of water capable of providing realistic solutions to the disputes over freshwater in the Middle East?

There are several reasons why people have missed examining water as a major force in the Middle East. One of these reasons is that when someone looks at the Earth, one sees it is covered mostly by water and are left with the impression that there is plenty of water to go around. What one fails to realize is that the only drinkable water is freshwater, and that only accounts for approximately 2 percent of the world's water supply. Of this 2 percent, 87

percent is embedded in ice caps and glaciers, buried deep underground, or contained in the atmosphere. In fact, of all the freshwater in the world, only about one-third of 1 percent is available for human consumption and survival.¹ Now add to that equation the fact that the minuscule amount left is spread out unevenly all over the world, and not according to need. For example, Canada, whose population is only 0.5% of the Earth's population also contains 9% of all the freshwater.² Also figure in the fact that populations are continually increasing while new sources of freshwater are not. Only after realizing all of this can one begin to grasp exactly how scarce water, the element essential for all life, really is.

An additional reason why water issues are not a pressing issue in Western policy circles is the focus and needs of Western leaders. The West does not need water, it wants a cheap oil supply. Because it focuses on oil, it is blind to the need for a resolution to Middle Eastern water disputes. Furthermore, the Western powers are currently unable to even adequately deal with the oil issue, let alone add on the water issue as well. This same claim is made by former deputy assistant secretary for energy emergencies at the Department of Energy, Edward Badolato. He argues that, "we haven't focused on the water problem. We're barely capable of focusing on oil."³

Finally, it seems that human history is linked to the plentiful availability of water. Civilization emerged along the Fertile Crescent of the Tigris and Euphrates Rivers. The

¹ Joyce R. Starr, "The Quest for Water: from Biblical Times to the Present," Environmental Science and Technology 27 1993: 1264.

² J. Issac and H. Shuval, eds., Water and Peace in the Middle East (Amsterdam: Elsevier, 1994).

³ Joyce R. Starr, "Water Wars," Foreign Policy Spring 1991: 20.

Pyramids and tombs of the ancient pharaohs of Egypt stretched out along the flowing banks of the Nile River. Along the Jordan River lay the land flowing with milk and honey that God promised the Israelites. As people expanded their reach they traveled along the rivers, crossed the vast oceans to discover new lands, and harnessed the waters. Humankind learned to use them for transporting goods and people over long distances. New lands were explored and mapped using the rivers. They also developed the ability to acquire electrical power from water. They even managed to make deserts bloom and grow crops in areas with little rainfall through irrigation. All of these uses for water in addition to the basic use drinking. To think of water as anything other than mighty and an ongoing resource seems to be such a foreign concept. Yet the rivers are not mighty giants. For example, "The fabled Jordan River would fit comfortably in two lanes of any U.S. highway, one family sedan deep, even at peak flow. The springs that feed the Jordan would barely qualify as a leak from the California Aqueduct."⁴ We need to rethink our perceptions of the plentitude of these fabled Middle Eastern rivers. And in rethinking this issue we must also ask if international law is capable of realistically resolving the disputes that exist over these rivers. To determine international law's role we will first look at the alternatives to international law, and primarily the use of game theory. The development of international law will then be considered, looking at where it stands currently, and bearing in mind the contributions of Islamic law and the law of State succession. Finally, international law, in the form of the International Law Commission's Draft Articles will be applied to the groundwater in the West Bank, the Euphrates River, and the Nile River.

⁴ David Schwarbach, "Promised Land," The Amicus Journal Summer 1995: 35.

UNILATERAL AND MULTILATERAL ACTION

NEED FOR ACTION

As the twentieth century comes to a close, more and more countries either currently or will face water shortages. This situation is especially prevalent in the Middle East where only the countries of Turkey and Lebanon can be said to have adequate water supplies. All other 5 countries in the region, considering the Palestinians to be a State for the purposes of the case study, face shortages in the relatively near future. These water shortages have the potential to not only cause significant problems both economically and socially within these countries, but also to strain relations among the nations of a given region. The possibility exists for what has been termed "water wars."

Water wars are exactly what they sound like, wars fought over control or access to water resources. While an actual water war has yet to occur, and the possibility of one occurring is highly debated among both the water shortage alarmists and those who take a more conservative approach to the issue, neither side is willing to completely rule out such a possible outcome. Nor is such a possibility a far fetched one. Aside from the theory of resource-based conflicts, (which is a widely accepted viewpoint both sociologically and politically) it is possible to look at conflicts that have had hydrological causes. A prime example is the 1967 Israeli-Arab war. In addition to the political tensions there were also tensions over planned Arab diversions of the Jordan River, a key water source for Israel. The end result of the 1967 war was that Israel acquired not only the West Bank, giving it more control of the Jordan River as well as valuable underground water supplies, but Israel also

took control of the Golan Heights. The Golan Heights have not only been recognized as key strategic point since the Roman Empire, but the headwaters of the Jordan River are also located there. Israeli control of the Golan Heights ensures that the Arabs can never again attempt to divert the waters of the Jordan. Even today the potential for violence still exists.

Thomas Naff, a Middle East water expert at the University of Pennsylvania believes that, "it is water in the final analysis that will determine the future of the Occupied Territories, and by extension, the issue of peace in the region."⁵ Regional leaders also continually stress the importance of water. While still foreign minister of Egypt, Boutros Boutros-Ghali was quoted as saying "the next war in our region will be over the waters of the Nile, not politics."⁶ And King Hussien of Jordan has said that water is such a volatile issue that it "could drive nations of the region to war."⁷ Situations such as this one show the necessity of resolving water conflicts before they have the chance to lead to violent confrontations. The water issue is one of national security. It has become essential for States to realize that it is their ability to deal with the issue of water that will determine their survival.

Just how governments will deal with water is the concern. While States may chose to continue their current policies without concern for water issues, time will catch up with them. To allow the status quo to continue will make the problems more explosive and pressing in

⁵ Sandra Postel, "The Politics of Water," World Watch July-Aug. 1993: 19

⁶ Peter Gleick, Peter Yolles, and Haleh Hatami, "Water, War and Peace in the Middle East," Environment April 1994: 13.

⁷ Priit J. Vesiland, "Middle East Water--Critical Resource," National Geographic May 1993: 50.

the future. The Middle East is a volatile enough area without adding to the problems. There are then two possibilities, action either unilaterally, or multilaterally. Acting unilaterally is of course better than no action at all. Yet it too is problematic. There are times and issues when a State acting on its own can resolve a problem, or diffuse a situation by a change in domestic policy or even by acting alone on the international level. However, the issue of water rights and international rivers, by their very nature can not be resolved by a single actor working alone. In addition, by acting on its own a State, in almost all cases, will fail to take into consideration the needs of its neighbors. It will focus solely on its own concerns, plans, and potential for exploiting a given resource, in this case water. The resolution of disputes over rights to international rivers will require a collective effort.

Because States should not act unilaterally, and yet should still do something, there must be another option. This is where acting multilaterally enters the picture. While this can cover extensive global cooperation, or even many States, such as an entire region usually action only occurs between two or three States at most. This is because the more States that are involved, the more complex the solution becomes, and more difficult it is to forge the cooperation needed to achieve the solution. Collective action would allow States to work together to solve their differences and reach solutions that are acceptable to all sides involved.

GAME THEORY

Perhaps the best way to look at collective action is through the use of game theory. The theory of games theory is a relatively new field. Its origin can be traced back only to the early 20th century when John von Neumann proved the basic minimax theorem in 1928 and

then latter in 1944 published, Theory of Games and Economic Behavior⁸. What game theory does it to analyze the relationships between what are assumed to be rational actors, or players, in this case States, within the context of the rules of a particular game.

While there are many games that are played, there are three main ones: Prisoner's Dilemma, Chicken, and Stag Hunt. An understanding of what each game implies is important before continuing. The Prisoner's Dilemma game revolves around two prisoners in a jail. Each is individually offered the same deal; if they both remain silent they will each get a small sentence such as two years in prison. If one prisoner will give testimony against the other, he will go free while the other will receive a long sentence of ten years. However, if both tell on the other, they will both receive a sentence of five years. Throughout the entire time, they are kept in separate cells so that the prisoners cannot mutually chose a plan. Each of them is confronted with two courses of action (strategies), which each must take simultaneously or without knowing the other's choice. They can either "cooperate," ie. , choose a strategy that will make them both better off, or separately "defect," choose a strategy that maximizes one's payoff, notwithstanding the other's loss.⁹

The game of Chicken is a situation where two drivers speed towards each other. The driver who swerves (cooperates) first is "chicken." If neither swerves (ie., if both defect), the outcome is disastrous for both. Mutual defection has the lowest payoff for both. Each driver's

⁸ Morton D. Davis, Game Theory: A Nontechnical Introduction (New York: Basic Books Inc., 1983) x.

⁹ Eyal Benvenisti, "Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law," The American Journal of International Law July 1996: 389.

first preference is that the other cooperate, and her second-best preference is that both cooperate.¹⁰ By the other driver swerving first, the first driver will reap most of, if not all of the benefits.

The Stag Hunt draws on a hunting situation. It involves a group of hunters working together to hunt a large animal that on an individual level they would not be able to successfully hunt. All of the hunters would prefer to catch the large animal, in this case a stag, but if a smaller animal passes by, such as a rabbit, a hunter may decide to go after the rabbit. By doing this he would prevent the other hunters from capturing the stag. However, the other hunters could also decide to go after rabbits also. The basic theme is cooperation. If all parties work together they can succeed in a large project, such as perhaps regional cooperation. But if one of the group decides that a separate benefit or goal although smaller is more immediate or tangible and shifts priorities to accomplish that one instead, the chance for the success of the larger project will have been lost. This situation can take the form of an Assurance game, which is a coordination game. In the game, players do not have dominant strategies. Each player's strategy depends on the others': player A will cooperate if all other players cooperate, and will defect if all others defect.¹¹

Having an understanding of the games that are played is only one step. What is also required is to know which game fits the parameters (or rules), of the given situation. In this case, the parameters are the water situations of the Middle East. The Stag Hunt is a game that could have some potential for the water conflicts in the Middle East. The Stag Hunt basically

¹⁰ Benvenisti 390.

¹¹ Benvenisti 390.

is the model for regional cooperation in a given river basin. However, in terms of the Middle East, it eliminates itself from use by its very definition. The Middle East is not an area known for its regional cooperation. For the Stag Hunt to succeed, there would have to be a basin where all the riparian States trusted each other. Trust of neighboring basin States is something, along with water, that river basins in the Middle East lack. Trust is important to the success of the Stag Hunt, without the hunters trusting that each one is going for the Stag, there is no reason to participate. Additionally, there is a lack of either a common goal or a common self interest. In many situations States measure their gains against the gains or losses of their neighbors, with the ideal being their gain and another's loss. Seldom is the time when States in the region work in tandem to improve a situation for everyone.

This leaves for consideration either the Prisoner's Dilemma, or Chicken. The Prisoner's Dilemma, although it is the most common game in game theory, does not work for the Middle East either. Benvenisti asserts that Prisoner's Dilemma could work in a situation similar to the dispute between Israel and the Palestinians over groundwater. Benvenisti States that,

"Take the example of two riparians that draw water from a shared lake or aquifer. They can cooperate by keeping withdrawals lower than the replenishment rate and by preventing pollution of the resource. Cooperation involves certain costs (lower rate of consumption, improvement of infrastructure) but ensures sustainable use of the resource...Israel and Palestinians face that game with respect to the Mountain Aquifer, the most important water resource of both communities."¹²

However this assumes two very important factors. First, that both States are able to cooperate and use less of the resource; and secondly, that both States are willing to use less.

¹² Benvenisti 389.

As Benvenisti should be well aware, considering the extensive research he has done on the issue of the Mountain Aquifer, neither Israel or the Palestinians are able or willing. The Israelis are extremely dependent on the aquifer for approximately one-third of their water resources and so can not afford to cut back. The dependence by Israel on the Mountain Aquifer has also been a major stumbling block towards Palestinian autonomy in the West Bank; indicating the unwillingness to cut back as well. The Palestinians are already kept at approximately 1965-67 water levels by the Israelis and can not cut back their water use without catastrophic health and sanitation problems. Additionally, there is every indication from the Palestinians that if anything, they want to increase their use of the Mountain Aquifer, not decrease it.

The only game left to evaluate is that of Chicken. This is a game that in theory could apply to the Middle East situations. It takes into consideration the feelings of distrust, the antagonist attitudes of the players, and the zero sum nature of the conflict. Yet again, the basic premise is flawed in relation to the Middle East. It assumes that two equal States rapidly move towards each other and mutual destruction of a water resource and subsequently themselves. A situation like this though does not exist. As far as the river basins are concerned, there can not be "equal" players. Upper basin States by the very nature of being in the upper basin can control the flow to lower basin States, always taking what they need first. To compare it to a real game of chicken, it would be similar to a compact car playing chicken with a bus or similar heavy vehicle. There is no way the compact car can hope to win. Again, Benvenisti tries to apply the Chicken game to a thinly veiled Mountain Aquifer example. Again, it fails. There is not a single State in the Middle East that is willing to unilaterally

sacrifice its water supply for another State, especially either Israel or the Palestinians.

The root of Benvenisti's problem derives from his mis-analysis of water itself. If one is to look at water as an economic good, as Benvenisti does, there are four possible labels one can use: pure public which are goods that are nonexcludable and nonrival, pure private which are goods that are fully excludable and rival, impure public goods that are nonexcludable but are still rival and individual consumption takes from what is available for others to consume, and finally, common-pool resources that are partially excludable and rival. Benvenisti establishes that water is a common-pool resource. This assumes that everyone has access, yet the benefits are partially excludable. However, it is the very lack of access in many cases, that is the problem in the Middle East today. Additionally, through the use of dams, an upper basin State is capable of preventing another State from utilizing the water. Water, especially in the Middle East, is much closer to being a private good. By labeling water a private good instead of a common-pool resource, the use of the games is inappropriate. Subsequently, so is the concept of collective action as well. Instead, water in the Middle East should be viewed as a zero-sum game.

It should be viewed as zero-sum not because of the water itself, but instead the way the water is viewed, because it is tied to land. By limiting the discussion of water to that of a defined territory, it is impossible to be anything other than zero-sum. The gain in water by one country must be offset by the loss of water for another country. This arcane conception of water as bound to territory will necessarily precipitate conflict, according to many, with

contestants vying for access to limited reserves in a zero-sum game.¹³

Game theory it appears will not work for either explaining the water issue or determining a solution. Aside from the problems that exist when Benvenisti tries to apply game theory to the Middle East, (mis-labeling water in terms of economic goods, and the failure of the games to apply realistically to the situations in the Middle East) there are also unique political and cultural factors that need to be taken into consideration.

POLITICAL REALISM

In a general sense, perhaps the biggest political problem is that espoused by the realist school of thought in terms of international relations, this idea, one could argue, is widely held by the States of the region.

Realists argue that the political-structural condition of anarchy, the absence of a common government, in the international system has an impact on the willingness of States to engage in cooperation. Implicit in anarchy that there is no capacity to enforce sanctions as a means to protect States from each other or to prevent States from doing damage to others... That is to say, States have to rely on means they can generate and the arrangements they can make for themselves. Before all else, they must make provisions for their security in the power struggle among States. The preoccupation with autonomy, power, and security predisposes States toward conflict and competition. Neo-realists add that since States fear for their security, they are preoccupied not only with power, but also with the fear that if they were to cooperate their partners could eventually turn out to be better off than them by virtue of having achieved relatively greater gains ... Because of this possibility, a State would be wise not to cooperate, even if cooperation offered the promise of absolute gains; no State wants to realize fewer absolute gains than the other.¹⁴

¹³ Gary Hoch, "The Politics of Water in the Middle East," Middle East Insight Mar/April 1993: 19.

¹⁴ Miriam Lowi, "Rivers of Conflict, Rivers of Peace," Journal of International Affairs Summer 1995: 125.

The picture painted above fits the Middle East almost perfectly. It seems that the Middle East is nothing more than a cluster of competing interests. While every region could be described as a cluster of competing interests, I feel that in an other area, the prospect of regional cooperation is not as far fetched an idea as it is in the Middle East. For example it is really only within the last several years that there is actually widespread official recognition of the State of Israel and its right to exist. There is still widespread regional distrust among the actors. The Arabs distrust Israel and vice-versa. Arab. States distrust other Arab States. Arabs distrust the Turks and still remember the Ottoman Empire. Throughout the region is a unique interpretation of independence. Turkish Foreign Ministry official Burhan Ant says, “in this region, interdependence is seen as the opposite of independence. Every country here seeks a kind of self-sufficiency in every field, because they don’t trust the others.”¹⁵

There are also cultural issues that separate the States. It is difficult to separate the cultural from the political in the Middle East. In many cases the two are intertwined and have taken on a life of their own. Issues of Zionism and Arab. nationalism dominate the region. The role of Islam in what have become secular Arab. States is also a source of debate and conflict within the borders of Arab. States, as well as Turkey due to the political emergence of Islam. Additionally, the culture of colonialism and anti-imperialism is very much present in the leaders of Syria and Iraq.¹⁶ These issues will be dealt with more in depth in the individual case studies.

Regardless of if one should try and seek solutions to the water issues of the Middle East, or reason why it may or may not be

¹⁵ Vesilind 23.

¹⁶ Guy Oliver Faure and Jeffrey Z. Rubin, Culture and Negotiation (London: Sage 1993)

applicable, the fact remains that it is still a serious problem in need of a realistic solution. Since cooperation out of some altruistic concern for the land does not seem likely due to a lack of trust, there must be some other means or impetus to get nations to work together to solve the problem of water access and shortages that is able to transcend issues of culture and politics while there is still time to foster a sense of cooperation. That impetus is international law. The common framework of international law and its principles may act as the starting point for a resolution of the Middle East water issues. International law has the potential to succeed where game theory fails because it uses international law to act as a referee, something which is missing in game theory. To better understand what the present status of international water law is, it is important to have a basic grasp of what it has developed from.

DEVELOPMENT OF INTERNATIONAL LAW

NAVIGATION VS. NON-NAVIGATION

The development of navigational versus non-navigational international law is very unbalanced. From the time of the ancient Egyptians, governments have focused on using rivers for industry, commerce, and transportation; in general, from an economic perspective. The development of International law in regards to rivers and water in general has reflected this trend. Law, as it related to water, focused on navigational issues. International law consisted solely of treaties between specific States for freedom of navigation on set watercourses. However, in 1792 a fundamental change began to emerge. During the French Revolution, the French Executive Council declared that impediments to navigation on the

Scheldt and Moselle rivers were contrary to the fundamentals of natural law, and that the watercourse of a navigable river was the common and inalienable property of all its riparian States.¹⁷ This principle heavily influenced negotiations between France and Germany over navigation on the Rhine in 1804. These in turn influenced the Peace Treaty of Paris of 1814. This snowball affect was also present at the Congress of Vienna in 1815. While still dealing solely with the Rhine River at this point, the Congress of Vienna declared that:

The navigation of the rivers referred to in the preceding article, along their whole course, from the point where each of them becomes navigable, to its mouth, shall be entirely free, and shall not, as far as commerce is concerned, be prohibited to anyone; due regard, however, being had to the regulation to be established with respect to its police; which regulation shall be alike for all and as favorable as possible to the commerce of all nations.¹⁸

This basic premise quickly became attached to all navigable rivers. In addition, these rights, which at first only applied to riparian States, became applicable to all States.

THEORIES ON USE

International law is a constantly evolving process that requires many years to see the emergence of basic principles. International water law is no exception. To understand international water law as it exists now, one must look back over its evolution. International water law has gradually evolved through four basic theories: absolute territorial sovereignty, absolute territorial integrity, limited territorial sovereignty, and limited territorial integrity.

Absolute territorial sovereignty was the first theory to develop when States

¹⁷ Ludwik Teclaff, "Fiat or Custom: The Checkered Development of International Water Law," Natural Resources Journal 31 (1991): 47.

¹⁸ Teclaff 49.

considered their rights to control the people, land, and resources within their borders. Applied to water it means that a State has complete control over any watercourse in its territory while it is within its borders. A State may, under this legal theory, exploit a water source to such an extent that it becomes ruined and useless for a down stream State. This theory is also known as the Harmon Doctrine, since it was defined in 1895 by U.S. Attorney General Judson Harmon who advocated this theory during a dispute with Mexico over U.S. diversions of the Rio Grande River. While absolute territorial sovereignty is still in use as a bargaining tool among States, it is not a force in international law today.¹⁹

The great majority of writers emphatically reject the Harmon Doctrine on the principle of *sic utero tuo ut alienum non laedas* (use your own so as not to cause injury to another. State practice has also repudiated the doctrine. In the 1950's the United States finally rejected the doctrine during its dispute with Canada over the Columbia River. An international tribunal also rejected the absolute territorial theory in the *Lake Lanoux* case in 1957.²⁰

Absolute territorial sovereignty is a theory that favors the upper riparian State, so it is only logical that the next development in international water law would be the lower riparian response to this.

One extreme deserves another, and the lower riparian response was no exception.

¹⁹ Donald Chenevert Jr., "Application of the Draft Articles on the Non-Navigational Uses of International Watercourses to the Water Disputes Involving the Nile River and the Jordan River," Emory International Law Review 6 (1992): 503.

²⁰ Jonathan Cohen, "International Law and the Water Politics of the Euphrates," New York University Journal of International Law and Politics Fall 1991: 523.

They developed the theory of absolute territorial integrity. Whereas absolute territorial sovereignty favored the upper riparian, absolute territorial integrity favors the lower riparian.

This theory States that:

a State is not only forbidden to stop or divert the flow of a river which runs from its own to a neighboring State, but otherwise to make such use of the water of the river as neither causes danger to the neighboring State or prevents it from making proper use of the flow of the river on its part.²¹

In essence this theory would give the lower riparian veto power over almost any project the upper riparian may want to do, regardless of whether or not it was deemed a necessary project by the upper riparian State or not. Absolute territorial integrity, like absolute territorial sovereignty has no life in the realm of modern international law.

While absolute territorial sovereignty and absolute territorial integrity are not considered to be valid theories in today's international law, they still exist and are claimed by States. However when a State uses these theories, they are not expecting it to be accepted by the other party (parties). Instead, what they are doing is simple posturing to help their position in negotiations. There is always the hope that the other State(s) will submit to claims of absolute territorial sovereignty or integrity, but it is secondary. Additionally, what States are doing is simply advocating their individual sovereignty. As the realm of international law develops, States have found it to be if not necessary, comforting, to exert declarations of sovereignty and to declare that international law will exist with their permission, not that they will exist with the permission of international law.

²¹ Nurit Kliot, Water Resources and Conflict in the Middle East (New York: Routledge 1994): 228.

The third and fourth theories developed in tandem and represent where international law is today. They are the theories of limited territorial sovereignty and limited territorial integrity. These theories work to find the common ground between the needs of the upper and lower riparians. They recognize some sovereignty on the part of the upper riparian, but also a degree of obligation on that upper riparian to provide enough water for the lower riparian. In doing so, they espouse the doctrine and international law principle of equitable utilization.

Very simply Stated, the doctrine of equitable utilization or apportionment means that each basin State of an international drainage basin has a right, under general international law, to utilize the waters of the basin. It is entitled to a reasonable and equitable share in the beneficial uses of the waters of the drainage basin concerned.²²

This principle finally brings to international water law a sense of fairness that had been absent from previous theories. Because these theories do not favor either the upper or lower riparian, but instead endorse cooperative efforts between the two, they have become widely accepted. Today, they are universally recognized as the controlling principles of international water law.²³

While theories of water usage principles were developing, the application of those theories into international law were not. It was not until the twentieth century that international legal organizations began to look at the issue of international law for

²² Chenevert 505.

²³ Kevin Scanlan, "The International Law Commission's First Ten Draft Articles on the Law of the Non-Navigational Uses of International Watercourses: Do They Adequately Address All the Major Issues of Water Usage in the Middle East," Fordham International Law Journal June 1996: 2224.

non-navigational uses of watercourses. And it is only now, in the second half of the twentieth century, that those legal institutions have begun the process of codifying customary international water law into international conventions. This change in attitude has been a result of the combination of modern technology, a surging global population, and the realization of the scarcity of natural resources and the need to protect them.

WORK OF INTERNATIONAL LEGAL ORGANIZATIONS

Arguably, the most important work by an international legal organization has been the work of the International Law Association, more specifically, their work during their 1966 conference in Helsinki, Finland. In 1966 at the International Law Association's annual meeting, they worked to write down what they believed to be the customary international water law on the non-navigational uses of international rivers and to break it up into concise structured principles. In 1967 they published their report, Helsinki Rules on the Use of the Waters of International Rivers. This was the first such attempt to present a comprehensive and structured view of international water law. Until this point international water law existed solely in the arena of customary and comity law.

The move to continue the codification process continued when in 1970, Finland asked the United Nations to begin the transformation of international water law from customary law, to an international convention. The work of the United Nations was carried out by the International Law Commission, an organ of the General Assembly. The International Law Commission was established in 1948 for the express purpose of codifying existing customary law, thus providing a unifying structure to international law. The

members are nominated by individual countries and are then voted on by the General Assembly. Only the top 25 are elected, and there can only be one member of the ILC per State.²⁴ The International Law Commission does not complete the codification process but submits its work to the General Assembly for either approval or rejection.²⁵

A working group from within the ILC was commenced to establish a group of draft articles that encompassed customary law and to then present them to the General Assembly for ratification through a vote of the entire body. The International Law Commission (ILC), after allowing States to voice their opinion, and to get their perspectives, began its actual work in 1976.²⁶ This began the long and drawn out process of writing the draft articles. The process which inherently is a project measured in years took even longer than expected. It was not until 1991 that the ILC finally finished their work on what in the end became thirty-three draft articles. The ILC attribute their delay to the numerous changes in the special rapporteur ship, who is the chair of the working group, as well as to changes in the actual members of the ILC,

Members are elected to the Commission by the General Assembly for five-year, non-staggered terms of office. This arrangement created two vexing problems for the ILC's work. First, the continuity of the ILC over the course of the project was broken. As the composition of the ILC changed, the Commissioners wasted time reconsidering issues and ideas previously discussed and resolved at prior ILC meetings. Second, the changing make-up of the Commission increased the

²⁴ Herbert W. Briggs, The International Law Commission (Ithaca New York: Cornell 1965): 362.

²⁵ Briggs 198.

²⁶ Chenevert 508.

likelihood of internal inconsistencies within the draft articles ultimately approved.²⁷

In addition, there were changes in the scope and range of the articles that resulted in lengthy delays. The Commission, early on debated the question of what constituted an international river, and even whether to use the terms international river, or international watercourse. These questions are very important ones since they determine the scope of the draft articles. It was finally determined to save those questions for the end, since an agreement could not be reached, and although they are important issues, it was still possible to craft the draft articles without defining the term of river and watercourse to which they would apply. In addition to questions over the terms there were questions as to should the primary focus of the draft articles be to prevent significant harm to other riparians, or should the focus be on equitable utilization and apportionment; and within that discussion, when the two were in conflict, which should have priority.

The General Assembly, having passed the draft articles, has now turned them over to a Working Group of the Whole to elaborate a framework agreement on the non-navigational uses of international watercourses. The Working Group of the Whole supposedly completed their work on April 4th 1997, yet at this point no information exists on their decision and recommendations.

ILC DRAFT ARTICLES

The draft articles are the 33 articles created by the ILC which contain what

²⁷ Chenevert footnote 79 509.

international water law is at this point in time. The question though is what exactly do they contain as far as the text is concerned? The draft articles can be broken up into eight different blocks. The first section consists of articles 1 and 2. These articles define the scope and terms that will be used in the text. While it may appear to be not that important, the definition of the scope is crucial to the implementation of the articles as will be seen in the case studies.

The second group of articles are 3 and 4. These articles determine what a watercourse agreement is and what states are entitled to participate in the negotiations concerning watercourse agreements. These articles are overshadowed by the next block, that being articles 5-10. Articles 5-10 form the basic aspect of the draft articles, that being the principles the articles are written around. This section is inherently the most important since it is in this block that the fundamental rights of equitable utilization, and the need to not cause significant harm are established. Additionally, it also in this section where the factors for equitable utilization are laid out.

The next section covers articles 11-19. This section details the procedures for a planned project by a riparian State and its obligations to inform the other basin States of its plans. Built into the procedure is what course of action to take should a riparian State be opposed to a project of another State. This involves negotiations and if the parties agree, mediation by a third party.

Articles 20-23 discuss the need to preserve the river environment and its ecosystem. This section as a whole is not particularly relevant to the case studies except for article 21. This article concerns pollution, what constitutes it and the need to prevent it. This is relevant

because overuse that results in contamination of the watercourse is considered pollution and the State that caused the over consumption is then liable for damages. The issue of if a State could actually collect damages from another State is an side issue and not important to the discussion at this point. What is important is that the articles of this section argue that if a use causes pollution, that a redistribution may be required. This will affect the case studies further on.

Articles 24-26 cover the joint management of an international watercourse but that is of minimal concern at this point since it is doubtful that a complete joint management would be agreed on by all riparians concerned, even though it would be best for the watercourse itself. This can be attributed to what has already been described as the zero-sum nature of watercourses in the Middle East and the concern on the political side of the States to not allow another State to make either relative or absolute gains against them. Just as unimportant to the present focus, although all the articles as a whole are important, are articles 27 and 28 which deal with the protocol during harmful and emergency situations. Important, but not to the daily application of the draft articles.

The final section covers articles 29-33. These are the miscellaneous provisions. The ILC itself was not sure how to label them and so they use the heading of miscellaneous provisions as well. This section covers such a wide spectrum of topics such as international watercourses in time of armed conflict, to the final article, 33, concerning the settlement of disputes. Article 33 is important but is also voluntary participation, not mandatory. This will adversely effect its usefulness and applicability as will be seen in the Euphrates case study.

International water law has come a long way and is now almost to the point where

it can successfully be applied to real situations. What remains to be seen though, is what changes, if any, the Working Group of the Whole will make to the draft articles. As they stand, the draft articles carry the weight and obligation of customary international law and they also contain in article 33 a means to settle disputes. However, without any enforcement mechanism, an international water framework agreement will not only be unable to realistically resolve water disputes in the Middle East or elsewhere, but it will also be a waste of the time of the United Nations and a waste of paper. While the draft articles adequately lay out customary international law on the use of international rivers for non-navigational uses, the question remains: is the customary international law sufficient? And more importantly, is it effective? While considering international law as far as rivers are concerned, it is also important to look at international groundwater law. Although it is not as structured as the draft articles, international groundwater law serves to influence the discussion on rivers and groundwater is also a major source of the world's supply of freshwater.

GROUNDWATER LAW

One important aspect that the draft articles do not deal with in a sufficient manner is the issue of groundwater. When one initially thinks about non-navigational uses of freshwater the concern over drinking water comes to mind, and the possible sources, ie. Wells and the rivers. However, wells, and more importantly, underground aquifers are distinct from international rivers. In fact, the International Law Commission is very clear in its definition. Article 1 declares that, "The present articles apply to the uses of international

watercourses and of their waters,” and Article 2 defines a watercourse as, “ a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus.”²⁸ The scope of the draft articles is very clear, groundwater will not be dealt with unless it is part of an international watercourse (in other words only if a river goes underground for a distance before reemerging on the surface). To further stress the point, the ILC includes a resolution at the end of the draft articles solely on the issue of confined transboundary groundwater, or, international aquifers that cross State boundaries. Yet while establishing a resolution to deal with confined groundwater, they fail to address the issue of aquifers and wells to any real degree. The resolution States in part that,

“Considering its view that the principles contained in its draft articles on the law of the non-navigational uses of international watercourses may be applied to transboundary groundwater,

1. Commends States to be guided by the principles contained in the draft articles on the law of the non-navigational uses of international watercourses, where appropriate, in regulating transboundary confined groundwater;”²⁹

In essence, what the ILC has tried to do is to include confined groundwater within the draft articles without really specifically dealing with them. One must ask, if the ILC was willing to go this far and encourage States to deal with confined groundwater in the context of the draft articles, why not take the extra small step and actually include transboundary confined groundwater as an article in the draft articles? Even though the ILC does include

²⁸ Report of the International Law Commission on the Work of its Forty-sixth Session (New York: United Nation 1994): 199.

²⁹ Report of the International Law Commission on the Work of its Forty-sixth Session 326.

a resolution on the groundwater issue, the fact still remains that it is not a part of the draft articles and therefore, not a part of the codification process. Groundwater is subsequently left out and intentionally ignored.

Groundwater, while receiving only minimal attention in the draft articles is an extremely important source of global freshwater. In the first report of Special Rapporteur Stephen Swebel he writes, “ While surface runoff is the most visible source of moisture for watercourses, it is less important than groundwater, which is believed to constitute 97 per cent of the water on earth excluding the oceans, ice caps, and glaciers.”³⁰ This is very interesting because what it means is the International Law Commission has spent over twenty years writing draft articles for a water source that is only 3 percent of the total global freshwater supply. Meanwhile very little if anything has been done to codify international groundwater law, even though it constitutes 97 percent of the world’s fresh water. The reason for this is perhaps quite simple. What one is witnessing is the natural evolution of water law. At first, the use of water for navigation was the main focus and that then turned to using rivers and watercourses for purposes other than navigation.

With the codification of non-navigation uses just about completed, the ILC is likely to soon turn to confined groundwater as its next water project, a project already initiated by other international legal organizations. A prime example is the International Law Association, authors of the 1966 Helsinki Rules. In 1986, twenty years after Helsinki they

³⁰ Robert Hayton, “International Aquifers and International Law,” Water International 6 (1981): 161.

adopted the Seoul Rules on International Groundwater.³¹ While groundwater law has not developed at the same pace as that for watercourses, there is still a body of customary international law to deal with.

Looking first at the work of the International Law Association, one must look at The Seoul Rules on International Groundwater from 1986. One immediately notices a significant difference between the Seoul Rules and the Helsinki Rules from 1966, and that is the size of the document. The Seoul Rules are only four articles long, and barely stretch onto two pages, whereas the Helsinki Rules are very detailed and try to include every possible situation in which they would be useful. The focus of the Seoul Rules is the preservation of the aquifer. This, it seems, is to be carried out through pollution prevention and the exchange of relevant data.³² Within the text of the Seoul Rules, pollution is never defined or the range of what could be considered possible pollution limited. This is however dealt with fairly well in the Helsinki text. Article four then asks basin States to, “consider the integrated management. . . at the request of any one of them.”³³ This it seems is a radical change from the Helsinki Rules as well as the draft articles. The Helsinki and ILC texts, and especially in the ILC text, express an *obligation* to cooperate, while the Seoul text only asks the States to consider it. The impression one is left with after reading the Seoul Rules is that it is a partial extension of the Helsinki Rules, but also that it is a watered down version.

The Seoul Rules are only one example of work done by international legal

³¹ Klot 286.

³² Klot 287.

³³ Klot 287.

associations. The customary international laws dealing with transboundary groundwater, while encompassing the work of these organizations also involve more. Julio Barberis writes that,

“The protection of groundwater is a relatively recent development in international law, but it is following the same general rules applicable to other shared resources. The relevant applicable principles include the obligation not to cause appreciable harm, the duty of equitable and reasonable use, the obligation to provide prior notice, and the duty to negotiate. All these principles are generally accepted customary rules which are now being applied in the context of shared aquifers to ensure their maintenance and protection.”³⁴

Hopefully, these principles of customary international law look familiar at this point. The principles that Barberis writes about are also the primary principles in the text of the draft articles. This is very interesting. Although the customary international law for international watercourses and for transboundary confined groundwater is essentially the same with no real essential differences, the ILC has decided to omit confined groundwater from the draft articles. This can probably be attributed to debates within the ILC on if groundwater should be considered at this point and additionally the lack of interest among States in codifying this at this point in time. This can only serve to slow the development of international law for aquifers and considering the amount of global freshwater provided by these aquifers, it is move that does not seem reasonable. The draft articles are going to be applied to case studies in the Middle East so as to determine their effectiveness. However, it would be remiss to not first consider them in light of the water law that has existed in the region for centuries prior to the work of the International Law Commission.

³⁴ Julio Barberis, “The Development of International Law of Transboundary Groundwater,” Natural Resources Journal Winter 1991: 181.

That body of law is the Islamic law dealing with water.

ISLAMIC LAW

While considering the work of legal organizations and scholars, we would be remiss to ignore the legal structure that has had the most profound impact on the Middle East, Islamic law. Islamic law, or sharia as it is known in Arabic is a legal tradition immersed in the history and culture of the region. While religious in origin and use, it has shaped the legal systems of almost every country in the region. The sharia became the basis for the water law in the civil code of the Ottoman Empire, known as the *Al majalla othmaniyah*, in which eighty-two articles deal with water. Those articles became an important source for the codification of Islamic law in the Levant, and remain the residual legislation for Iraq, Syria, Lebanon, Jordan, and Palestine-Israel.³⁵ Islamic law is not a recent phenomenon, nor is it a developing or growing body of legal work. In fact, most of the sharia is based on the work of Islamic scholars in the 13th and 14th centuries, who have based their work on the Koran. What makes the sharia useful to our present study of water rights is the very root and origin of the sharia. Before the term sharia meant general Islamic law, it meant water law, or in Arabic, shari'a. (Allan, middle east) The word shari'a itself is derived from an Arab word for water. According to fourteenth-century Arab lexicographer Ibn Mandhur, the sharia is the source from which one descends to water.³⁶

³⁵ John Bulloch and Adel Darwish, Water Wars: Coming Conflicts in the Middle East (London: Victor Gollancz 1993): 176.

³⁶ Bulloch 176.

The sharia is not a collection of stories that seeks to educate through the use of parables. Instead there are clearly set principles and obligations spelt out within the texts of the sharia. One of the primary principles is the freedom of the water, and the ability of all to use it when there is need. It is the modern and traditional legal view that water can not be owned unless it is stored.³⁷ Once a person has put their labor into the storage of water, they then have the primary right to its use. Until then however, it is considered the common property of all. The sharia also divides water into three categories: rivers, springs, and wells. Within rivers are three sub-categories: great rivers (international rivers), lesser rivers within borders, and artificial rivers (irrigation channels, aqueducts). Our interest though is with the sub-category of great rivers. In this area the sharia is very clear, “that nobody should deny the use of that water to any human or animal.”³⁸ Of course that assumes that there have been no projects designed to store the water, since storage gives the storer the primary rights to use. It should be noted though that even when primary rights exist, the owner can not prevent a person from using the water, if the person needs to survive.³⁹

A second principle involves the distribution of surplus waters. This is a situation that usually applies to irrigation. The Prophet is attributed with saying, “The upstream irrigates before the downstream, up to the level of two ankles, and releases the remainder of the water,

³⁷ Bulloch 174.

³⁸ Bulloch 174.

³⁹ J.A. Allan and Chibli Mallat, eds., Water in the Middle East: Legal, Political, and Commercial Implications (London: I.B. Tauris Publishers 1995): 373.

so on, until all the needs are fulfilled, or until the water is exhausted.”⁴⁰ This Statement is then qualified by the jurist Shams al-A’imma as-Sarakhsi in his work, *al-Mabsut*, “his (The Prophet) saying ‘if the wadi reaches two ankles is not a compelling appreciation of (the height) of two ankles, but a reference to a surplus of water.’”⁴¹

The third principle is the need to prevent the pollution of a water resource.⁴² While the sharia does not explicitly prevent pollution, it does establish liability and subsequently a punishment for the withholding or misuse of water, including for polluting or degrading clean water.⁴³ In other words, water must be used efficiently so as to maximize the benefits of it, but also to prevent damage from overuse or pollution by some other means.

Another basic premise of the sharia is that of “no fault” injury. This relates to the directive in the ILC’s draft articles not to cause appreciable harm. The basic argument, and again this deals primarily with irrigation, is that if a water project, such as a well or canal, dug on person A’s property flows over to person B’s property and causes damage person A is responsible only “if he himself brought the water to overflow and knew that it would overflow onto the neighbor’s land.”⁴⁴ If person A had either not caused the overflow, or had not known it would harm the neighbor’s property then it would be a case of no fault injury.

⁴⁰ P.P Howell and J.A. Allan, The Nile: Sharing A Scarce Resource (Cambridge: Cambridge University 1994): 377-8.

⁴¹ Howell and Allan 377.

⁴² Bulloch 176.

⁴³ Allan and Mallat 130.

⁴⁴ Howell and Allan 375.

The important aspect of *la darar wa la dirar* (the Arabic term for the no fault injury clause) is that a person can not engage in a project that will provoke harm to those downstream.⁴⁵

The final principle of the sharia is that of the consideration of prior use. Although the specifics vary from region to region, the general trend is to acknowledge the right of prior apportionment combined with the distribution of any surplus water.⁴⁶ This practice is superceded though in cases where injury occurs. This is due to the principle of no fault injury because, “injury can never be old.”⁴⁷ An interesting consideration when looking at this part of the sharia is that both the sharia and the Helsinki Rules agree on the principle that prior use/apportionment is a valid consideration when looking at equitable distribution, however the ILC draft articles do not give any weight to prior use. This is a case where it appears the ILC may have ignored customary international law and gone with their own collective feeling on the matter.

Putting that one example aside, overall it is very interesting how similar the ILC text is to the sharia in three examples. First, both seek equitable distributions, although definitions on what constitutes equitable differ. Second, both strongly advocate for the preservation of a water resource and the prevention of pollution. And finally, the ILC and the sharia agree on the importance of not causing harm to those downstream. Considering these factors, the question naturally arises, does the sharia have any applicability to the modern situations of the primarily secular Middle East?

⁴⁵ Howell and Allan 376.

⁴⁶ Allan and Mallat 130.

⁴⁷ Howell and Allan 376.

Politically, it is important to remember that Egypt, Syria, Iraq, Turkey, and Israel are at least on an official level secular governments. Of course one must also take into consideration the level of influence that religion plays on a political level. Sudan though is not secular. They are an Islamic State. Turkey, although officially secular is now run by an Islamic political party that has tried at some levels to re-establish Islamic law. Perhaps most important though are the Islamic groups in Egypt and Sudan. John Bulloch writes in his book, Water Wars,

A number of related fatwas (religious edicts) issued by the Gamaat Islamiyah group in Egypt and Sudan, which is supported by Iranian extremists, worries the Egyptian authorities. An Islamic government in Khartoum could be forced to accept the arguments of the Islamic groups that some key articles in water agreements with Egypt contradict the sharia, violate Muslim rights to worship God, and are therefore null and void. The fundamentalists point out that such accords were concluded under infidel British domination. Egyptian officials have responded by warning that any attempt in Sudan to interfere with the flow of the Nile would be a *casus belli*. Egypt is one of the places that, although conquered by the Arabs in the seventh century, has water regulations based not on the sharia but on customary laws derived from ancient Egyptian and Coptic tradition that developed for thousands of years before the emergence of Mohammed in Arabia in the seventh century A.D. This is anathema to Islamic fundamentalists. Sheikh Omar Abd el-Rahman, the emir of the largest Egyptian Islamic group, al-Gamaat Islamiyah, was the man who issued the fatwa to the fundamentalist army officer Lieutenant Islamboli and his three partners to murder President Anwar Sadat. One of the reasons for the authorization to murder was the president's proposal to cement peace between Israel and the Palestinians by offering Nile water to be shared by both.⁴⁸

It is also important to point out that Sheikh Abd el-Rahman is the same man accused of ordering the bombing of the World Trade Center in New York. I think this shows that even if Islamic law is not officially practiced in States in the Middle East, it is certainly not forgotten and that the sharia is a valid and important consideration in the region.

⁴⁸ Bulloch 177-8.

While the sharia is still a part of the political and religious considerations of the region, our focus is on the legal considerations, and more specifically if the sharia has any useful legal applications to water rights. As noted previously, the basic principles of the sharia are present in the text of the ILC's draft articles. So to that extent the sharia is very much applicable to today's situations, to say otherwise would also say that the draft articles do not apply either. While the sharia is incorporated in the draft articles. It is important to realize that the draft articles are significantly more detailed and applicable to issues of the modern State, technology, and secularism. The sharia is designed to deal primarily with local concerns, that of irrigation and drinking water. It is not set up to help negotiate international disputes. It is exactly because the sharia and the draft articles are so alike that the sharia still has some modern uses. The sharia can be used to show the correlation between ancient water law and the modern ILC text. The Islamic States of the Middle East should, arguably, accept the draft articles as law since they are nothing more than the modern retelling of Islamic water law. The draft articles apply only in situations where a prior treaty or water agreement is not in place. The modern States of the Middle East have emerged from former colonies and parts of empires. During this time treaties were entered into of behalf of the territories. To understand if those treaties still apply, it is first necessary to look at international law concerning State succession.

STATE SUCCESSION

Another related aspect that needs to be considered is that of State succession. This is an issue that since approximately 1960, has been looked at increasingly more considering

in this era of post-colonialism. It is also particularly relevant to the discussion of the three Middle East case studies. The Nile basin spent over a century as part of the British Empire. The Euphrates has controlled by not only the Ottoman Empire, but it has also been controlled by both the French and the British after World War I. The groundwater in the West Bank is also influenced by State succession. It was governed by the Ottoman Empire until the end of World War I. After 1918 the region of Palestine was under British control before the creation of the State of Israel, and prior to June 1967, the West Bank was part of Jordan.

State succession is important for our purposes for determining which, if any, treaties entered into by the colonial powers on behalf of a territory under their control still apply today. Determining this aspect is critical to the application of the ILC draft articles since they apply only in the absence of previously existing treaties or customary law. In other words, if a treaty exists on the use of an international river, then the treaty, and not the draft articles, has priority in the situation. With this understanding it is easy to see the need to determine if earlier treaties still have authority in the region.

State succession can be broken up into two concepts, that of succession in fact and succession in law. Succession in fact refers to the actual control of a territory shifting from one political entity to a different one.⁴⁹ In other words, the transfer of a territory from one State to another State. Succession in law refers to the transfer of the legal rights and obligations from the old sovereign to the new sovereign.⁵⁰ The two are related in that

⁴⁹ Bonaya Godana, Africa's Shared Water Resources (London: Frances Printer 1985): 133.

⁵⁰ Godana 133-4.

succession in law cannot occur without succession in fact. One is the physical transfer, the other is the transfer of legal situations. It is this succession in law that is the focus of our interest. Succession in fact is not a debatable matter, either in theory or in current practice. The same cannot be said for succession in law. The issue of the transfer of customary law is not disputed, but the debate centers around to what extent the rights and obligations created by treaties are transferred.⁵¹ This transfer of obligations has been especially difficult when the treaty has concerned international water rights. The problem is due to difficulties both within the law of State succession and the unique characteristics of water itself. The law of State succession suffers from a confusing historical evolution that has seen doctrinal controversies and divergent State practice.⁵² This has been compounded by a decolonization process that is full of politically and emotionally charged approaches which according to Godana, "have resulted in a widely varying practice based on national policy considerations rather than on general normative principles. Consequently, State practice from this particular historical epoch becomes in the words of O'Connell, a matter of 'administrative technique' rather than of 'legal theory' and hence lacks 'internal consistency' ".⁵³

In addition to problems with the law of State succession, the nature of water and its subsequent law has lacked a definitive structure. Water ignores political, ideological, and geographical boundaries making it almost impossible to control. This inability to control the flow of water has resulted in law that has lacked universal cohesion.

⁵¹ Godana 136.

⁵² Godana 134.

⁵³ Godana 134.

Charles De Visscher writes that, "of all the kinds of territory the international river is the one in which administration is most sensitive to economic and political factors. For twenty years these factors have been largely responsible for weakening the trend that established itself in Europe after the First World War towards maximum uniformity in the regime of navigable waterways of international concern on the basic principles of universally recognized priority for freedom of navigation. In this tendency to universalization there was an over-abstract conception that ignored the sometimes profound differences in the economic functions as well as the geographic and hydrographic conditions of the waterways. While in European rivers, which water thickly populated countries and are for the most part naturally navigable, navigation is the primary function, very different factual conditions in the Americas and other continents call for different regimes. These circumstances would be sufficient to explain why, despite periodic attempts at unification, international river law remained very largely a particular law."⁵⁴

It is the combination of these flaws in the law of State succession and international water law that make determining what treaties are still in effect a difficult procedure. It will depend on what theory of succession in law States conform to now, to in the end determine what treaties still apply, and as a result, if the draft articles are to be applied.

There are three theories of succession in law. The first theory is that of the doctrine of universal succession. The basic premise of this theory is that the new State receives all of the rights and obligations of the old State, including treaties.⁵⁵ This theory was introduced by Hugo Grotius in the Law of Nations. It is based on drawing an analogy from Roman law involving the transfer of property rights from a deceased's estate. Thus, the idea of universal succession, prevalent among theorists up to mid-nineteenth century, regards the

⁵⁴ Godana 135.

⁵⁵ Chenevert 540.

successor State as the direct heir to the rights and obligations of its predecessor, "in exactly the same way as the heres of Roman law continued the personality and legal relationships of the deceased. All the rights and obligations of the predecessor State devolve *ipso jure* and *in toto* upon the successor State without any modification."⁵⁶

This theory has been discarded in modern times by both State practice and the International Court of Justice. The statute of the ICJ espouses the belief that, "the complex questions arising in connection with State succession in matter of treaties cannot be solved through such a simplistic a priori analogy between international and private law, and at that only one system of private law. Moreover, as Lester says, the recurrent problem with regard to succession to treaties is that, 'as a matter of treaty law, they are *res inter alios acta* as far as new States are concerned', so that 'if it is argued that a new State succeeds to the predecessor's treaties such a doctrine must be reconciled with the law of treaties'."⁵⁷ The important thing to understand about the doctrine of universal succession is that it is not in practice now, and that its application would conflict with the law of treaties, of which is our primary concern.

The second theory is that of the *tabula rasa*, or clean slate theory. The *tabula rasa* theory believes that the sovereignty of the new State is absolute. As a result of this, the new State is not obligated by the treaties of the predecessor, but at the same time it is also not entitled to the rights from treaties held by the predecessor.⁵⁸ This theory developed in the

⁵⁶ Godana 136.

⁵⁷ Godana 137.

⁵⁸ Chenevert 540.

second half of the nineteenth century as a response to the disparity between the doctrine of universal succession and actual State practice. This theory found support among the practice of the States at the time. Examples of this can be seen in the actions of Greece and Belgium on their independence, Britain after the conquest of the Boer Republics, and Japan after the conquest of Korea. In this century, Czechoslovakia, Ireland, and Israel have espoused *tabula rasa*.⁵⁹

Godana argues that this theory is also flawed. His position is that the interdependence of modern States prevents the complete and absolute rejection of treaties conducted by the predecessor State. He argues that, "one of the limitations placed on sovereignty by international law is precisely that successor States will have to assume rights and obligations of their predecessors. Nor is the idea of a freedom to choose favorable treaties and reject others fair either to the predecessor or third States."⁶⁰ However, this position seems to conflict with his earlier comments on why the doctrine of universal succession is not legitimate today. Godana creates an internal contradiction in his argument that only serves to further confuse the evaluation of the law of succession.

The final theory is that of continuity. This is very similar to the doctrine of universal succession except that under the theory of continuity, the State decides whether it accepts or rejects the treaties of the predecessor. A treaty will remain in effect until the State formally rejects the individual treaty.⁶¹ This is also known as the Nyerere Doctrine, after Julius

⁵⁹ Godana 137.

⁶⁰ Godana 138.

⁶¹ Chenevert 540.

Nyerere, the prime minister of Tanzania, when it gained its independence in 1961. Nyerere Stated that all treaties negotiated on its behalf by Great Britain would remain in effect for two years while they were evaluated by the new government, treaties not approved in the two year span would be considered lapsed and no longer in effect.⁶² Although Godana does not see this theory as legitimate for reasons stated above, State practice contradicts him and the theory of continuity has been observed in State practice, especially in the case of the Nile basin.

Within these theories on State succession is also the discussion of what kind of treaty is in place. There are two types, personal and dispositive. Personal treaties are political or economic in nature that depend on the continued existence of the parties to remain in effect. Once a party ceases to exist, the contract can no longer be considered to be in effect, and the treaty is no longer considered valid.⁶³ Dispositive treaties on the other hand deal with issues of territory and do not concern themselves with a particular government. Because of this fact, dispositive treaties continue to be in effect after the transfer of territory takes place. In other words, they are not personal to the contracting parties and impress upon the territory a permanent status that remains unaffected by the change of territorial sovereignty.⁶⁴

The existence of dispositive treaties is supported by State practice, the decisions of tribunals, jurists, and legal institutions. The International Law Commission reached a strong consensus as early as 1972 that so-called 'dispositive treaties', or treaties of a territorial

⁶² Chenevert 546.

⁶³ Chenevert 541.

⁶⁴ Godana 138.

character, or 'real' or 'localized' treaties constitute a special category not covered by the general clean-slate rule.⁶⁵ What is important for our purposes is to have an understanding of what types of treaties could be considered dispositive. Examples of such would include boundary treaties, river treaties and treaties of peace and neutrality.⁶⁶

This means that treaties concerning international rivers constitute dispositive treaties and are therefore still in place after succession in fact has occurred. So treaties conducted during colonial periods on the Nile or Euphrates river would, in theory, still be in effect today after the creation of new independent States. This is very important because as previously mentioned, the draft articles apply only in situations where a prior treaty or agreement or custom is not currently in effect. Current treaties and agreements have priority over the draft articles, even if the treaty would be a violation of what the draft articles consider to be equitable utilization or significant harm. However, what the theory claims and what States actually practice can be two different things as my case studies will illustrate. In those cases, State practice must be considered to be customary law since a system of international law that is strictly theoretical and ignores State practice serves no purpose and no benefit aside from giving academics something to talk about. What will be seen in the individual case studies then will be what theories are in use through State practice and by extension of that, what prior treaties are still in effect. Having looked at the relevant aspects of international law, it is now possible to apply those laws to the three case studies. The first case study looks at the dispute between the Israelis and the Palestinians over the distribution of the waters from

⁶⁵ Godana 139-40.

⁶⁶ Godana 139.

the West Bank aquifers.

WEST BANK CASE STUDY

BACKGROUND

Israel is the major player in this game of hydro politics since it controls all the freshwater the Palestinians in the West Bank have access to. Israel has a renewable (referring to water that is replaced yearly by rainfall and/ or the rivers, as opposed to fossil water that has collected in underground caverns over the centuries and once used cannot be replaced) annual water supply of approximately 1800 million cubic meters (mcm) a year. It is very important to stress the approximate volume because of the significant variations that can occur from year to year in rainfall. Although Israel expects an annual water budget of 1800 mcm, it could be considerably less depending on the winter rains and droughts. A prime example are the droughts of 1990-1991 when Israel was forced to cut down consumption by approximately one-third.

Israel's water is transported through a system of pipes and aquifers called the National Water Carrier. The National Water Carrier is made up primarily of three aquifers. Two of these, the "Mountain" and "Western" are located in what Israel calls

Judea and Samaria, and what the Arabs call the West Bank.⁶⁷ Only one aquifer, the "Coastal" aquifer is located in the original 1948 borders. This system is vital to the delivery of water within the country and the security of the carrier is viewed by many, especially the Israeli government, as an essential part of the national security. The location of these aquifers is very important and it sheds some light on why Israel is so reluctant to give up the West Bank.

Israel uses 73 percent of its water supply on agriculture, 22 percent on domestic consumption, and only 5 percent goes to industrial use.⁶⁸ With Israel focusing the majority of its water resources on agriculture one would assume it to be a major industry for the country. However agriculture only produces between 4-7 percent of the gross national product and only accounts for about 2.7 percent of the employment.⁶⁹ It is estimated that one cubic meter of water used in agriculture can produce products worth less than \$1, and the same cubic meter of water used by industry can produce products worth up to \$4.⁷⁰ The water distribution is very interesting to look at and provides an insight into the way Israel thinks. One can easily see the economic benefits of putting more water into industry and less into agriculture. However, that assessment ignores the

⁶⁷ Irwin Ploss and Jonathan Rubinstein, "Water for Peace," The New Republic Sept 7 & 14 1992: 20.

⁶⁸ Aaron Wolf and John Ross, "Impact of Scarce Water Resources on the Arab-Israeli Conflict," Natural Resources Journal Fall 1992: 925.

⁶⁹ Bruce Stutz, "Water and Peace: In the Middle East, Where Water is as Precious as Oil, the Jordan River is a Pawn in a Complicated Diplomatic Game," Audubon Sept/Oct. 1994: 70.

⁷⁰ Boaz Watchel, "From Peace Pipelines to Peace Canals," Middle East Insight Nov/Dec. 1993: 26.

ideology of Zionism.

Zionism is the ideological force that created Israel in 1948 and it is the power that drives it still today. In 1919, at the Paris Peace Talks, the Zionist borders for a "national home" were determined by three criteria: historic, strategic, and economic. Economic considerations were defined almost entirely by water resources.⁷¹ One of the original ideas of Zionism was to, "make the desert bloom," and to become agriculturally self sufficient.⁷² To do so requires vast amounts of water. It is clear now that the current methods of making the desert bloom are a failure. While the water shortages have forced the development of new technology such as drip irrigation, where drops of water are placed directly at the roots of plants using computer technology thus cutting down on wasted water, the possibility for Israel to become self sufficient in food production are remote at best.

It would not be a concern how Israel is using their water supply if they were only using the renewable water supply. However, Israel's water consumption has exceeded its renewable supply. Israel was overdrawing from the Western aquifer but claims to have stopped. The shortage problems, however, have not gone away. Due to increased immigration, by the year 2000, Israel will only be able to meet 70 percent of the water it

⁷¹ Aaron Wolf and Ariel Dinar, "Middle East Hydropolitics and Equity Measures for Water-Sharing Agreements," The Journal of Social, Political and Economic Studies Spring 1994: 71.

⁷² Giles Trendle, "Whose Water is it," The Middle East Jan 1992: 19.

needs. It will find itself short about 800 mcm.⁷³ Increased immigration is a concern for several reasons. Aside from more people needing more drinking water, there is also the need for more water for agriculture to feed the increased masses, as well as more water required for housing and sanitation. Israel will either need a new source of water or will be forced to overdraw from its existing supply and contaminate the very water it is so desperately trying to preserve now. Due to immigration and refugees in the region there is no longer a question of if there will be shortages. It is now only a matter of when.

The shortages of the future have an impact on the water supply of today. In trying to get enough water now many wells, especially those in Gaza and the West Bank, are being overdrawn. The result of this is that those wells and aquifers become contaminated with salt, sewage, and agricultural chemicals. Brine contamination has been seen in the aquifer that runs along Israel's coast and the Gaza Strip, where the water has become too salty to drink.⁷⁴ This is very important to note since this coastal aquifer is the only one within the original Israeli borders.

The Gaza Strip finds itself in a situation much worse than Israel. Gaza has a renewable water supply of 60 mcm, yet it needs and uses 95 mcm.⁷⁵ The only option open to it is to overuse the aquifer it has access to. As a result, it faces the same problems as Israel in terms of overuse, except it faces them now. Contamination there has already

⁷³ Zhou Quinchang, "Water Resources of the Middle East," Beijing Review Nov 15-21 Feb. 1996: 12.

⁷⁴ Fred Pearce, "Peace Pact Promises Unity in the Desert," New Scientist Sept. 18 1993: 4.

⁷⁵ Wolf and Ross 925-26.

reached a critical level, due to the heavy local use of pesticides and fertilizers, and the lack of services to remove or treat raw sewage in many towns and villages. Overpumping has also caused seawater intrusion, and the aquifer's salinity quotient is continually rising. Gaza's water will be unusable by the year 2000, when its population will number 1 million.⁷⁶

The West Bank has an annual water supply of about 130 mcm, again, depending on the rainfall.⁷⁷ When the number 130 mcm is referred to it is important to remember that this is the amount of water that stays in the West Bank, the rest is lost to the National Water Carrier. Exactly what percent of the water remains in the West Bank Israel refuses to comment on and the Palestinians to this point have been unable to come up with any figures of their own. However, it is known that Israel takes 85 percent of the water from the western aquifer, and gets between 30-40 percent of its total water supply from the West Bank, approximately 600 mcm.⁷⁸

The 130 mcm that is left in the West Bank is distributed on a very unequal basis among the Palestinians and the Israeli settlers.

In the string of injustices Palestinians commonly cite against the settlers, theft of water is second only to theft of land. The settlers number only 125,000, few compared to the total Israeli population of five million. But according to Aymin Rabi, Executive Manager of the Palestinian Hydrology Group, they consume 390 liters of water per person per day---compared to 130 liters for Israelis in Israel proper, and merely 30 liters on average for

⁷⁶ Stutz 68.

⁷⁷ Wolf and Ross 925.

⁷⁸ Stutz 68.

Palestinians in the West Bank and the Gaza Strip.⁷⁹

Palestinians not only find themselves on the short end of a water deal, but are also prevented from drilling more wells by the Israeli government. The end of the 1967 war resulted in the Israeli military occupation, which imposed restrictions on new wells that could be drilled by Palestinians. To drill a new well, a Palestinian must first get a permit. In 1992, only five permits had been given to Palestinians since 1967. The Israeli settlers however during the same time were allowed to drill 17 wells. Israel is very protective of its water access and the National Water Carrier. As previously Stated, it considers the security of the water pipeline a matter of national security. This is the reason for the policy restricting Palestinian use of the Western aquifer. The Israelis are afraid that if the Palestinians were allowed to drill as many wells as they wanted that it would result in the overpumping and contamination of the aquifers that Israel depends on for survival. Instead, the Israelis import water from the National Water Carrier to Ramallah and Hebron hill region for Palestinian use rather than allow additional drilling.⁸⁰

If the West Bank water is so important to Israel, is peace a possibility or a pipe dream? It has become clear that water is an essential variable in any peace equation, but can all parties agree on a division of the water? That is a very important question and there is no simple answer to it. Israel views water access as an extension of Zionism and

⁷⁹ Schwarzbach 37.

⁸⁰ Wolf and Ross 946.

its national security. The Palestinian position can be summed up by West Bank farmer Salin Budwan, "This is my water as it is my land, and I will not negotiate for them."⁸¹ Giving the West Bank back would be seen as a direct threat to national security by conservative Israelis, not so much because it would mean the end of a security buffer and territory, but because it would suddenly allow the Palestinians to drill hundreds of new wells. The result of these wells would be increased water use for the Palestinians, but it would also mean significantly less water from the West Bank getting to Israel, and because of subsequent overpumping, it would increase the risk of salt intrusion into the western aquifer and the National Water Carrier. "The interim agreement should not encompass the future need for a new redivision of water," says Israel's agriculture minister, Yaacov Tsur. Unless the Palestinians agree to the continuation of the current pattern of water use, he says, Israel should not withdraw from the West Bank, even "partially".⁸²

The realm of international law has so far failed to provide for a peaceful resolution to the issue of the groundwater either. Both the Israelis and Palestinians have within the context of the "Helsinki Rules on the Use of the Waters of International Rivers" been able to find a position to support their claims to West Bank water. The Palestinians argue that they only get 17 percent of the West Bank's water; the Israelis counter that water from the aquifer flows naturally down into Israel and so is legally

⁸¹ Rustom Irani, "Water Wars," New Statesman and Society May 3 1991: 24.

⁸² "Whose Water," The Economist Aug 5 1995: 41.

theirs by right of natural flow as well as by the right of historical usage.⁸³ The Palestinians counter this argument with another factor in determining equitable distribution of water resources, that of the natural attributes of the source.

Also, nature-based apportionment is the way shared mineral resources are divided. If this formula were applied to the common Palestinian-Israeli waters, the Palestinian share would perhaps be 80 percent or more, the exact opposite of the present distribution.⁸⁴

However, the recent emergence of the ILC draft articles should eliminate those problems. Israeli Prime Minister, Shimon Peres, argues that, "if roads lead to civilization, then water leads to peace."⁸⁵ Today exists the means by which a water solution can be reached, and subsequently, peace in the region can be realized.

APPLICATION OF DRAFT ARTICLES

The application of international law to the groundwater in the West Bank is an interesting situation. The problem is the fact that the West Bank is an occupied territory and as such would more likely fall under the laws concerning belligerent occupation than the draft articles. Additionally, the Palestinians are not considered a State in the strict legal sense, and as a result would not be considered party to the draft articles. With this case study however the intention is not to determine what current allocations should be,

⁸³ John Kolars, "Trickle of Hope," The Sciences Nov/Dec. 1992: 20.

⁸⁴ Sharif Elmusa, Negotiating Water: Israel and the Palestinians (Washington D.C.: Institute for Palestinian Studies 1996): 68.

⁸⁵ Shimon Peres, The New Middle East (New York: Henry Holt 1993): 132.

but to determine if allocations should change from their current level given the existence of a Palestinian State in the West Bank. For that to take place, the draft articles must be applied to the situation at hand.

The application of international water law was helped when the Israeli government for the first time officially recognized Palestinian rights to West Bank water in Accords signed in September of 1995.⁸⁶ However it remains to be seen if this concession will bear fruit since the issue of water has been reserved for the final negotiations along with the issues of final borders and Jerusalem. This means that water is a hostage of the political struggle and negotiations and that a water solution will depend on the continuation of the peace talks. This continuation is not a guarantee considering the debate over Israeli settlements in historically Palestinian areas of Jerusalem and the political struggles of the current Israeli government. Returning to water, additionally, both sides have agreed that the water issue should be resolved through the principle of equitable utilization.⁸⁷ Equitable utilization is the basis of the International Law Commission's draft articles. While all 33 of the articles are important in their own right the focus will only be on articles 2, 5, 6, 7, 10, and 21.

Article 2 defines the terms of "watercourse" and "international watercourse," which constitute the basis of the entire text. The important aspect is the definition of a watercourse: "a system of surface waters and groundwaters constituting by virtue of their

⁸⁶ Eddie Evans, "Shrinking Water Supply Adds to World Tension," Reuters Sept 14 1996: wire release.

⁸⁷ Elmusa 31.

physical relationship a unitary whole and normally flowing into a common terminus."⁸⁸

An international watercourse is just one that passes through more than one State. The commentary on the article adds, "it also follows from the unity of the system that the term 'watercourse' does not include 'confined' groundwater, i.e., that which is unrelated to any surface water."⁸⁹ This is very important. For the West Bank groundwater to be covered under the scope of the draft articles, they must connect to surface water at some point, and they must naturally flow to a common terminus. What is not always understood or realized is that the West Bank aquifers in question, the Mountain and the Northern aquifers, do in fact naturally drain into springs in Israel.⁹⁰ Although this is seldom realized outside of the region it is very important within the region since the flow of these aquifers to the springs forms the basis for Israeli claims to utilize these aquifers. Currently though very little of the aquifers' flow actually escapes through these springs. Most of the water is pumped by wells located along the "green line" that separates Israel proper from the West Bank. This having been realized, it is then established that the scope of the draft articles does cover the West Bank groundwater.

The next article of importance is Article 5. This article establishes that States should utilize an international watercourse in an equitable fashion. Article 5 sets out the fundamental rights and duties of States with regard to the utilization of international

⁸⁸ Report of the International Law Commission 199.

⁸⁹ Report of the International Law Commission 201.

⁹⁰ James Moore, "Parting the Waters: Calculating Israeli and Palestinian Entitlements to the West Bank Aquifers and the Jordan River Basin," Middle East Policy Spring 1994: 94

watercourses for purposes other than navigation.⁹¹ Thus a watercourse State has both the right to utilize an international watercourse in an equitable and reasonable manner and the obligation not to exceed its right to equitable utilization or, in somewhat different terms, not to deprive other watercourse States of their right to equitable utilization.⁹² This does not establish a rule that States should have an equal amount of water, instead, it establishes equality of rights to utilize the water. But what is equitable utilization? Jonathan Wenig argues that, "to the extent that existing allocations satisfy existing demands, they are judged as equitable."⁹³ It is very apparent that the current apportionment of the West Bank water does not satisfy existing demand. To an extent however this is hard to measure due to the military occupation and governance of the territory. The military occupation and military orders governing the West Bank artificially restricts the Palestinian demand for water due to these external restrictions places on agriculture and industry. Although optimal utilization has an inherent bias towards existing uses of water, when inequalities still exist, the focus shifts towards redistribution.⁹⁴ Not only do inequalities exist, there is also appreciable harm caused by these regulations on the Palestinian people. A use that causes appreciable harm is

⁹¹ Report of the International Law Commission 218.

⁹² Report of the International Law Commission 218.

⁹³ Jonathan Wenig, "Water and Peace: The Past, the Present, and the Future of the Jordan River Watercourse: An International Law Analysis," New York University Journal of International Law & Politics Winter 1995: 353-4.

⁹⁴ Wenig 354.

inherently inequitable.⁹⁵ As a result of these impediments to the Palestinians (as discussed above) a the West Bank water needs to be re-allocated.

While it is easy to say that the waters should be re-allocated, that hard part is in determining how equitable utilization should be determined. It is at this point that Article 6 enters the picture. Article 6 lists factors relevant to equitable and reasonable utilization. This section includes such factors such as the social and economic needs of the watercourse States, the population dependent on the watercourse, and geographic or hydrographic factors among others. Sharif Elmusa argues that the relevant factors "boils down to the socially and economically based water needs and the relative ability of the two sides to tap alternative water sources."⁹⁶ These two factors justify a re-allocation in favor of the Palestinians. The aquifers of the West Bank are the sole water source for the Palestinians. Although they border the Jordan River, they are prevented from utilizing it as a result of the military occupation. The Palestinians also have neither the capital or technology to tap alternative sources of water. The Israelis, however, are world leaders in water efficient technology and have both the capital and technology for desalination plants. Israel is capable of harnessing nonconventional resources that could provide it with substantial amounts of water. In fact, it announced in 1995 a long-term water desalination program that will produce about one-and-a-half times the amount of water of the entire mountain aquifer by the year 2040.⁹⁷

⁹⁵ Wenig 355.

⁹⁶ Elmusa 39.

⁹⁷ Elmusa 63.

Article 7 brings up another factor that needs to be considered in redistributing the waters, that of the obligation to not cause significant harm. While this can easily be applied to the case in favor of the Palestinians, it can also be utilized on behalf of Israel. As noted above, Israel is currently very dependent on the West Bank water. It is very easy to argue that a re-allocation would cause them significant harm. However, in the context of the articles as a whole, Article 7 favors a redistribution favorable to the Palestinians considering the significant harm that has been caused to them through the water policies of Israel. It does however place limits on that redistribution and obligates those who will in the end determine specific amounts to still consider the Israelis when the aquifers are divided.

Article 10 in a sense is related to Article 6. It establishes that no use of an international watercourse has inherent priority over other uses and that in the case of conflicts between uses, that special regard should be given to the requirements of vital human needs.⁹⁸ The first part of this article is important because it negates the prior Israeli position that prior and existing use has priority in determining water allocation. The second part is also important because it establishes the primacy of vital human needs above all others.

Domestic needs are, of course, the primary concern in water allocation. Regarding domestic use, the basic distributive principle should be equal allocations of water to all users according to their needs. This principle would lead in the future to the allocation of additional quantities to the Palestinians for domestic purposes, since the current Palestinian average per capita consumption is less than one-third of the average per capita consumption in

⁹⁸ Report of the International Law Commission 256.

Israel.⁹⁹

Palestinian water consumption is not one-third that of Israel because Palestinians just need less water, it is because they have been systematically denied the water that international law entitles them to have. While vital human needs does not include general agriculture such as for economic purposes such as export, it does include water required for food production in order to prevent starvation.¹⁰⁰ This is another aspect of Palestinian life that has been repressed since 1967.

The final important article is Article 21. This article is designed to prevent, reduce, and control pollution. Pollution is defined as, "any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct."¹⁰¹ A reduction in quality or the increase in saline levels in the aquifer would constitute pollution under the draft articles. Only in considering pollutive actions does the principle of 'no appreciable harm' supersede that of equitable utilization.¹⁰² This is important because if the overuse of an aquifer results in increasing the salinity of the aquifer, then such a use cannot be allowed to continue, even if it constitutes equitable utilization. In other words, the Palestinians must be careful

⁹⁹ Eyal Benvenisti and Haim Gvirtzman, "Harnessing International Law to Determine Israeli-Palestinian Water Rights: The Mountain Aquifer," Natural Resources Journal Summer 1993: 561.

¹⁰⁰ Report of the International Law Commission 257.

¹⁰¹ Report of the International Law Commission 289.

¹⁰² Wenig 356.

once they acquire autonomy not to overpump the West Bank water (a major Israeli fear) and increase the salt water intrusion into the aquifers. If they were to do so, the Israelis would have the right to prevent such actions.

Looking over the draft articles it is quite easy to see that they endorse a redistribution of the West Bank groundwater in favor of the Palestinians. Such a division can only be seen as finally establishing equitable utilization and reversing the harms and restriction placed on them by thirty years of Israeli occupation. The draft article, however, should not be seen as a blank check to the Palestinians to engage in whatever water policies they deem fit. The draft articles do place some restrictions on them. These are found in Articles 7 and 21, the obligation not to cause significant harm and to prevent pollution, in this case from salt water intrusion due to overpumping the aquifers. The attention now shifts from the West Bank to the Euphrates River which runs through Turkey, Syria, and Iraq. While looking at the nature of the dispute that surrounds this river, international water law will be applied to determine if it can provide a realistic solution to the Euphrates dispute.

EUPHRATES CASE STUDY

BACKGROUND

The Euphrates River begins in Turkey before traveling through Syria and finishing its journey in Iraq. The Euphrates and its companion the Tigris River have important historical significance. It is within the basins of these two rivers that the fertile crescent

lies. And it was there that western civilization is believed to have originated. Also it is in what is known as modern Iraq that the first dam is believed to have been constructed thousands of years ago. Our interest with this region though does not go back so far. For the purposes of this case study the focus will be on the current status of the region. To better understand the politics and confrontations that surround the modern Euphrates one needs to have a basic grasp of how the countries of Turkey, Syria, and Iraq relate to each other and why.

Any State that has endured occupation through imperialism inherently becomes very wary of the occupier State after its independence. The same is true in the Euphrates basin following the Ottoman Empire. There is still a tendency among Arab policy makers to blame the underdevelopment of the new Arab States on Ottoman policies.¹⁰³ Unlike their Turkish counterparts, Arab leaders have a unique perspective of the region's historical experiences. For example, it is well known that in any talks with Hafiz al-Assad, the Syrian president, one should expect to be treated to at least a two hour exposition on the history of the region.¹⁰⁴ This history has directed the attentions of the Arab leaders to strive for complete self-sufficiency in as many areas as possible. The post Ottoman Empire has created two distinct types of conflicts; that of Arab vs. Turk, and Arab vs. Arab, or more specifically, Syria versus Iraq.

Arab vs Turk feeling can predominately be attributed to the Ottoman Empire and Arab concerns over anything the Turks do that may increase their sphere of influence or

¹⁰³ Faure 141.

¹⁰⁴ Faure 145.

control or the actions of Arab States. However, in addition there is a special animosity between Turkey and Syria. Part of the problem stems from Syria's historical role as a supporter of revolutionary groups, in this case of the PKK (The Kurdish Workers Party), but this will be considered later. The other issue is that of territory. In 1938, in order to pave the way for an alliance with Ankara (the capital of Turkey), France granted independence to the Hatay region, part of its Syrian mandate. Hatay, inhabited by Turks and Arabs, decided in 1939 to unite with Turkey. The Syrians and most Syrian governments have never come to terms with Hatay's secession and Damascus has never been able to hide the fact that it considers the Turkish sovereignty over Hatay as illegitimate.¹⁰⁵ In fact Syrian maps in Damascus still show Hatay as part of Syria.

The Arab vs Arab sphere is not so much the result of the Ottoman Empire, at least not directly, as it is the result of politics and the different ethnic factions in Syria and Iraq. Syria and Iraq are ruled by rival factions of the Ba'ath party. The Ba'ath party espouses Arab unity and is very secular in nature. The result of this is that both Assad and Hussein are struggling not just for State and regional dominance, but they are also competing for the role as at least spokesman, if not leader, of the Arab world. A compromise on the part of one leader would result in the strengthening of the other, a risk neither Assad or Hussein are willing to take.¹⁰⁶ This can be seen in their unwillingness to reach a binding agreement regarding the Euphrates. While this is caused partly because

¹⁰⁵ Suha Bolukbasi, "Turkey Challenges Iraq and Syria: The Euphrates Dispute," Journal of South Asian and Middle Eastern Studies Summer 1993: 10.

¹⁰⁶ Faure 147.

of the limited nature of the Euphrates, it is also due partly to personal animosities and jealousies between Syrian and Iraqi leaders. The tradition of personalized leadership in the Arab countries sometimes makes a country's foreign policy hostage to its chief executive's personal feelings and agenda.¹⁰⁷

Another cultural similarity between the Syrian and Iraqi regimes concerns the basis of their political power. Assad is Alawi, a Shi'a religious sect that represents almost 12.5% of the Syrian population, whose majority is Sunni. Hussein is a Sunni in a country where most of the population (almost 50%) is Shi'a. Each leader has created pillars of support for his regime that competes with the country's traditional political institutions. Assad's top political advisors are Alawi, and he has staffed most critical positions in the army, security, and intelligence services with his relatives. The same phenomenon holds true in Iraq. Very few Shi'a occupy critical political posts in Iraq. Hussein has drawn heavily on fellow Sunnis, members of the Iraqi Ba'ath Party, and relatives. Hence national agendas easily can become identified with the protection of the interests of the group in power. In the case of Syria, some of those interests include the protection of the Alawi's rights in Hatay, a thorny issue that has affected the negotiations with Turkey over the Euphrates water dispute. They also include supporting Shi'a political power inside Iraq, a source of constant friction between Syria and Iraq, which indirectly has affected negotiations between the two countries over the river dispute. The Iraqi political elite also have supported Sunni Muslim groups inside Syria, such as the Muslim Brotherhood, and have used religious symbols in isolating the Syrian regime in a region that is heavily dominated by Sunni political regimes.¹⁰⁸

The differences in ethnic groups and the similarities in politics have managed to prevent agreement between Syria and Iraq, and on a larger scale a basin-wide agreement on the use of the Euphrates. But it is the Arab vs Turk sphere that has been the predominate reason for a lack of agreement between Turkey, Syria, and Iraq.

¹⁰⁷ Faure 148.

¹⁰⁸ Faure 148.

Another important issue of contention has been that of the Kurds, specifically, the PKK, the Kurdish Workers Party. The PKK is the primary revolutionary group that is active in Turkey. Their goal is similar to many other Kurdish organizations, that of the creation of a Kurdish State, Kurdistan. The reason why the PKK is such an important block to Syrian and Turkish cooperation is due to the simple fact that the PKK is supported, trained, and partially funded by Syria; all unofficially of course. This can be traced back to a decision by President Assad to increase his bargaining power with other States in the region by funding groups and organizations that contribute to the instability in other countries. These groups were supported through money, training, and weapons.¹⁰⁹ In 1978, Abdullah Ocalan, otherwise known as "Apo", who would soon assume the leadership of the PKK made the move to Syria and accepted the Syrian offer of assistance. The issue of the Kurds and the Euphrates became linked in the 1987 Protocol of Economic Cooperation. This protocol dealt with a wide variety of issues: oil and gas exploration, banking, livestock transportation, customs formalities, and water.¹¹⁰ The protocol established that in exchange for Syrian cooperation on border security (to be read as ceasing support for the PKK) Turkey would guarantee a minimum flow for the Euphrates of 500 cubic meters per second.¹¹¹ Assad successfully played the PKK card. However, Assad did not cease PKK support, instead the PKK simply was moved from

¹⁰⁹ Bulloch 60.

¹¹⁰ Natasha Beschorner, Water and Instability in the Middle East (London: Brassey's 1992): 40.

¹¹¹ Bolukbasi 22.

Syria proper to Syrian controlled areas in Lebanon. After couple of years, the PKK moved back to Damascus. It was this failure to cease PKK support that prompted Turkish Prime Minister Ozal in 1989 to State that if Syria did not stick to the requirements of the 1987 accord, then Turkey would not consider itself bound to deliver a minimum flow of 500 cubic meters per second to Syria.¹¹² In spite of hostile verbal exchanges between Syria and Turkey concerning the PKK, both countries reaffirmed the 1987 Protocol of Economic Cooperation in 1993.

What is important to take away from this protocol is the text of Article 6:

During the filling up period of the Ataturk dam reservoir and until the final allocation of waters of the Euphrates among the three riparian countries, the Turkish side undertakes to release a yearly average of more than 500 cubic meters per second at the Turkish-Syrian border and in cases where the monthly flow falls below the level of 500m³/sec, the Turkish side agrees to make up the difference during the following month.¹¹³

This is important because it establishes for at least the present, what Turkey's obligation as far as the flow of the Euphrates is concerned. All that Turkey is obligated to do is ensure that Syria receives 500m³/sec. Barring a future agreement involving all three riparians, this is the level Turkey is obligated to provide. Without an agreement to negotiate from all three parties, the draft articles cannot be applied because an agreement on use already exists. It is important also to point out that this aspect of the protocol is recognized by all parties as only being temporary until negotiations involving all three States can take place. When Turkey and Syria concluded the agreement, its intent was to

¹¹² Bolukbasi 23.

¹¹³ Beschorner 40.

be temporary due to the absence of Iraqi involvement in the protocol, this is how Turkey explained the protocol to Iraq when it complained about being left out of the negotiations.¹¹⁴

The second aspect of the Arab vs Turk sphere is that of the GAP. The GAP stands for "Güneydogu Anadolu Projesi" or translated from Turkish, the Southeast Anatolia Project. It is a giant \$32 billion project of 21 dams, 19 hydropower plants, and irrigations canals for the southeastern region of Turkey.¹¹⁵ The rural southeast region of Turkey is populated mostly by Kurds, who have always harbored separatist dreams. A central political premise on which the GAP initiative is predicated is that as long as the rural Kurdish areas remain poor, the locals will be susceptible to Marxist and nationalistic ideas. Conversely, a thriving economy with many job opportunities would strongly inhibit the inhabitants from toying with such revolutionary ideas.¹¹⁶ In essence, GAP seeks to buy off the Kurdish population and at the same time significantly decrease the appeal, effect, and importance of the PKK.

At the same time though, GAP is a project that can provide immense benefits to Turkey through the increased electrical output, increased irrigation and agricultural output there by producing export income, as well as incredible economic growth. GAP will also serve as a means of flood control for downstream riparians at no cost to them

¹¹⁴ Beschorner 41.

¹¹⁵ Refet, Kaplan, "Water-Rights Dispute Divides Syria, Turkey," The Washington Times March 25 1996: 19.

¹¹⁶ Faure 137.

and water storage is most effectively done near the headwaters for flood control and to lessen evaporation.¹¹⁷ The principle part of GAP is the Ataturk Dam, which has the capacity of nearly 49 billion cubic meters (greater than that of the entire yearly output of the Euphrates) and, when finished, will be the fourth largest construction in the world. The canals draining out from the reservoir will be able to irrigate 143,000 hectares of land, making the region a sort of Eden, capable of producing three harvests a year.¹¹⁸ GAP should not be viewed solely as a means of placating the Kurds, but also as a project with tremendous national importance for the country as a whole.

Syria and Iraq are very concerned about the GAP project. Once completed, it would have a drastic impact on the flow of the Euphrates they receive. A fully functioning GAP could cut Syria's permanent share of the Euphrates by up to 40 percent and Iraq's by 80 percent.¹¹⁹ Syria is predominately concerned about the effect of GAP on its own dam and hydropower plans. A significant reduction in the flow would translate into lower water levels with which to work. Already, Syria suffers from power shortages.¹²⁰ Dr. Seyfi Tashan, director of Turkey's Foreign Policy Research Institute, points out that,

the Russians built the Tabka Dam (Syria's primary dam and pride and joy) and power plant in Syria using construction methods appropriate for

¹¹⁷ Elizabeth Green, Hydropolitics in the Middle East and U.S. Policy (Newport Rhode Island: US Naval War College 1993): 32.

¹¹⁸ Allan and Mallat 205.

¹¹⁹ Cohen 513.

¹²⁰ Cohen 509.

Siberia, where there is little evaporation and much water. The powerplant is situated above the earth so that the dam must always be full to get maximum output from the powerplant. If the level falls, the powerplant ceases production. Modern technology requires that the powerplant be embedded underground, particularly the turbines, so they can operate at lower water levels.¹²¹

For Iraq, the key issue is water for irrigation. Like most countries in the region, Iraq believes in the necessity of being, or at least attempting, agricultural self-sufficiency.¹²² The Iraqi government's concern is further exasperated by the fact that the majority of Iraqis involved in agriculture (35 percent in 1988) are Shi'a.¹²³ A decrease in the amount of water available for agriculture could have a serious destabilizing effect on the political structure of Iraq. However, Iraq has an advantage that Syria does not, another river, the Tigris, flows through its borders. Shortfalls in the Euphrates can be made up by using water from the Tigris instead. This is also relatively guaranteed since the Tigris is not used heavily by Turkey. In addition, it appears that Iraq does not face a water shortage in the near future. As Tevfik Okyayuz, head of the Middle East and North African Relations Department of the Turkish Foreign Ministry explains, "The Iraqis have connected the Tigris and Euphrates Rivers by a canal. They use the water from the Tigris for irrigation . . . Just before the Persian Gulf crisis, the Iraqis constructed a pipeline to Kuwait to sell water from the Euphrates and Tigris. Then they turn to us and say 500

¹²¹ Norman Frankel, "Water and Turkish Foreign Policy," Political Communication and Persuasion Oct-Dec 1991: 260.

¹²² Cohen 510.

¹²³ Faure 138.

cm/sec is not enough. If this is not enough, why are they selling water to Kuwait? This is very cheeky."¹²⁴ Now let us examine the relevance or applicability of the draft articles in helping to negotiate the conflict over the use of the Euphrates.

APPLICATION OF DRAFT ARTICLES

The application of the draft articles to the disputes concerning the Euphrates are in one sense easier, and in another more difficult. On the positive side is the fact that there are no complicating issues of occupation or future Statehood to deal with. The three riparians of Turkey, Iraq, and Syria will remain as they currently exist territorially for the foreseeable future. The problem though arises in the lack of cooperation among the riparians. The three have yet to meet, on any significant level, to collectively negotiate the flow of the Euphrates. The articles that are most applicable to the Euphrates are similar to those for the West Bank. They are Articles 2, 5, 6, and 7.

Is the Euphrates River an international river? The question seems to be very simple, and one would answer positively that the Euphrates is an international river, after all it passes through three States, Turkey, Syria, and Iraq. The question, however, is not as simple as that. Turkey claims that the Tigris and Euphrates form a single transboundary watercourse and are not international rivers.¹²⁵ The assertion is that they are Turkish rivers while they flow within the borders of Turkey.¹²⁶ Even then Prime

¹²⁴ Frankel 286.

¹²⁵ Beschorner 42.

¹²⁶ Allan and Mallat 210.

Minister, Suleyman Demirel Stated, “neither the Euphrates nor the Tigris are international waters and nobody (no foreign authority) can claim resources situated on the Turkish territory.”¹²⁷ International law and more specifically, draft article 2 takes a different view on what constitutes an international watercourse. The draft article defines an international watercourse as, “a watercourse, parts of which are situated in different States.” And a watercourse is defined as, “a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus.”¹²⁸

Therefore, the Euphrates, regardless of if it is combined with the Tigris constitutes an international watercourse. The Turkish claim that the Euphrates runs through several States but does not form the border between States and therefore it is not an international watercourse. However, as long as a watercourse extends into two or more States, it is considered an international watercourse. The Turkish claim of sovereignty is also addressed in international law. As discussed previously, international law has evolved from concepts of absolute sovereignty to that of limited sovereignty and equitable utilization. What must still be reconciled by international law is the issue raised by the Turkish government that, “the principle not to cause large-scale damage to neighboring countries must not be understood to mean that one country has a duty to renounce its own needs to satisfy those of the neighbouring countries.”¹²⁹

¹²⁷ Allan and Mallat 211.

¹²⁸ Report of the International Law Commission 199.

¹²⁹ Allan and Mallat 212.

Article 5 establishes the need for equitable utilization which is the fundamental core of the draft articles. Within the commentary to Article 5 is found the Statement that "there is no doubt that a watercourse State is entitled to make use of the waters of an international watercourse within its territory. This right is an attribute of sovereignty and is enjoyed by every State whose territory is traversed or bordered by an international watercourse."¹³⁰ This provides the basis of the Turkish claim to be able to use the Euphrates for its needs while it is within its borders as it sees fit. Wenig's point that, "to the extent that existing allocations satisfy existing demands, they are judged as equitable, is once again very important to the discussion."¹³¹

As long as Syria and Iraq's needs are met, Turkey does not violate international law with the continuation of the GAP. Iraq's needs are met and it has been pointed out above that they have a surplus of water. It is questionable however if Syria has enough. Syria's lack of sufficient hydropower and dam problems can be attributed to poor planning (dams that were designed for Siberia, not Syria), Turkey cannot be expected to compensate Syria for poor planning by increasing the flow of the Euphrates into Syria. However, Syria could be justified in asking for an increase to satisfy irrigation needs and increases in population. This however raises the issue of the 1987 Protocol. Because it constitutes an already existing water agreement between Turkey and Syria, it has prima facie over the draft articles. This means that Turkey is not obligated to increase the flow of the Euphrates, only to maintain the previously agreed upon 500 cubic meters

¹³⁰ Report of the International Law Commission 221.

¹³¹ Wenig 353-4.

per second.

In Article 6 are found the factors to use to settle divergent claims for equitable utilization. Looking at the relevant factors such as climate, geography, and hydrology, it is very possible to assert that Turkey is entitled to a large portion of the Euphrates. Turkey not only contributes almost all the water to the Euphrates but also has a large share in the area of its drainage basin and portion in the river channel.¹³² This is consistent with the current situation. As long as the other riparian needs have been met, the remainder, and what should be a majority, of the Euphrates water can be utilized by Turkey.

Article 7 obligates States to not cause other riparians significant harm. A use that causes harm is inherently inequitable.¹³³ While the current use does not engage in significant harm to any of the riparians, this is a clause to bear in mind for the future. As noted previously, a completed and fully operational GAP will have a drastic effect on Syria and Iraq. This would, by any stretch of the imagination, constitute the significant harm that the draft articles seek to prevent. The impact of this is that GAP project will have to be re-evaluated, or at least some agreed upon method of compensation for the lower riparians will have to be developed. The likelihood of that is very slim considering the importance of the Euphrates to both Syria and Iraq. Equally unlikely is the prospect that Syria and Iraq will give their permission for the construction of a completed GAP.

All of this assumes that Turkey will be willing to implement the draft articles,

¹³² Klot 270.

¹³³ Wenig 355.

a consideration that can only be considered a guess at this point. If Turkey remains adamant in their claims that the Tigris and Euphrates Rivers are not international watercourses then they will not consider themselves bound by the draft articles. To accept the draft articles would mean turning their back on GAP, a prospect they are completely unwilling to do. Turkey is in a relative position of strength. As the upper riparian, its water supply is not controlled by either Syria or Iraq. Considering the political relations among the three States, it does not need to worry about damaging political alliances either. And importantly, it has the 1987 Protocol on Economic Cooperation to act as a pre-existing agreement on the distribution of the Euphrates to block an attempt to apply the draft articles. Most importantly though, it is protected from repercussion by the State of international law. No effective mechanism exists to force States to comply with international law, this is the point behind the Realist school of thought. The dispute resolution mechanism of the draft articles itself fail to provide a solution either. Article 33 on dispute resolution assumes that all parties want to reach a solution. The Article assumes a situation that rarely exists in the real world. The final case study is the Nile Basin. This study will be unique for several reasons and it is here that one could argue that the draft articles have the best possibility of proving successful.

NILE CASE STUDY

BACKGROUND

The Nile basin is the third and final case study. The use of the Nile river began thousands of years ago. And human ability to control the mighty river can be traced back to 3400 BC when Menes united Upper and Lower Egypt and started the construction of canals and dykes.¹³⁴ The Nile basin is by far the largest. The whole catchment area of the Nile basin is about 2.9 million square kilometers, representing nearly one-tenth of all African Territory. The average yearly flow, calculated from data available from the last fifty years, fluctuates between 40 and 140 billion cubic meters of water per day, with an annual average of 90 billion cubic meters.¹³⁵ The Nile River system passes through nine different States. The Nile watercourse States include Burundi, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda, and Zaire. The Nile draws its water from the rain that falls on the Lake Plateau of Central Africa and the Ethiopian highlands.¹³⁶ Ethiopia's headwaters of the Blue Nile account for 60 percent to 85 percent (it is typically agreed that Ethiopia contributes 85 percent of the Nile's flow) of the Nile's water.¹³⁷ Although Ethiopia contributes the lion's share of the Nile, it at present utilizes very little of that water. At present Egypt and Sudan use a combined total of 94 percent of the annual flow while the other riparians, including Ethiopia, use a mere 6

¹³⁴ Kliot 32.

¹³⁵ Dante Caponera, "Legal Aspects of Transboundary River Basins in the Middle East: The Al Asi (Orontes), The Jordan and The Nile," Natural Resources Journal Summer 1993: 650.

¹³⁶ Chenevert 518.

¹³⁷ Green 42.

percent.¹³⁸ It is this disparity that forms the basis of the case study.

The Nile basin case study is rather different from the other two cases. The Israel-Palestinian study is unique because it involves groundwater. The Euphrates example involves the domination of an upper riparian over lower ones, which is a common situation. The Nile is unique because Egypt and Sudan, the two lower riparians contribute essentially nothing to the Nile's waters, but dominate and control its utilization. This study is unique for another reason, that being the means by which control is asserted. Typically, control is based on military strength and occupation, as is case with the groundwater in the West Bank. At times control can also be based on political strength, or the struggle for political control and regional dominance as is the case Syria and Iraq and the Euphrates (in this case it is the political struggle between Syria and Iraq that allows Turkey to dominate). The Nile is unique in the control is asserted based on legal principles, more specifically, treaties, although the threat of Egyptian military force is still present.

While the treaties provide the basis for Egypt's dominance of the Nile, they would not be able to exert the power they do if were not for the lack of development among the region.

The truth of the matter is that there is not a single upstream State at present which is able to challenge the existing practice, tamper with the waters of the Nile or dam the river in any way. None of these States has the economic muscle or technical know-how to build dams, dig diversion canals or carry a large scale land reclamation operation. None of these States is in a position to mobilize world public opinion, donor countries, or international

¹³⁸ Anthony Shadid, "Cairo may see waters of the Nile diminish," Los Angeles Times Bulldog edition, Dec 17 1995: A 38.

financial institutions to finance such projects. All economic indicators point to the fact that the States have sagging economies and that their populations are increasing at a considerably faster rate than their economies. In the past 40 years populations have increased between two and a half to four times while the Gross National Products have remained very small and have not grown at a rate to cope with the increase in population. All the basin States are indebted to the outside world and their budgets have large deficits. All have increased their external and national debts during the last 15 years to more than three times their value, so much so that the service of the debts consumes the larger part of the total exports. In addition to these economic and fiscal difficulties most basin States have had to cope with the poverty and stress wrought by the droughts of the 1970's and 1980's which affected the livelihood of large segments of their populations. They also have had to cope with the political problems arising from the spread of separatist movements resulting from tribal, ethnic, and religious tensions. These have contributed to the weakening of central governments, the pervasiveness of corruption and the spending of large sums of money on armaments and instruments of repression.¹³⁹

However, the lack of development among the upper riparians has been a problem for Egypt. Egypt would like to negotiate a modern basin wide agreement, yet it finds itself almost alone in such a desire. Boutros Boutros-Ghali has Stated that, "The other African countries, which have not reached the level of agriculture through irrigation achieved by Egypt, are not as interested in the problem of water scarcity. It is the classic difference in attitudes found among upstream and downstream countries."¹⁴⁰

The issue of development while very important is secondary to that of treaties. The two main treaties that govern the Nile are the 1929 and 1959 agreements. There are also a number of other minor treaties and agreements, but their actual specifics are not

¹³⁹ Rushdi Said, The Nile River: Geology, Hydrology, and Utilization (Oxford: Pergamon Press 1993): 266.

¹⁴⁰ Kaplan 25.

important to this discussion and they can all be lumped together. It is very important to point out that every treaty on the Nile, except for the 1959 agreement between Egypt and Sudan and a 1977 treaty on cooperation between some of the riparians, was conducted by at least one colonial power "on behalf" of their protectorate territory. In a number of cases, treaties are only between two colonial powers and not an actual independent African State.

The 1929 Anglo-Egyptian Nile Agreement was conducted between Egypt and the British Empire on behalf of Sudan, Kenya, Uganda, and Tanzania.¹⁴¹ This agreement gave Egypt 48 billion cubic meters and Sudan received only 4 billion cubic meters.¹⁴² The agreement also stated that, "except without prior consent of the Egyptian Government, no irrigation works shall be undertaken nor electric generators installed along the Nile and its branches nor on the lakes from which they flow if these lakes are situated in the Sudan or in countries under British administration which could jeopardize the interests of Egypt either by reducing the quantity of water flowing into Egypt or appreciably changing the date of its flow or causing its level to drop."¹⁴³ Quite explicitly, this established that Egypt had veto power over any Nile related project the British administration may desire to do. The final aspect of this agreement was that it was meant to be temporary. Egypt wanted the agreement to be conditional upon future political

¹⁴¹ Howell and Allan 356.

¹⁴² Kliot 81.

¹⁴³ Said 265.

developments in territory under British administration.¹⁴⁴

The 1959 Nile Water Agreement between Egypt and Sudan stemmed from the temporary condition of the 1929 agreement. The 1959 agreement can be seen as the continuation of the prior one. Once again the waters of the Nile were divided among Egypt and Sudan. This time Egypt received 55.5 billion cubic meter and Sudan received 18.5 billion cubic meters.¹⁴⁵ The 1959 agreement also claimed to establish full utilization of the Nile water, although only Egypt and Sudan received specified amounts and were the only two parties to the agreement.¹⁴⁶ Future potential claims by upper riparians however were acknowledged by Egypt and Sudan within the agreement.¹⁴⁷ Currently, no upper riparian has yet claimed an amount of the Nile, although Ethiopia has claimed a general right to utilize an equitable share of the Nile waters.¹⁴⁸

While those are the treaties that govern the Nile, the question of their validity must still be addressed. This is an important issue because most treaties date back to the colonial powers and it is here that the issue of State succession and succession in law is very important. Recalling that there are personal and dispositive treaties, with dispositive treaties relating to issues of territory and are binding while personal treaties are economic or political contracts between to parties and are not binding, a further clarification must

¹⁴⁴ Kliot 81.

¹⁴⁵ Kliot 84.

¹⁴⁶ Kliot 84.

¹⁴⁷ Howell and Allan 357-8.

¹⁴⁸ Shadid 38.

now be made. That point is the doctrine of *rebus sic stantibus*. Very briefly, this doctrine asserts that if the circumstances which constituted an essential basis of the consent of the parties to be bound by a treaty undergo such far-reaching changes as to transform radically the nature and scope of obligations still to be performed, the Agreement may be terminated on the initiative of a party.¹⁴⁹ The issue is whether or not the changes during the decolonization of the African States constitute such a far-reaching change. In general, the answer would have to be no, after all, what is merely taking place is that of succession in fact and natural State succession. However, if the situations surrounding the basis of treaty have changed because of State succession, then the termination of a treaty is justified.

This is the argument made by J.A. Allan, that the treaties continue in force because they are by nature dispositive treaties and therefore binding on the successor State and that they do not contain any exceptional or illegal principle.¹⁵⁰ However Godana applies the doctrine of *rebus sic stantibus* to these treaties and especially the 1929 Agreement based on the fact that the 1929 Agreement primarily represented political concessions by the British Government so as to have a friendly Egyptian Government to deal with.¹⁵¹ This position is backed by the circumstances of the time and Statements by then British Foreign Secretary Austen Chamberlain to the House of

¹⁴⁹ Godana 142.

¹⁵⁰ Howell and Allan 355.

¹⁵¹ Godana 142.

Commons.¹⁵² This being the case, the upper riparians have the right to negate treaties negotiated under such premises. In fact, the upstream countries have denied the perpetual character of the colonial agreements in the post-independence period. They hold the view that the agreements in the colonial period were concluded by the colonial powers for the time solely for the benefit of the downstream countries without any consideration for actual need.¹⁵³

As for the other minor treaties and agreements, Egypt argues along the lines of Allan's argument that they remain valid due to the dispositive nature and international law concerning State succession.¹⁵⁴ As mentioned above, the upper riparians have taken the opposite position and deny the existing validity of those agreements. On several occasions they have declared their rights to the waters of the Nile although no country has yet attempted a project on the Nile nor has made claims to specific amounts.¹⁵⁵ As a result of the decolonization of these States, it is possible to argue that either the treaties are still valid due to State succession, or to argue that the decolonization resulted in such far-reaching changes so as to allow the upper riparians the right to negate the treaties. Regardless, the 1959 Nile Water Agreement is still effect since neither Sudan nor Egypt have negated it. The upper riparians just do not recognize its validity since it does not allocate any of the Nile's water to them. It has been this refusal to acknowledge the 1959

¹⁵² Godana 141.

¹⁵³ Allan and Mallat 183.

¹⁵⁴ Kliot 86.

¹⁵⁵ Kliot 86.

agreement that has prompted Egypt to try and create a new basin wide agreement among all the riparians that still recognizes Egypt as the primary beneficiary of the Nile. The lack of cohesion or unity, or even similarities among the basin States has prevented the existence of such an agreement. The primary conflict has been between Egypt and Ethiopia, the largest user and the largest provider of the water. This however is changing. In July 1993, a general agreement was reached between the new Ethiopian government and the Egyptian government and may mark the beginning of a new era of cooperation. This agreement included a clause concerning the Nile River in which the countries agreed not to do anything with the Nile River that might harm the other State and to consult and cooperate on future water projects that would be mutually beneficial. It was agreed that future water resource cooperation would be grounded in international law.¹⁵⁶ This agreement between the two major riparians commits them to the principles of international law and more specifically, the draft articles.

APPLICATION OF DRAFT ARTICLES

The Nile basin is the easiest of the three case studies to apply the draft articles to. This can be attributed to several factors. The first of these is the willingness and desire of both Ethiopia and Egypt to utilize the principles of international law found in the draft articles, mainly that of equitable utilization. Secondly, is the desire on the part of Egypt, the largest user of the Nile's water, to negotiate a basin wide agreement.

¹⁵⁶ Courtney Flint, "Recent Developments of the International Law Commission Regarding International Watercourses and Their Implications for the Nile River," Water International 20 (1995): 201.

Additionally, is the lack of conflict over the Nile. While the basin States themselves are not unified, there is a general lack of animosity among the riparians, and sometimes that is the best one can hope for. While there are some States that are not pleased with the current allocation, no basin State is prepared to go to war, or petition the International Court of Justice for a ruling. This is different from the other two case studies. The main reason for this can be attributed to the general lack of development along the Nile, and current inability to engage in development projects. Without the ability to develop, most basin States lack the desire to deal immediately with the issue of allocating the Nile waters. The articles of primary relevance to the Nile basin are 3, 5, 6, and 7.

Article 3 establishes parties to watercourse agreements. The part of interest to this case study is paragraph 3:

When a watercourse State considers that adjustment or application of the provisions of the present articles is required because of the characteristics and uses of a particular international watercourse, watercourse States shall consult with the view to negotiating in good faith for the purpose of concluding a watercourse agreement or agreements.¹⁵⁷

What is important about this is the recognition that what constitutes equitable today may not be equitable tomorrow. While it does not reserve any rights or allocations for the future, it establishes that should a riparian feel adjustments are necessary they will be considered and negotiated. Although a positive result is not guaranteed. This article is important when looking at the Nile basin because of its current lack of need for the draft articles to be applied. Once basin States have the capability to develop the Nile further,

¹⁵⁷ Report of the International Law Commission 206.

then the allocations can be adjusted to respond to that need. But until then the current allocations remain in place.

Article 5 establishes the basic premise of the draft articles, that of equitable utilization. Equitable utilization is determined by evaluating if the current supply meets the current demand.¹⁵⁸ This can be said to be the case in the Nile basin. Due to the upper riparians inability to develop the Nile, their current needs are being met. The current needs of both Egypt and Sudan are also being met. Thus, it is possible to argue that the current status, while imperfect and in reality is inequitable, qualifies as an equitable utilization of the Nile River until such time as a basin State can develop the Nile within their border.

Article 6 lists factor that allow for the determination of what constitutes equitable utilization. The factors of interest to this study are:

- (a) geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;
- (b) the social and economic needs of the watercourse States concerned;
- © the population dependent on the watercourse in each watercourse State;
- (d) the effects of the use or uses of the watercourse in one watercourse State on other watercourse States;¹⁵⁹

Egypt's utter dependence on the Nile is the primary point in its favor because it is ninety-seven percent desert. With its arid climate and minimal rainfall along the Mediterranean coast, Egypt would simply cease to exist without the water provided by the

¹⁵⁸ Wenig 353-4.

¹⁵⁹ Report of the International Law Commission 231.

Nile.¹⁶⁰ As for factor (b), the social and economic needs... this again favors Egypt due to the incredible level of dependence Egypt has on the Nile. This factor too would award a greater portion of the Nile to Egypt. Factor © would again likely favor Egypt. Because Egypt uses so much of the Nile, other basin States have tapped other sources of water such as national rivers and groundwater so that the population in other basin States that utilizes water from the Nile is comparatively small. Factor (d) would probably go against Egypt when re-allocation is considered, but in the meantime it does not hurt Egypt since the upper riparians are not in a position to use the Nile waters to any great extent. All of these factors only serve to validate Egypt's current status as primary beneficiary of the Nile. However, when other basin States are ready to use the Nile to a larger extent it will be Article 7 that will necessitate the redistribution.

Article 7 provides the obligation to not cause significant harm. If the current allocations were to remain in place when the upper riparians were either ready and able or needed to develop the Nile waters for their use it would result in a significant harm to those basin States. A use that causes appreciable harm is inherently inequitable.¹⁶¹ Because the use would not be equitable, it would be necessary to distribute the Nile in an equitable manner.

The Nile is a unique case study. Although in practice the current allocations are far from equitable, the de facto situation created by the inability of any upper riparian to engage in any large scale development project combined with the fact that no basin State

¹⁶⁰ Chenevert 558

¹⁶¹ Wenig 355.

has directly challenged the prior agreements and asserted a claim to a specific amount of the Nile's flow has resulted in what can be classified as an equitable utilization of the Nile. While the draft articles allow for this paradox, they also allow for a re-evaluation of this equitable utilization at a later time when other basin States are capable of utilizing the Nile to a greater extent.

CONCLUSION

Water is a critical resource in the Middle East. It has the ability to unite or divide depending on how it is approached. From issues of Zionism to Arab nationalism to Kurdish independence the region is plagued by destabilizing problems. Added to this is the issue of water. Joyce Starr believes that by the turn of the century water will replace oil as the region's most important resource. Perhaps the region's ability to survive and develop in the future will depend on how it deals with the issue of water today.

While the Middle East addresses the issue of freshwater, the international legal community is doing the same thing. International law concerning water is not new. What is new is the shift in focus from a navigation orientation to a consideration of the non-navigational uses of freshwater. The theories surrounding its use have evolved from those of absolute sovereignty to the realization that freshwater must be utilized equitable among all basin States. It is this shift away from a navigation focus that makes it possible to now apply international water law to the Middle East.

In looking at the three case studies one gets an appreciation for the intricacies of

the water disputes and their resolutions. From questions concerning the place of Islamic law in the modern politically secular region to questions regarding State succession and just what treaties have survived the era of decolonization. The draft articles if applied and accepted by all parties can create an equitable distribution that would resolve the dispute over the groundwater in the West Bank, the Euphrates River, and the Nile River. However, it appears that international law cannot succeed where the political wills are opposed to it. It appears though that the only case study where this is likely to occur is in the Euphrates basin. While this is only one case study it shows the inherent flaw of the draft articles, that being the failure of Article 33 on dispute resolution to compel all parties to negotiate with each other and come to an agreed solution. The application in the case studies exposed the weakness of the draft articles. They lack a truly useful and practical enforcement mechanism. Without a means of enforcing equitable utilization the draft articles are meaningless. This however is more of a general flaw of international law and not unique to the draft articles alone.

In the final analysis, the actual 33 draft articles themselves will probably lack the ability to resolve water disputes in and of themselves. However, their effectiveness is not moot. The draft articles, and by extension international law in general, does serve a useful purpose. The discussion of what international water law is, and what the obligations of States are, has served to shape the actual policy decisions of States. It is doubtful that not only the Israelis and the Palestinians, but also the Egyptians and the Ethiopians would have agreed to mediate their water disputes based on the principle of equitable utilization if it had not been for its discussion and acceptance in the

international law community. It is arguable that discussions of theory actually do result in real State policy. This is likely to be the way in which international water law influences the Middle East water disputes, and in doing so indicates that international law can result in realistic solution the problems inherent in today's society.

Appendix

Text of the International Law Commission's Draft Articles on the Law of the Non-Navigational Uses of International Watercourses

Article 1: Scope of the present articles

1. The present articles apply to uses of international watercourses and of their waters for purposes other than navigation and to measures of conservation and management related to the uses of those watercourses and their waters.
2. The use of international watercourses for navigation is not within the scope of the present articles except in so far as other uses affect navigation or are affected by navigation.

Article 2: Use of terms

- (a) "international watercourse" means a watercourse, parts of which are situated in different states;
- (b) "watercourse" means a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus;
- © "watercourse State" means a State in whose territory part of an international watercourse is

situated.

Article 3: Watercourse agreements

1. Watercourse States may enter into one or more agreements, hereinafter referred to as “watercourse agreements”, which apply and adjust the provisions of the present articles to the characteristics and uses of a particular international watercourse or part thereof.
2. Where a watercourse agreement is concluded between two or more watercourse States, it shall define the waters to which it applies. Such an agreement may be entered into with respect to an entire international watercourse, or with respect to any part thereof or a particular project, programme or use, provided that the agreement does not adversely affect, to a significant extent, the use by one or more watercourse States of the waters of the watercourse.
3. Where a watercourse State considers that adjustments are application of the provisions of the present articles is required because of the characteristics and uses of a particular international watercourse, watercourse States shall consult with a view to negotiating in good faith for the purpose of concluding a watercourse agreement or agreements.

Article 4: Parties to watercourse agreements

1. Every watercourse State is entitled to participate in the negotiation of and to become a party to any watercourse agreement that applies to the entire international watercourse, as well as to participate in any relevant consultations.
2. A watercourse State whose use of an international watercourse may be affected to a

significant extent by the implementation of a proposed watercourse agreement that applies only to a part of the watercourse or to a particular project, programme or use is entitled to participate in consultations on, and in the negotiation of, such an agreement, to the extent that its use is thereby affected, and to become a party thereto.

Article 5: Equitable and reasonable utilization and participation

1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to obtaining optimal utilization thereof and benefits therefrom consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such a participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present articles.

Article 6: Factors relevant to equitable and reasonable utilization

1. Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including:

(a) geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

(b) the social and economic needs of the watercourse State concerned;

© the population dependant on the watercourse in each watercourse State;

(d) the effects of the use or uses of the watercourse in one watercourse State on other watercourse States;

(e) existing and potential uses of the watercourse;

(f) conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

(g) the availability of alternatives, of corresponding value, to a particular planned or existing use.

2. In the application of article 5 or paragraph 1 of this article, watercourse States concerned shall, when the need arises, enter into consultations in a spirit of cooperation.

Article 7: Obligation not to cause significant harm

1. Watercourse States shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States.

2. Where, despite the exercise of due diligence, significant harm is caused to another watercourse State, the State, whose use caused the harm shall, in absence of agreement to such use, consult with the State suffering such harm over: (a) the extent to which such use is equitable and reasonable taking into account the factors listed in article 6; (b) the question of ad hoc adjustments to its utilization, designed to eliminate or mitigate any such harm caused and, where appropriate, the question of compensation.

Article 8: General obligation to cooperate

Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity and mutual benefit in order to attain optimal utilization and adequate protection of an international watercourse.

Article 9: Regular exchange of data and information

1. Pursuant to article 8, watercourse States shall on a regular basis exchange readily available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydrogeological, and ecological nature, as well as related forecasts.
2. If a watercourse State is requested by another watercourse State to provide data or information that is not readily available, it shall employ its best efforts to comply with the request but may condition its compliance upon payment by the requesting State of the reasonable costs of collecting and, where appropriate, processing data or information.
3. Watercourse States shall employ their best efforts to collect and, where appropriate, to process data and information in such a manner which facilitates its utilization by the other watercourse States to which it is communicated.

Article 10: Relationship between different kinds of uses

1. In the absence of agreement or custom to the contrary, no use of an international watercourse

enjoys inherent priority over other uses.

2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to the principles and factors set out in articles 5 to 7, with special regard being given to the requirements of vital human needs.

Article 11: Information concerning planned measures

Watercourse States shall exchange information and consult each other on the possible effects of planned measures on the condition of an international watercourse.

Article 12: Notification concerning planned measures with possible adverse effects

Before a watercourse State implements or permits the implementation of planned measures which may have a significant adverse effect upon other watercourse States, it shall provide those States with the timely notification thereof. Such notification shall be accompanied by available technical data and information in order to enable the notified States to evaluate the possible effects of the planned measures.

Article 13: Period for reply to notification

Unless otherwise agreed: (a) a watercourse State providing a notification under article 12 shall allow the notified States a period of six months within which to study and evaluate the possible effects of the planned measures and to communicate the findings to it; (b) this period shall, at the

request of a notified for which the evaluation of the planned measure poses special difficulty, be extended for a period not exceeding six months.

Article 14: Obligation of the notifying State during the period for reply

During the period referred to in article 13, the notifying State shall cooperate with the notified States by providing them, on request, with any additional data and information that is available and necessary for an accurate evaluation, and shall not implement or permit the implementation of the planned measures without the consent of the notified States.

Article 15: Reply to notification

1. The notified States shall communicate their findings to the notifying State as early as possible.
2. If a notified State finds that the implementation of the planned measures would be inconsistent with the provisions of articles 5 or 7, it shall communicate this finding to the notifying State within the period applicable pursuant to article 13, together with a documented explanation setting forth the reasons for the finding.

Article 16: Absence of reply to notification

1. If, within the period applicable pursuant to article 13, the notifying State receives no communication under paragraph 2 of article 15, it may, subject to its obligations under articles 5 and 7, proceed with the implementation of the planned measures, in accordance with the

notification and any other data and information provided to the notified States.

2. Any claims to compensation by a notified State which has failed to reply may be offset by the costs incurred by the notifying State for action undertaken after the expiration of the time for a reply which would not have been undertaken if the notified State had objected within the period applicable pursuant to article 13.

Article 17: Consultations and negotiations concerning planned measures

1. If a communication is made under paragraph 2 of article 15, the notifying State and the State making the communication shall enter into consultations and, if necessary, negotiations with a view to arriving at an equitable resolution of the situation.

2. The consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other State.

3. During the course of the consultations and negotiations, the notifying State shall, if so requested by the notified State at the time it makes the communication, refrain from implementing or permitting the implementation of the planned measures for a period not exceeding six months.

Article 18: Procedures in the absence of notification

1. If a watercourse State has serious reason to believe that another watercourse State is planning measures that may have a significant adverse effect upon it, the former State may request the latter to apply the provisions of article 12. The request shall be accompanied by a documented

explanation setting forth its reasons.

2. In the event that the State planning the measures nevertheless finds that it is not under an obligation to provide a notification under article 12, it shall so inform the other State, providing a documented explanation setting forth the reasons for such finding. If this finding does not satisfy the other State, the two States shall, at the request of the other State, promptly enter into consultations and negotiations in the manner indicated in paragraphs 1 and 2 of article 17.

3. During the course of the consultations and negotiations, the State planning the measures shall, if so requested by the other State at the time it requests the initiation of consultations and negotiations, refrain from implementing or permitting the implementation of those measures for a period not exceeding six months.

Article 19: Urgent implementation of planned measures

1. In the event that the implementation of planned measures is of the utmost urgency in order to protect public health, public safety or other equally important interests, the State planning the measures may, subject to articles 5 and 7, immediately proceed to implementation, notwithstanding the provisions of article 14 and paragraph 3 of article 17.

2. In such cases, a formal declaration of the urgency of the measures shall be communicated to the other watercourse States referred to in article 12 together with the relevant data and information.

3. The State planning the measures shall, at the request of any of the States referred to in paragraph 2, promptly enter into consultations and negotiations with it in the manner indicated in paragraphs 1 and 2 of article 17.

Article 20: Protection and preservation of ecosystem

Watercourse States shall, individually or jointly, protect and preserve the ecosystems of international watercourses.

Article 21: Prevention, reduction and control of pollution

1. For the purposes of this article, “pollution of an international watercourse” means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.
2. Watercourse States shall, individually, or jointly, prevent, reduce and control pollution of an international watercourse that may cause significant harm to other watercourse States or their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonize their policies in this connection.
3. Watercourse States shall, at the request of any of them, consult with a view to establishing lists of substances, the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated, or monitored.

Article 22: Introduction of alien or new species

Watercourse States shall take all measures necessary to prevent the introduction of species, alien

or new, into an international watercourse which may have effects detrimental to the ecosystems of the watercourse resulting in significant harm to other watercourse States.

Article 23: Protection and preservation of the marine environment

Watercourse States shall, individually or jointly, take all measures with respect to an international watercourse that are necessary to protect and preserve the marine environment, including estuaries, taking into account generally accepted international rules and standards.

Article 24: Management

1. Watercourse States shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism.
2. For the purposes of this article, “management” refers, in particular, to: (a) planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and (b) otherwise promoting rational and optimal utilization, protection and control of the watercourse.

Article 25: Regulation

1. Watercourse States shall cooperate, where appropriate, to respond to the needs or opportunities for regulation of the flow of the waters of an international watercourse.

2. Unless otherwise agreed, watercourse States shall participate on an equitable basis in the construction and maintenance or defrayal of the costs of such regulation works as they may have agreed to undertake.

3. For the purposes of this article, “regulation” means the use of hydraulic works or any other continuing measure to alter, vary or otherwise control the flow of the waters of an international watercourse.

Article 26: Installations

1. Watercourse States shall, within their respective territories, employ their best efforts to maintain and protect installations, facilities and other works related to an international watercourse.

2. Watercourse States shall, at the request of any of them which has serious reason to believe that it may suffer significant adverse effects, enter into consultations with regard to: (a) the safe operation or maintenance of installations, facilities or other works related to an international watercourse; or (b) the protection of installations, facilities or other works from wilful or negligent acts or the forces of nature.

Article 27: Prevention and mitigation of harmful conditions

Watercourse States shall, individually or jointly, take all appropriate measures to prevent or mitigate conditions that may be harmful to other watercourse States, whether resulting from natural causes or human conduct, such as flood or ice conditions, water-borne diseases, siltation,

erosion, salt-water intrusion, drought, or desertification.

Article 28: Emergency situations

1. For the purposes of this article, “emergency” means a situation that causes, or poses an imminent threat of causing, serious harm to watercourse States or other States and that results suddenly from natural causes, such as floods, the breaking up of ice, landslides or earthquakes, or from human conduct, such as industrial accidents.
2. A watercourse State shall, without delay and by the most expeditious means available, notify other potentially affected States and competent international organizations of any emergency originating within its territory.
3. A watercourse State within whose territory an emergency originates shall, in cooperation with potentially affected States and, where appropriate, competent international organizations, immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency.
4. When necessary, watercourse States shall jointly develop contingency plans for responding to emergencies, in cooperation, where appropriate, with other potentially affected States and competent international organizations.

Article 29: International watercourses and installations in time of armed conflict

International watercourses and related installations, facilities and other works shall enjoy the

protection accorded by the principles and rules of international law applicable in international and internal armed conflict and shall not be used in violation of those principles and rules.

Article 30: Indirect procedures

In cases where there are serious obstacles to direct contacts between watercourse States, the States concerned shall fulfil their obligations of cooperation provided for in the present articles, including exchange of data and information, notification, communication, consultations and negotiations, through any indirect procedure accepted by them.

Article 31: Data and information vital to national defense or security

Nothing in the present articles obliges a watercourse State to provide data or information vital to its national defense or security. Nevertheless, that State shall cooperate in good faith with the other watercourse States with a view to providing as much information as possible under the circumstances.

Article 32: Non-discrimination

Unless the watercourse States concerned have agreed otherwise for the protection of the interests of persons, natural or judicial, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to an international watercourse, a watercourse State shall not discriminate on the basis of nationality or residence or place where

the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on under its jurisdiction.

Article 33: Settlement of disputes

In the absence of an applicable agreement between the watercourse States concerned, any watercourse dispute concerning a question of fact or the interpretation or application of the present articles shall be settled in accordance with the following provision:

(A) If such a dispute arises, the States concerned shall expeditiously enter into consultations and negotiations with a view to arriving at equitable solutions of the dispute, making use as appropriate, of any joint watercourse institutions that may have been established by them.

(B) If the States concerned have not arrived at a settlement of the disputes through consultations and negotiations, at any time after six months from the date of the request for consultations and negotiations, they shall at the request of any of them have recourse to impartial fact-finding or, if agreed upon by the States concerned, mediation or conciliation.

(I) Unless otherwise agreed, a fact-finding commission shall be established, composed of one member nominated by each State concerned and in addition a member not having the nationality of any of the States concerned chosen by the nominated members who shall serve as Chairman.

(ii) If the members nominated by States are unable to agree on a chairman within four months of the request for the establishment of the commission, any State concerned may request the Secretary-General of the United Nations to appoint the chairman. If one of the States fails to nominate a member within four months of the initial pursuant to paragraph (b), any other State

concerned may request the Secretary-General of the United Nations to appoint a person who shall not have the nationality of any of the States concerned, who shall constitute a single member commission.

(iii) The commission shall determine its own procedure.

(iv) The States concerned have the obligation to provide the commission with such information as it may require and, on request, to permit the commission to have access to their respective territory and to inspect any facilities, plants, equipment, construction or natural feature relevant for the purpose of its inquiry

(v) The commission shall adopt its report by a majority vote, unless it is a single member commission, and shall submit that report to the States concerned setting forth its findings and the reasons therefor and such recommendations as it deems appropriate.

(vi) The expenses of the commission shall be borne equally by the States concerned.

© If, after twelve months from the initial request for fact-finding, mediation or conciliation or, if a fact-finding, mediation or conciliation commission has been established, six months after receipt of a report from the commission, whichever is the later, the States concerned have been unable to settle the dispute, they may by agreement submit the dispute to arbitration or judicial settlement.