

THE SYR DARYA BASIN: CATALYST FOR CONFLICT OR COOPERATION?

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Abstract

The Syr Darya Basin has been a source of discord amongst the states of Central Asia since the collapse of the USSR. The downstream states desire an unlimited amount of water to be released in the spring and summer months to coincide with their growing seasons free of charge; upstream states want either payment for the water to finance construction of upstream dams for the production of hydroelectricity. Though the potential for violent conflict exists, it is unlikely to be realized due to growing regionalism facilitated by third party actors. Through the application of a framework on water regime formation created by Stefan Lindemann, the thesis states that in some cases where actors are playing by “zero sum” rules, an epistemic community may be created due to the involvement of an international organization or an external hegemon. The resulting implication is that “zero sum” problems do not necessarily require “zero sum” answers.

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Relevant Maps

*Central Asia*¹



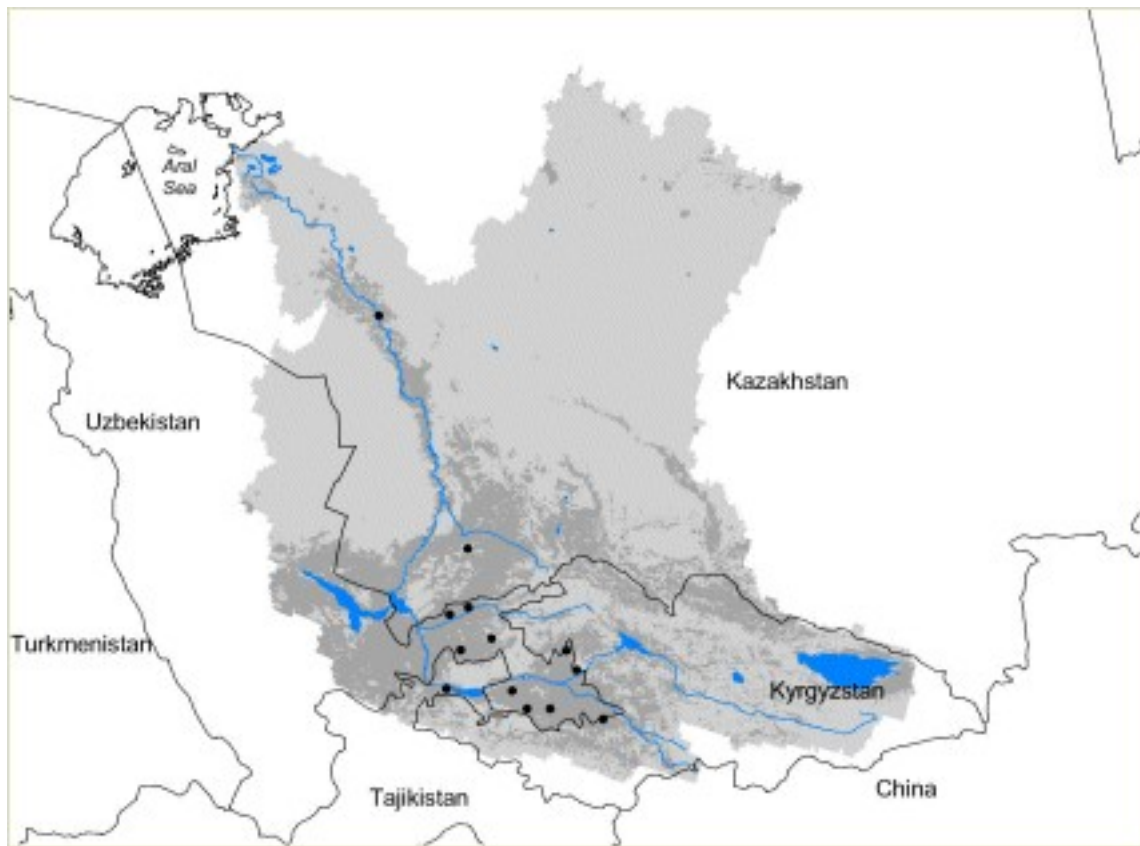
¹ PERRY-CASTENADA MAP COLLECTION, UNIVERSITY OF TEXAS,
[HTTP://WWW.LIB.UTEXAS.EDU/MAPS/ASIA.HTML](http://www.lib.utexas.edu/maps/asia.html), (ACCESSED ON 24 APRIL 2009).

The Aral Sea Basin²



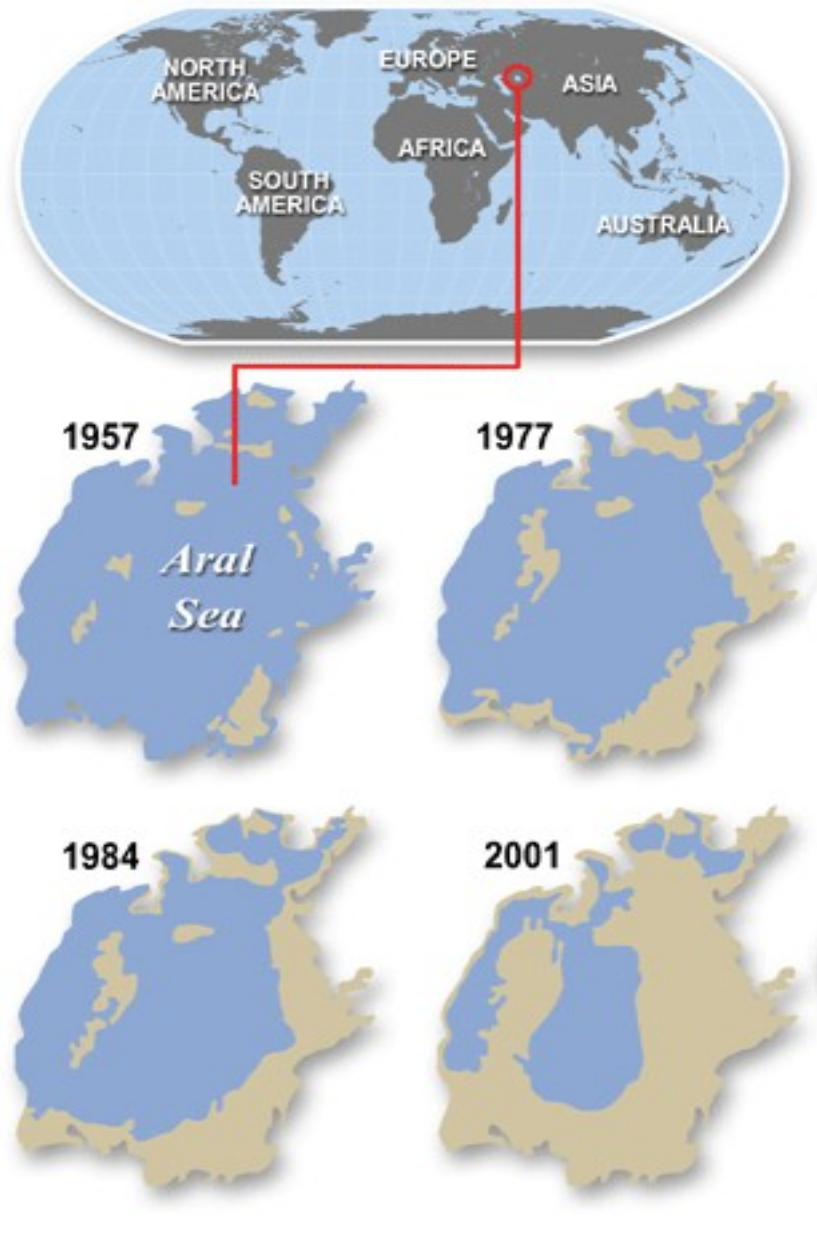
² CA WATER INFO, [HTTP://WWW.CAWATER-INFO.NET/ARAL/INDEX_E.HTM](http://www.cawater-info.net/ARAL/INDEX_E.HTM), (ACCESSED ON 15 MAY 2009).

The Syr Darya Basin³



³ WORLD RESOURCES INSTITUTE, "SYR DARYA WATERSHED," [HTTP://EARTHTRENDS.WRI.ORG/TEXT/WATER-RESOURCES/MAP-371.HTML](http://earthtrends.wri.org/text/water-resources/map-371.html), (ACCESSED ON 2 JUNE 2009).

The Shrinking Aral Sea⁴



⁴ ARAL SEA FOUNDATION, [HTTP://WWW.ARALSEA.ORG/4.HTML](http://www.aralsea.org/4.html), (ACCESSED ON 2 JUNE 2009).

Introduction

Since the collapse of the Soviet Union, fresh water has been a flashpoint in intra-regional relations in Central Asia. Due to years of mismanagement and negligence, the newly independent and heavily indebted nations inherited an environmental disaster “among the worst in the world.”⁵ The scene was chaotic as Soviet-appointed leaders rushed to secure their power while simultaneously attempting to maintain fragile economies. Due to conflicting myriad interests, the Central Asian Republics (CARs) have been unable to form a lasting water regime on the Syr Darya River. Examination of existing literature on water regime formation reveals a dearth of theoretic postulation on Central Asian water; given the region’s strategic geographic region as the crossroads of Europe and Asia, an analysis of its locale on the spectrum of water regime formation would be extremely valuable. Such an analysis would not only contribute to the growing theoretical debate on transnational water regime formation, but would also offer solutions to other regions held hostage by similar crises across the globe.

In 1994 Ismail Serageldin, then Vice President of the World Bank’s Environmentally Sustainable Development program, stated in a report that “in the near future, availability of water rather than land will be the main constraint to agricultural production.”⁶ Not long after making that statement, he made the now infamous statement that the wars of the next century will be fought over water instead of oil, and since then “water wars” have been a recurrent theme in international relations and environmental

⁵ HEATHER BEACH ET. AL, *Transboundary Freshwater Dispute Resolution: Theory, Practice, and Annotated References*, UNITED NATIONS UNIVERSITY PRESS, NY, (2000), PG. 121.

⁶ THOMAS HOMER-DIXON, “THE MYTH OF GLOBAL WATER WARS,” *Toronto Globe and Mail*, 9 NOVEMBER 1995.

security. It is true that of all earth's natural resources, water is one of the most heavily politicized.

There are some 261 international rivers worldwide that are shared by two or more riparian nations, which in turn make up over 45% of the earth's land surface.⁷ International river basins supply some sixty percent of the freshwater needs for nearly 40% of the world's population.⁸ This has often resulted in conflict arising throughout the course of history; Eyal Benvenisti, one of the world's premier experts on international water law, notes that the first biblical tales of conflict in Canaan arose not over land but the use of water.⁹ International Crisis group claims that it has been "a factor in at least 42 violent conflicts world wide since the start of the last century."¹⁰ Thomas Bernauer counts more than 3,600 treaties over the use of trans-boundary water supplies from 805-1984, which includes over 300 since the 1945 alone.¹¹ As such, sharing a trans-boundary river can be a source of great cooperation between states, or a catalyst for enduring conflict.

The Syr Darya Basin in Central Asia has proven to be a case of both conflict *and* cooperation. While Central Asia has yet fall into some sort of protracted armed conflict, tangible tensions exist. The freshwater that sustains Central Asia originates from two of the region's most resource-poor countries (Tajikistan and Kyrgyzstan) in the form of two main rivers: the Amu Darya and the Syr Darya. The more controversial and heavily

⁷ THOMAS BERNAUER, "EXPLAINING SUCCESS AND FAILURE IN INTERNATIONAL RIVER MANAGEMENT," *Aquatic Sciences* 64 (2002). PGS 1-19.

⁸ STEFAN LINDEMANN, "UNDERSTANDING WATER REGIME FORMATION- A RESEARCH FRAMEWORK WITH LESSONS FROM EUROPE," *Global Environmental Politics*, NOVEMBER 2008.

⁹ EYAL BENVENISTI, *Sharing Trans-Boundary Resources*. CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE, UK, 2002.

¹⁰ INTERNATIONAL CRISIS GROUP "CENTRAL ASIA: WATER AND CONFLICT," MAY 2002.MPG.4.

¹¹ BERNAUER,

regulated of the two rivers however, is the Syr Darya, which is a flashpoint for relations between upstream and downstream states. Freshwater in Central Asia has become, in Thomas Homer-Dixon's words, an "environmental scarcity," and as populations increase the propensity for violence will only grow.¹² Thus, according to his theory, tensions should be growing, moving ever closer to conflict over the fresh water of the Syr Darya River. However, armed conflict has failed to materialize, and despite heavy rhetoric, the states continue to meet regularly in an attempt to negotiate a settlement. This creates a theoretical dichotomy: how can a system characterized by competition and insecurity produce attempts at regional integration?

Stefan Lindemann has created a theoretical framework for describing the pre-existing conditions necessary for the creation of successful international water regimes. Lindemann's framework is an appropriate matrix by which to examine water regime formation because he has divided the different "arguments" into sections which closely resemble the major debate amongst international relations scholars: the argument between liberalism and realism. The purpose is to create a type of pre-fabricated grid that allows certain criteria to be applied to other water crises across the globe. Lindemann has concluded that the existence of an epistemic community of shared interests was the major prerequisite in order to create lasting water regimes in his European cases. In other words, a water regime would *not* have been formed regarding said rivers had the riparian states not realized that the ends to be achieved through cooperation were much greater than those gained in a "zero sum" game.

In a developing region such as Central Asia, the creation of such an epistemic

¹² THOMAS HOMER-DIXON, "ENVIRONMENTAL SCARCITIES AND VIOLENT CONFLICT: EVIDENCE FROM CASES," *International Security* 19 (1) (SUMMER 1994), PG. 3.

community initially requires external assistance. Weinthal states that despite the surface appearance, regionalism in Central Asia *is* in fact growing due in large part to the role being played by both International Organizations and local and foreign NGOs. These organizations and agreements are by and large facilitated by the active participation of a third party, which generally keep the lines of communication open thus preventing conflict.¹³ Weinthal's theory that third party intervention has been crucial for the prevention of conflict as well as a growing regionalism in Central Asia suggests that, contrary to Lindemman's theory, power beheld by a single member is *not* the necessary precondition for water regime formation in developing countries with antagonistic relations. Rather, epistemic communities in insecure societies can be created with the help of third parties, be it IOs or foreign powers.

The object of this thesis is to determine under what circumstances a water regime in Central Asia can be created. Although there already exists many references to realism and neo-realism in the literature on Central Asia, it is not a sufficient theory for the explanation of water regime creation in Central Asia alone; the system is itself too complex to fall into the "circular reasoning" of realism. If there has been no actual conflict, and further more no forced agreement, how could a "power based argument" pertain to Central Asia and the Syr Darya Basin?

I thus intend to show that in order for a viable and lasting water regime to be created in Central Asia, a "knowledge-based" theory based on the existence of an epistemic community of commonly shared interests and possible gains will most likely. The existence of an epistemic community based on commonly shared interests is crucial to water regime formation; in developing countries, despite this is aided through the

¹³ ERIKA WEINTHAL, "

intervention of third parties. By examining the nature of both “power-based” and “knowledge-based” theories and what they suggest versus what *has* happened, I answer the questions of what types of conditions are necessary for regional agreement on a water regime in the Syr Darya Basin? In order to answer such a question, examining the empirical facts of the region’s historical interaction over the use of freshwater resources and the application to the relevant theories will determine which is the better “fit.” I show that while the basic tenets of realism in Central Asia regarding the Syr Darya Basin simply may exist, there is a growing institutionalism which is assisted by external third parties. This benefits the discourse of international relations in two ways: by exemplifying the misconception of the “fallacy of composition” which stipulates a single theory answers all questions, and secondly, by further strengthening a framework which can offer suggestions for the resolution of other multilateral environmental conflicts.

The structure of the thesis will be as follows: the next section will give a more thorough history of Central Asia and the Syr Darya basin in particular. It will then chronicle the specifics of the origins of the current water crisis. The third chapter will discuss the tenets of realism and its applicability as Lindemann’s “power-based” argument entails. I will show how regionalism has grown around security through the actions of true foreign hegemony, such as Russia, through their role in the realization of a commonly shared interest and how it has been realized through regional cooperation, which runs counter to such a “power-based argument” for regime formation. The fourth chapter on neo-liberalism supporting the “interest-based” and “knowledge-based” arguments will chronicle the agreements and organizations which have been created, and the extent to which they still exist today by displaying a thriving and growing regionalism based on the

shared interest in environmental cooperation. It will also importantly display the role played by third parties in facilitating the growing regionalism taking place in Central Asia, as posited by Weinthal. Additionally, it discusses the Chu-Talas Basin, an example of a successful treaty signed between both Kyrgyzstan and Kazakhstan as a possible example of a growing epistemic community that could be emblematic for the region as a whole. Lastly, I will conclude with an overview of the research and possible future implications of Central Asia's growing regionalism.

1. Theoretical Debate- A Solution on the Horizon?

In light of the circumstances of the crisis of the Syr Darya River Basin, a number of relevant questions arise. Through what channels can the problem of access to freshwater in Central Asia be solved, and how can we account for the current deadlock in Central Asia? Does the outward appearance of realism necessitate relative over absolute gains for the creation of a lasting regime formation? Is international law part of the solution, as Uzbekistan maintains? It is important to first examine, specifically, what the theories entail in order to postulate where Central Asia fits in the growing literature on international water regime formation.

1.1 *International Law*

A number of aspects of international environmental law come into play in Central Asia. The Kyrgyz Water Law of 1997 that stated water was a commodity with a fixed price, for which the downstream states must pay. Despite being unanimously rejected by the downstream states, this position, described by Weinthal as an “essential component of state building and sovereignty enhancement,” is nonetheless illegal according.¹⁴ Accordingly, upstream states have the right to sell only *services* associated with water, such as storage or release to downstream states.¹⁵ However, the nature and enforceability of international law is more prescient in answering the question of its pace in Central Asia.

According to the UN Convention on the Law of Non-Navigational Use of International Watercourses (Document A/51869), states are allowed to utilize freshwater resources in an “equitable and reasonable manner.” The definition of the subjective terms

¹⁴ WEINTHAL, PG. 122.

¹⁵ MORAT, PG. 2.

“equitable” and “reasonable” is a source of never-ending contention. International Water law has two primary criteria: 1) the responsibility to not cause harm to downstream states as well 2) the right to use said water to the fullest extent possible. This is seemingly in contrast to the UN Charter that emphasizes the sovereignty of nations over their territory and the resources contained therein. It should be noted however, that the Convention has only been ratified by 16 of the 35 members needed in order for it to enter into force- it should be noted that not one of the Central Asia republics are of those 16.¹⁶ Even if the UN Charter were to be ratified tomorrow, there would be the problem of states in the region that don’t recognize, for example, the status of UN treaties. As such, international law most likely does not hold the clues to resolving an existential water crisis in Central Asia, though the traditional theories of international relations look promising.

1.2 Lindemann’s Framework and IR Theory

Stefan Lindemann details the relationship of today’s dominant theories and water regime formation in an article titled “Understanding Water Regime Formation” based on an existing successful water regimes in Europe. Though there are substantial differences in the specific scenarios when compared to the states of the Syr Darya Basin (such as level of development and post-colonial status), there are similarities they share *as river basins*. That is, they exhibit the “classical upstream-downstream relationship [which] involves negative externalities where the upstream country imposes costs on the downstream country without compensating it for the inflicted harm.”¹⁷ That said, the theories he postulates could help to

¹⁶ "COLUMN 1255W—CONTINUED". UNITED KINGDOM PARLIAMENT. [HTTP://WWW.PUBLICATIONS.PARLIAMENT.UK/PA/CM200708/CMHANSRD/CM071205/TEXT/71205W0012.HTM](http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm071205/text/71205W0012.htm), (ACCESSED ON 12 MAY 2009).

¹⁷ LINDEMANN, PG. 1.

serve as a platform for better understanding, and therefore solving the dilemma of the Naryn River/ Syr Darya basin.

One of the first types of lenses Lindemann discusses is the “knowledge-based argument,” which stresses the importance of policy diffusion through the spread of scientific knowledge and presupposes the existence of an epistemic community throughout the region. An epistemic community, put simply, is “a network of professionals with recognized expertise and competence in a recognized domain and an authoritative claim to policy-relevant knowledge within that domain or issue area.”¹⁸ In the same article Lindemann states that an “interest-based argument” could indeed be said to exist in that there are “asymmetrically shared costs” amongst the states and indeed a collective problem (the vanishing Aral Sea), a nod to neoliberal institutionalism. Additionally, external third parties currently play a large role in guaranteeing security- both environmentally and militarily.

That does not preclude weaknesses to such a position. Critics such as Stephen Haggard and Beth Simmons question the effectiveness of third parties as a question of empirics: *how can one be sure that states’ behavior is indeed influenced to by a third party?*¹⁹ Gallarotti questions the efficacy of third parties, and international organizations as a whole, stating that they have “systematically failed in their attempts to manage difficult problems in international relations.”²⁰ Both of these criticisms however, are silenced by the role played by third parties in *financing* the CARs and intra-regional organizations quiets said criticism. The CARs are heavily indebted and need money. Weintal states that, at

¹⁸ MIKAEL SUNDSTROM, “A BRIEF INTRODUCTION: WHAT IS AN EPISTEMIC COMMUNITY?”, WWW.SVET.LU.SE/JOLUSHEMA/EPISTCOMM.PDF, 2000.

¹⁹ LISA MARTIN, *International Relations Theories: Discipline and Diversity Chapter Five: Neoliberalism*, OXFORD UNIVERSITY PRESS, NY. 2007. PG. 112.

²⁰ IBID. PG. 113.

least initially, “only the IMF and World Bank could promise sufficient amounts of assistance to enable the Central Asian states to establish concrete borders of separation from Moscow.”²¹

Lastly, Lindemann mentions the “power-based” argument regarding regime formation, which can be taken to signify realism.²² Lindemann states that a “power-based theory “may be of higher explanatory power in the developing world where degrees of regional integration are much lower and... countries still tend to act as rational power maximizers.”²³ In the anarchical system in which the newly independent states found themselves after the demise of the Soviet Union, power struggles certainly did occur. Security was understood to be reachable through the consolidation of power, which itself was only attainable through strict adherence to Westphalian sovereignty.

A neorealist argument also presupposes the existence of a downstream hegemon, more powerful both economically and financially, which is capable of imposing its will on the upstream countries. By nature of its hegemonic status, it should be capable of taking advantage of power asymmetries to shape an agreement that benefits it over all others. Given the It seems quite logical to defer to realism as perhaps the best lens through which to view the Central Asian quagmire.

At first glance, Uzbekistan certainly fits the description of a regional hegemon, which is a crucial factor in any “power based” realist argument. While it shares borders with each of the four other Central Asian States, not to mention Afghanistan, Uzbekistan has done nearly everything within its power to block accord (water and otherwise) amongst the states through such actions as mining borders and imposing enormous taxes on goods

²¹ WEINTHAL PG. 208.

²² LINDEMANN, PG. 11.

²³ IBID. PG. 12.

that pass through its territory. It steadfastly avoided any prospect of regional integration until the Islamic Movement of Uzbekistan began a series of terrorist attacks in the 1990's that spilled over its borders; this brought about the first true interstate cooperation since independence. Once western forces in Afghanistan neutralized the threat of the IMU, business quickly returned to usual.

Uzbekistan's obsession with security does not however necessitate the validation of a "power-based argument." The last meeting of the states on 28 April 2009 resulted in the signing of an agreement on cooperation regarding the dying Aral Sea, but the sharing of water resources was not mentioned.²⁴ If it, or any of the regional powers were in a position to exercise sufficient force over another to the extent that they could influence policy, it would have happened long ago. Thus the continued dialogue must be attributed elsewhere

1.3 Third Parties and Institutionalism

As the world economy becomes increasingly integrated, collective problems call for collective solutions. International institutions play a growing role in finding such solutions, and the case is no different in Central Asia. Randall Stone notes that such institutions have "proliferated, expanded in membership, acquired new legal enforcement powers, and extended their reach into the details of domestic political economy of their member states."²⁵ Indeed, it is through the entrance of exogenous third parties into negotiations in many cases that has facilitated the creation of successful transnational water regimes in other highly contentious regions, such as the aforementioned Indus River Treaty

²⁴ BBC, "CENTRAL ASIA FAILS IN WATER TALKS," 28 APRIL 2009, [HTTP://NEWS.BBC.CO.UK/2/HI/ASIA-PACIFIC/8021900.STM](http://news.bbc.co.uk/2/hi/asia-pacific/8021900.stm), (ACCESSED ON 10 MAY 2009).

²⁵ RANDALL STONE. "THE SCOPE OF IMF CONDITIONALITY," *International Organization* 42(3): 590.

and the Mekong River Commission.

Common interests frequently prevail in international environmental concerns, particularly in the case of security. It is by guaranteeing security that both China and Russia have forged regional institutionalism. In Central Asia, the role of water is also one of subtle security; without a sufficient amount flowing downstream, the domestic security of the leaders is jeopardized as a result of social unrest. Weinthal posits just that IOs and NGOs have played a crucial role that was vacated by Moscow; it is the mediation and financial and technical assistance delivered by third parties that have enabled the CARs to continue functioning more or less as they did in the USSR.²⁶ As they hold the strings of the purse, they are able to coerce the CAR leadership to the negotiating table time and again. This is ultimately evidenced through the history of water usage in Central Asia.

2. The Aral Sea Basin

Central Asia is a region rich in agricultural history. Some 8,000 years ago the peoples whom inhabited the region realized that they could indeed channel river water to their crops, which facilitated both social and economic development, though it wasn't until some 3,000 years ago that irrigation began to spread rapidly.²⁷ Accordingly, there is evidence that by 2,000 years ago there was already roughly 3.6 million irrigated hectares in the Aral Sea Basin.²⁸ The local populations lived separate lives, as a decentralized system of irrigation kept populations separate from each other, and conflict was rare. Water decisions were made by a *mijab*, an individual who would organize the communal

²⁶ WEINTHAL, PG. 208.

²⁷ SARAH L. OHARA, "LESSONS FROM THE PAST: WATER MANAGEMENT IN CENTRAL ASIA," *Water Policy 2* (2000), PG. 369.

²⁸ IBID. PG. 369.

maintenance of irrigation canals with other regional *mijabs*.²⁹ The amount of work expected of those who benefitted from the system was proportional to the amount of rewards to be reaped. For example, a village at the head of a planned canal (known as an *ariq*) would contribute more towards the realization of such a project.³⁰ Communities worked together to ensure the maintenance of the *ariqs* – the process itself was known as *hashar* and was considered mandatory for all riparian communities.³¹ O’Hara points to two crucial functions such mandatory division of labor served: first, the system was a conduit for the assumption of symmetrical costs by all parties, in terms of both labor and materials, and second, it ensured that irrigation could continue with minimal difficulties, benefitting all parties.³² Thus, a system was multilaterally devised in such a manner that relative gains prevailed over absolute gains, as both knowledge resources and costs were shared for the sake of the common interest.

Despite the perpetual spread of irrigated fields, projects were small-scaled which proved sustainable in the vast region. Additionally, the crops grown at the time were not water-intensive; the local populations traditionally grew “alfalfa, melons, apricots, peaches, figs, cherries, pomegranates, apples, almonds and mulberry trees for raising silkworms.”³³ The amount of water required to sustain a pomegranate tree, for example, was minimal, giving rise to the Central Asia saying that “a drop of water is like a drop of gold.” It was not until the conquest of Central Asia by Czarist Russia that the system of agriculture began to become altered such that its legacy lives to this day.

The fact that Russia left in place the traditional *mijab* system is deceptive in that it

²⁹ WEINTHAL, PG. 67.

³⁰ O’HARA PG. 373.

³¹ IBID. 373.

³² IBID. 373.

³³ IBID. PG. 77.

implies that the system was not altered. Though policy was still set by local *mijabs*, Imperialist Russia bureaucratized the system that had the effect of destroying the traditional root-level linkage between policy makers and the villages they represented. It was the American Civil War however, which proved to be the catalyst for the sea change in agricultural policy. The advent of war nearly terminated Russia's supply of cotton from the fledgling Union, and as such prompted the Czar to push for independence from foreign countries on essential supplies. The Russian's initially attempted to create large-scale plantations similar to those in the American South, though they ultimately proved untenable due largely in part to the amount of labor required in harvesting the cotton- labor that in America was provided by slaves. As such, much smaller "family-based units" sprung up across the region, making the production of cotton much more profitable. Competition for water thus increased exponentially, and the institute of the *mijab* gave way to cronyism.

By the time of the Bolshevik Revolution, Russia was indeed self-sufficient in cotton production. However, reckless farming methods intended to maximize harvests and to reclaim new land were already beginning to have an adverse effect on the land. O'Hara points to regions such as the Kyzly Kum Desert where poor irrigation methods had created swamps instead of cotton plantations, and the Merv region and the Ferghana Valley, where over-watering caused the process of soil salination to begin, rendering tracts of land useless.

The Bolshevik revolution dramatically altered the way of life and agriculture in Central Asia. Recognizing the potential inherent in the two massive rivers, the Soviets embarked upon a massive project to irrigate the desert and turn once barren land into the

USSR's cotton belt by diverting the rivers to farms in what is now Uzbekistan, Turkmenistan and Kazakhstan. Water, once considered a "Gift from God," was now considered a public good to be shared by the whole of Central Asia, in the name of promoting agriculture for the good of the USSR. National projects to increase cotton yield followed the typical Soviet tendency of "bigger is better," and newly available funds helped the USSR realize its goal of man over nature, at the expense of the Central Asian environment. One of the best examples of Soviet innovation in irrigation is the Kara Kum Canal. 1400 kilometers long, the Canal is responsible for the flow of roughly 12.9 cubic kilometers away from the Amu Darya River into 1 million irrigated hectares in the deserts of Uzbekistan and Turkmenistan.³⁴

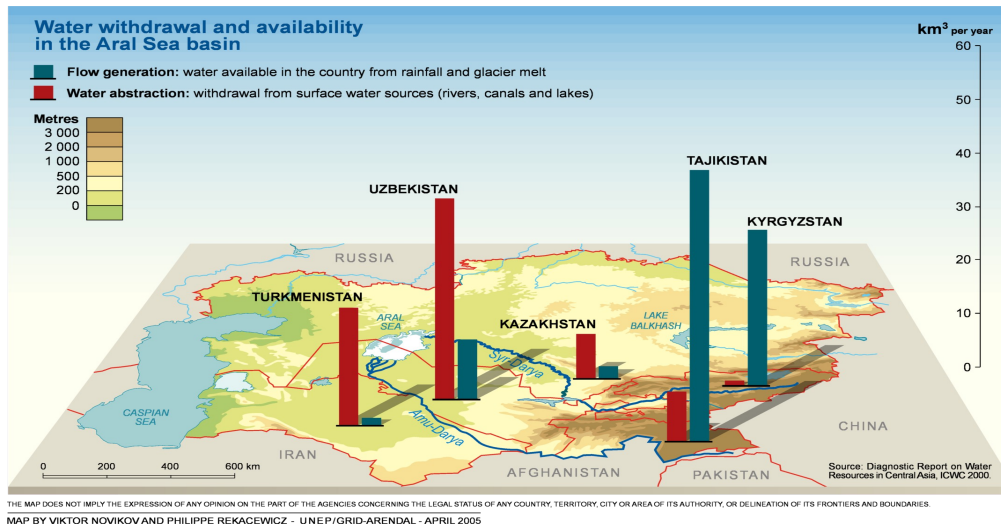
The plan of the Soviets to turn Central Asia into the USSR's breadbasket was an exemplary success, in terms of production. While 25 percent of the irrigated area of the Zarafshan Valley was dedicated to cotton in order to free Imperial Russia from dependence on foreign countries, by the mid 1980s nearly 7.2 million of land is irrigated- more than half of that is located in Uzbekistan.³⁵ Not only did Central Asia become the major source for the USSR's cotton, but also "a third of its fruit, a fourth of its vegetables, and 40 percent of its rice".³⁶ The irrigation policy, however productive, is also highly inefficient and faulty (see chart for usage).³⁷

³⁴ IBID. PG. 375.

³⁵ WEINTHAL PG. 89.

³⁶ IBID. PG. 78.

³⁷ UNEP/GRID-ARENDA, WATER WITHDRAWAL AND AVAILABILITY IN ARAL SEA BASIN, UNEP/GRID-ARENDA MAPS AND GRAPHICS LIBRARY, [HTTP://MAPS.GRIDA.NO/GO/GRAPHIC/WATER-WITHDRAWAL-AND-AVAILABILITY-IN-ARAL-SEA-BASIN](http://maps.grida.no/go/graphic/water-withdrawal-and-availability-in-aral-sea-basin) (ACCESSED 4 JUNE 2009)



The desire to break the USSR's dependence on foreign countries for its basic needs as well as to feed an enormous population ultimately proved to be more costly than beneficial for the region, and to this day the aging network of canals and reservoirs remain structurally unsound and inefficient. The majority of the irrigation canals that flowed to the fields were (and still are for that matter still are) unlined open channels of water running through the desert to their destination, which has resulted in enormous water loss through both seepage and evaporation. The seepage has caused massive water logging and soil salination. Seepage from the Kara Kum Canal, for example, has resulted in the water table rising in the Merv region more than 20 meters.³⁸ Ultimately it can be said that the freshwater of the Aral Sea Basin, used as a limitless public good, has been harnessed in such an inefficient and irresponsible manner under Soviet rule that the negative impact upon the environment has been greater than the economic gain for the region. As the Soviets harvested the waters of the Amu Darya and Syr Darya rivers, they created one of the worst man-made natural disasters in recorded history.

One of the major areas of interest for foreign organizations and NGOs that operate

³⁸ O'HARA, PG. 376.

in Central Asia is to facilitate in saving the Aral Sea, though many organizations consider it a lost cause. Aladin notes that “between 1960 and 1970, water use in the Aral Sea Basin rose from 64.7 to 103.5 cubic kilometers per annum and by the late 1980s so much water was being extracted from the region’s rivers that flows to the Aral Sea virtually ceased for a few years.”³⁹ Before the gargantuan irrigation projects came to be, the combined inflow from both the Amu Darya and Syr Darya was between 55 and 56 cubic kilometers of water per year; in the year 2000, information from a gauging station near the Sea measure just 3 cubic kilometers reaching the Sea from the Amu Darya.⁴⁰

The effects of the loss of the Aral Sea show the first hand effects of a regional problem at the local level. Once a major source of regional vitality through a robust fishing industry, the salinity of the Aral Sea now is eight times what it was in 1960, and as a result is utterly void of life.⁴¹ The now exposed seabed, covered with poisonous dust from decades of fertilizer runoff upstream, now laces dust storms with carcinogenic powder that causes serious health problems for the local populace and pollutes nearby farmland, decimating the livelihoods of its inhabitants.⁴²

In terms of health problems, the Uzbek republic of Karakalpakstan is one of the most severely affected. An array of cancers and pulmonary diseases plague the populace, while in 1998 18 per cent of pregnancies ended in miscarriage.⁴³ Of the children that are born, one in twenty has a deformity, “the risk being five times as high as in Europe.”⁴⁴

³⁹ N.V ALADIN, I.S. PLOTNIKOV, AND W.T.W POTTS, “THE ARAL SEA DESSICATION AND POSSIBLE WAYS OF REHABILITATING AND CONSERVING ITS NORTHERN PART,” *Envirometrics* 6 (17-29).

⁴⁰ KUZMITS, PG. 6

⁴¹ INTERNATIONAL CRISIS GROUP PG. 6.

⁴² IBID PG.6.

⁴³ KUZMITS PG. 8.

⁴⁴ IBID. 8.

Additionally, the loss of large parts of the sea has had a pronounced effect on the region's ecology on a macro scale by facilitating desertification, making the entire region both hotter and drier, with temperature increases measured as far away as 200 kilometers from the lake.⁴⁵ The process of desertification combined with shortening supplies of fresh water does not bode well for the population near the Aral Sea. Thus, the loss of the sea has had far-reaching ecological concerns for Uzbekistan, Turkmenistan and Kazakhstan, though the republics continue to overuse the already-strained rivers to increase irrigation projects.

The Soviet Union's engineers only began to address the problem towards the end of the 1980s. In order to address the growing chorus of concern emanating from Kazakhstan and Uzbekistan over the underestimated results of cutting off an inland sea's water supply, they initially began constructing blueprints for SIBARAL. SIBARAL was a plan to divert two Siberian rivers into Central Asia in order to a) recover more land from the desert in order to increase the cotton crop and b) to resume a flow of Fresh water to the Aral Sea. However, plans to do so fettered out with the arrival of Gorbachev, due to voices raised over the cost and environmental impact SIBARAL would have for the USSR. The Soviets instead opted to restructure the irrigation system and focus on increased efficiency of equipment and irrigation methods. The Soviets also created two organizations which continue to function today: the BVO Syr Darya and the BVO Amu Darya, whose purpose it was to monitor the water economy. Despite the creation of new organizations, before any substantial plan of action could be enacted the dissolution of the Soviet Union effectively ended Russian involvement in the Aral Sea, and without its mediation conflicts soon arose.

The legacy of Soviet rule left an enormous collective action problem in the hands of

⁴⁵ INTERNATIONAL CRISIS GROUP PG. 6.

five newly independent republics, which lacked the finances and knowledge to rectify the environmental disaster of the Aral Sea in addition to being heavily dependent on cotton production. Resolution of the disaster was also to be complicated by the “culture of blame” which had been created by the Soviet bureaucracy, where decisions always came from above and responsibility for problems rested in somebody else’s hands.⁴⁶ This, in addition to the complications involved in managing a fledgling state with a weak economy and pressing security issues has been a main obstacle in finding a solution agreeable to all parties regarding use of the Syr Darya River.

⁴⁶ O’HARA, PG. 379.

2.2 The Syr Darya Basin: Oasis in the Desert

The Syr Darya Basin crosses Central Asia as a great life-giving streak in the heart of an arid landscape. While there are over 29,000 rivers in the Basin, it is the Syr Darya that serves as the lifeline of the region.⁴⁷ One of the two great Central Asian river basins, it originates in the Tianshan mountains of Kyrgyzstan from melting snows in the spring, and then from glacial runoff in the late summer. Upon leaving Kyrgyzstan, the Syr Darya crosses first through the Uzbek Ferghana Valley, through Tajikistan, Uzbekistan once again, and then through the Kazakh flatlands before finally ending in the Aral Sea. While the Amu Darya may carry the most water in Central Asia, the Syr Darya is the longest in Central Asia.⁴⁸ From the point where the Naryn and Karadarya rivers join to form the Syr Darya, it measures 3019 kilometers long (including the Naryn) and its drainage area covers 219,000 cubic kilometers.⁴⁹ In terms of the amount of water contained therein, the Syr Darya's annual flow is 37 cubic kilometers per year.⁵⁰ A vast majority of that water is channeled through antique irrigation canals into the fields of Central Asia, where the water brings the desert to life.

Approximately 20 million people rely on the Syr Darya for their livelihood; of

⁴⁷ O.S. SAVOSKUL, "WATER, CLIMATE, FOOD, AND ENVIRONMENT IN THE SYR DARYA BASIN," *Project ADAPT, International Water Management Institute*, (JULY 2003) [HTTP://WWW.IWMI.CGIAR.ORG/RESEARCH_IMPACTS/RESEARCH_THEMES/BASINWATERMANAGEMENT/ADAPT/OUTPUTS.ASPX](http://www.iwmi.cgiar.org/research_impacts/research_themes/basinwatermanagement/adapt/outputs.aspx), (ACCESSED ON 12 MAY 2009).

⁴⁸ BRITANNICA ONLINE ENCYCLOPEDIA, [HTTP://WWW.BRITANNICA.COM/EBCHECKED/ TOPIC/578814/SYR-DARYA](http://www.britannica.com/ebchecked/topic/578814/syr-darya), (ACCESSED ON 14 MAY 2009).

⁴⁹ BERND KUZMITS, "CROSS-BORDERING WATER MANAGEMENT IN CENTRAL ASIA: CONFLICT CONSTELLATIONS AND WAYS TO A SUSTAINABLE RESOURCE USE," ZEF WORKING PAPERS SERIES 27, APRIL 2006, PG.2.

⁵⁰ DAENE MCKINNEY, "COOPERATIVE MANAGEMENT OF TRANSBOUNDARY WATER RESOURCES IN CENTRAL ASIA," IN *In the Tracks of Tamerlane- Central Asia's Path into the 21st Century*, NATIONAL DEFENSE PRESS, NOVEMBER 2003.

those 20 million, 73% live in rural areas.⁵¹ Of the populace at large, in Kazakhstan 23 percent of the populace is employed in agriculture, in Kyrgyzstan 34 percent, in Tajikistan 42 percent, and in Uzbekistan 28 percent.⁵² From that flow however, the Syr Darya is responsible for supplying water to the enormous agricultural industries in both Uzbekistan and Kazakhstan. As such, the downstream states are heavily dependent on the flow of the Syr Darya river, in particular Uzbekistan, as agriculture makes up the vast majority of its gross national product. For example, in Uzbekistan agriculture makes up for 28 per cent of GDP, and of those crops some 95 per cent are irrigated.⁵³ Due to such heavy irrigation, a number of tributaries no longer reach the Syr Darya (such as the Chu, Talas, Assa, and Bugun) when flowing through the Fergana Valley, which seriously lowers the annual flow downstream.⁵⁴

2.3 The Present Conflict

After the collapse of the Soviet Union, what was once a system designed to work as a whole was fractured into five states with asymmetrical power structures and competing interests. The Union's collapse couldn't have occurred at a worse time for the republics, as it had finally acknowledged the Aral Sea disaster and was in the process of restructuring policy to address it. With the collapse of the Union however, a domestic problem became an international one over night. Despite the gravity of the situation, the regional problem of water and the Aral Sea suddenly fell to the wayside as local politicians rushed to

⁵¹ O.S. SAVOSKUL, "WATER, CLIMATE, FOOD, AND ENVIRONMENT IN THE SYR DARYA BASIN," ADAPT PROGRAM, [HTTP://WWW.WEAP21.ORG/INDEX.ASP](http://www.weap21.org/index.asp), (ACCESSED ON 14 MAY 2009).

⁵² WEINTHAL, PG. 101.

⁵³ INTERNATIONAL CRISIS GROUP, "CENTRAL ASIA: WATER AND CONFLICT," 30 MAY 2002.

⁵⁴ KUZMITS, PG. 2.

consolidate power and ensure national security. Tajikistan lapsed into a protracted civil war. In an attempt to maintain the status quo, the Central Asian States signed the Almaty Agreement in 1992 to continue the regime that had been formulated by the USSR- an agreement that served to prolong the barter system of water for energy. As such, the downstream states of Kazakhstan and Uzbekistan would continue to supply the upstream states of Tajikistan and Kyrgyzstan with fossil fuels in the winter in exchange for the management and release of dammed water in the summer with which they (the downstream states) could then irrigate their crops in the desiccated Central Asian desert. This agreement proved untenable; with the demise of the USSR carbon-based fuels were no longer subsidized and their prices skyrocketed to world market prices. Demanding world prices for their energy products caused huge account deficits amongst the carbon resource-scarce countries. As a result, the poverty-stricken populace of Kyrgyzstan switched from oil to electricity for heating, forcing the government to release more water from the dam disrupting outflow agreements with the downstream states. This started a regressive tit for tat exchange between Kyrgyzstan and the downstream states that continues to this day, with a heavy emphasis on saber-rattling rhetoric from Uzbekistan in particular.

In order to rescue the Aral Sea and maintain a strong flow of freshwater to quench the downstream states agricultural while generating hydroelectricity for the upstream states, numerous organizations have been formed and even more multilateral agreements have been signed. Over the years the relationships of the Central Asian states has become more and more antagonistic, with each country embarking upon individual water policies, often blatantly in contradiction to previous agreements. Historically, the weaker upstream states have tried to make amends, though Uzbekistan continues to play a view water policy

as a “zero sum game.”

Uzbekistan has in fact often proven to be the most inflexible of the states by deliberately obstructing solutions proposed by the upstream states and refusing to participate in regional conferences. Claiming that water is a common public good and citing international law, Uzbekistan refuses to allow a price to be placed on water, and demands unlimited free access to it. While Turkmenistan has generally followed a policy of “positive neutrality” and avoids engaging in multilateral agreements, neither has it moved to ameliorate the current situation. A permanent solution thus remains elusive, as each multilateral agreement has been broken in some form or another.

2.3.1 Water Release and Irrigation

Electricity, agriculture, and irrigation are all deeply interrelated in Central Asia. As irrigation is at the center of the debate, it would be wise to continue there. The Irrigation system of the Syr Darya River begins in Kyrgyzstan with the Toktogul Reservoir located on the Naryn River, the Syr Darya’s main tributary. The Toktogul Reservoir is the largest reservoir of the system of hydro stations, dams, and reservoirs located on the river and it has the capacity to generate 1200 megawatts of electricity annually, though it was built for the purpose of irrigation rather than electricity production.⁵⁵ In total, it has a total storage capacity of 195 cubic kilometers of water.⁵⁶

As stated before, due to the heavy dependence on cotton production, the downstream states desperately need access to large amounts of water in the spring and summer. While Kyrgyzstan and Tajikistan are blessed with the majority of the region’s water supplies, those same countries are painfully vacant of the rich carbon energy deposits

⁵⁵ WEINTHAL PG 120.

⁵⁶ IBID. PG.117

in downstream Uzbekistan, Kazakhstan, and Turkmenistan. Under the Soviet system, a barter exchange existed amongst the Central Asia states in which water was traded for energy amongst the states. The upstream countries would release a specified amount of water for irrigation during the spring and summer, and the carbon-rich downstream countries would ship coal and natural gas upstream for heating purposes during the winter. Specifically, under the Soviet Regime the Toktogul dam in Kyrgyzstan was to release 75% of its reserves in the summer, and the remaining 25% in the winter.⁵⁷

The ensuing debacle has become a debate of electricity versus agriculture. The amounts of water to be released for irrigation from the dam versus how much it to be released for the production of electricity is the central factor in the Central Asian water crisis. As stated previously, all states in the region are following their own independent paths for agriculture and energy independence. This entails setting independent quotas for the amount of water to be used. Due largely to the continued dependence on cotton production, the downstream countries have remained obstinate regarding the lowering of water needed.

2.3.2 Agreements on Management of the Syr Darya

Cotton is still king in Central Asia. In the 1980s, cotton produced more than 65 percent of the Uzbekistan's gross output and employed 40 percent of its work force. Today Uzbekistan is the world's fifth largest producer of cotton and the world's second largest exporter; 35 percent of its GDP is derived from the sale of cotton.⁵⁸ So heavy is the downstream dependence on cotton, that a missed harvest would have had far reaching

⁵⁷ WORLD BANK. "WATER ENERGY NEXUS CENTRAL ASIA." 2004.

⁵⁸ SARA L. O'HARA, "CENTRAL ASIANS DIVIDED OVER DWINDLING WATER SUPPLY," SUMMER 2004, PG. 19.

economic, and thus social consequences would be devastating and likely cause widespread unrest. It is this fact that resulted in the signing of the Almaty Agreement in 1992, the first and only water agreement signed by the Central Asian republics without the extensive involvement of the international community.⁵⁹

Signed several weeks after independence was gained, the Almaty Agreement was signed with the purpose of ensuring a continuance of the original barter system designed by the Soviet Union in terms of water for energy. From the outset, without Moscow's presence for mediation agreed amounts of water and energy both fluctuated wildly. Additionally, the upstream states soon realized that the existing 25 percent of water allotted to them was in fact insufficient for their own agricultural plans, while simultaneously being held responsible for the maintenance and upkeep of the dams located on their territory. As a result, a plethora of bilateral agreements have sprung up amongst the states with more specific details on the barter system. These agreements are insufficient as well as there are no authentic mechanisms for dispute resolution.

The 1990s after the Almaty Agreement were marked by growing tensions between the upstream and downstream states. Growing desperate, Kyrgyzstan's parliament passed a law in 1997 that declared water a commodity, and as such had a price tag. The passage of the law occurred during a drought, and tensions reached a fever pitch, though ultimately out and out conflict was avoided. This led to the signing in 1998 of the Syr Darya agreement, facilitated by USAID, which set solid numbers for the barter agreement, in hopes that finally an agreement had been reached. The initial success of USAID in negotiating the agreement stemmed from the fact that it was able to supply funds and technical assistance as a means of coercion, while maintaining a role as an unbiased third

⁵⁹ WEINTHALL, PG. 125.

party.

The Syr Darya agreement provided Kyrgyzstan with coal from Kazakhstan and gas from Uzbekistan, though Kyrgyzstan would still have to pay Uzbekistan for its gas.⁶⁰ There were still major shortcomings: 1) again, the absence of control mechanisms; 2) Kyrgyzstan was still responsible for maintenance of Toktugul; and 3) a lingering lack of trust and continued suspicion of the each other.⁶¹ Ultimately, due to various reasons that were not necessarily illegitimate, both upstream and downstream states consistently sent a lower amount of fuel/ water to the other. The 1998 barter agreement is still in place, however it should not be considered a success.

According to a policy performance rubric devised by Thomas Bernauer and a host of engineers, economists, and political scientists, show that compliance with the agreement is in fact *high*.⁶² This is, however, misleading; though compliance has been high, *performance* has been marked as “very low and highly variable.”⁶³ The high ranking is attributable to the fact that “international agreements are weak and therefore shallow.”⁶⁴ The Syr Darya Agreement of 1998 was the last multilateral agreement that all the states were able to agree to regarding the Syr Darya River. That the states were able to reach any agreement is in and of itself praiseworthy; it has taken more developed nations such as the United States and Canada, or more pertinently European riparians of the Elbe and Rhine rivers decades to create water agreements.

What is certain is that a substantial restructuring is needed of the 1998 Syr Darya

⁶⁰ INTERNATIONAL CRISIS GROUP, PG. 12.

⁶¹ IBID. PG. 13.

⁶² THOMAS BERNAUER AND TOBIAS SIEGFRIED, “COMPLIANCE AND PERFORMANCE IN INTERNATIONAL WATER AGREEMENTS: THE CASE OF THE NARYN/SYR DARYA BASIN,” *Global Governance* 14 (2008), PG. 482.

⁶³ IBID. PG. 479.

⁶⁴ IBID. PG. 482.

Agreement, as the current system is unsustainable. Each republic is currently using 1.5 times the sustainable amount of water for irrigation, and the carbon reserves of the downstream states (at least in Uzbekistan's case) are dwindling.⁶⁵ This leads us to question where the process is heading.

2.3.3 The Theoretical Puzzle

The current discord, at first glance, seems to fall under Lindemann's "power-based theory" which implies that at some point, a regional hegemon (presumably Uzbekistan) will force the other states through rhetoric and possibly the use of force to achieve its goal of an unlimited, free supply of water to feed its ever-growing addiction to cotton. Given the degree of Uzbek reliance on cotton for capital, it can be said that it views access to water as crucial to its national security.⁶⁶ Despite the existence of multilateral treaties, the words are simply not backed up by actions for a long list of reasons. At the tail end of the Soviet Union there were in fact clashes between neighboring ethnic communities in the Ferghana valley over access to water, and given the valley's odd borders and ethnic mix there's nothing to preclude it from occurring once again.

The ultimate question has become, is the region a casebook study of realism underneath a veneer of regional institutionalism? If so, then why have armed struggles not erupted and why do the groups continue to meet with one another under the auspice of reaching an agreement? The next section examines the evidence for application of a "power-based" argument to the Syr Darya case study, and whether or not it truly does fit.

⁶⁵ INTERNATIONAL CRISIS GROUP REPORT, PG. 1.

⁶⁶ IBID. 5.

3. The Illusion of Power and the External Facilitation of Regionalism

3.1 *A Veneer of Realism*

Upon the collapse of the Soviet Union, the states of Central Asia faced serious problems at both the national and international levels in terms of the newly formed asymmetries in the region. Weintal notes that at the domestic level, they faced the challenge of managing their unevenly distributed natural resources amongst themselves while at the same time undertaking the domestic challenge of state-building.⁶⁷ Only the domestic challenge has been met, and in some states even that is questionable. Despite both regional and international attention that has been given to the issue of creating a functioning water regime in Central Asia, nothing tangible and lasting has been produced. This is due primarily to the overwhelming focus that the local governments put on Westphalian sovereignty. Access to natural resources is crucial to their survival: for Turkmenistan, Kazakhstan, and Uzbekistan water is crucial to maintain their heavy reliance on agriculture. Kyrgyzstan needs heat equally badly, and if it is not to receive it from downstream states in the form of coal from Kazakhstan or Gas from Uzbekistan, it follows logically that it would produce it hydrologically since it has the means to do so.

Taken at face value, the basic requirements for a realist explanation in Central Asia regarding water regime formation in the Syr Darya Basin seems to be most logical. The question of whether or not a “power-based argument” can be made on the likelihood of creating a lasting water regime in the Syr Darya Basin must answer a simple question: can

⁶⁷ WEINTAL, PG.

any state in the region truly be considered a regional hegemon and as such be sufficiently powerful to coerce others into an agreement it deems practical? The answer is that while Uzbekistan may indeed be the most powerful state *militarily* in the region, the use of its power is not likely. This is due in large part to the presence and active involvement of major endogenous powers to the region that are involved the macro-structure of intra regional involvement. The presence of these third parties, namely the Russian Federation and to a smaller extent the United States and China, are the driving factor behind a different type of regionalism in terms of *security*.

The states of Central Asia are more or less security-obsessed, and this is a driving factor behind the actions of the dictatorships of Uzbekistan and Turkmenistan. The perception of threats both existential and illusory has prompted the states into a number of security organizations and cooperation with external powers to counter opposition from within and without their countries. Some states such as Kyrgyzstan have become adept at playing the external powers off of one another in the name of ensuring maximum gains and keeping an overwhelming portion of power outside of any one parties' hands. This signifies two important points: 1) the states agree that security is in and of itself a shared interest and 2) cooperation in every case involves the efforts a third party to prod the Republics into an agreement. Thus, the states accept a shared interest and as such are willing to compromise a portion of their own sovereignty in order to assuage the perceived threats.

It is important to first pay heed to the arguments which proclaim the case of struggle and power in Central Asia regarding the Syr Darya Basin before they can be debunked, however. Then, an examination of *why* none of the Central Asian Republics can

rightly fit the role of a regional hegemon will further show the fallacy of the power-based argument. Lastly, a closer examination of these organizations will illustrate the role of the third party in breathing life into a pre-existing set of mutually-shared fears and concerns, much as is the case in the Aral Sea and the allocation of water rights.

3.2 The Argument for Realism

The water crisis in Central Asia has been a battleground for proving or disproving neo-realism and neo-liberalism. While both theories have their defender and protractors, Neo realism has been grossly overstated in the literature regarding the water situation in Central Asia. In order to properly grasp the argument put forward in favor of realism, it is important to note that water regime formation is, at its root, essentially about the creation of a type of epistemic community. An epistemic community is In an article about regime formation (and in particular environmental regime formation), Oran Young states that “specific arrangements come into existence when those possessing sufficient power take the necessary steps to create them... neo-realists come to stress the role of preponderant actors or, in the current vocabulary of international relations, hegemons in the process of regime formation.”⁶⁸ As such, events that have thus far unfolded seem to fit the pieces of the realism puzzle to date. Young continues that theoretically, “power theorists typically view the dispersal of power or the presence of numerous parties possessing roughly equal bargaining strength as a problem, basing their view on the theory that such conditions raise transaction costs, sometimes to the point where they prevent the emergence of agreements

⁶⁸ ORAN YOUNG, “THE POLITICS OF INTERNATIONAL REGIME FORMATION: MANAGING NATURAL RESOURCES AND THE ENVIRONMENT,” *International Organization* 43(3), (SUMMER 1989), 351.

on institutional arrangements altogether.”⁶⁹

In an article from, Annette Bohr states that “the systemic theory of neo-realism, which asserts that regional groupings form in response to external challenges, applies well to Central Asia. Kazakhstan, Kyrgyzstan, and Tajikistan perceive Uzbekistan’s preponderance and heavy-handed behavior as perhaps their greatest external threat, and it is this challenge in particular that has shaped the ways in which they approach the regionalization process.”⁷⁰ Bohr goes on to give evidence to the Uzbek’s obstinacy in the shape of, for example, its reaction to the 1999 and 2000 IMU incursions into both Uzbekistan. The Uzbeks enacted “a rigorous visa regime, mined its border regions, expelled residents from border areas, unilaterally demarcated certain border territories and regularly cut off energy supplies to its neighbors.”⁷¹ Bohr further strengthens her arguments noting Uzbekistan’s failure to follow through on parts of its own agreements with neighboring Kyrgyzstan and Kazakhstan, which has resulted in, for example, the overflow of the Syr Darya in February of 2004. The results were the mass flooding of “fields in settlements in Kazakhstan near the Kazakh-Uzbek border were submerged and thousands of people were forced to evacuate their homes.”⁷² Ultimately, this has resulted in other countries in the region bandwagoning together in order to offset Uzbekistan’s position as a stronger military power due to its unpredictability; the scenario thus fits nicely into the folds of neo-realism.

Roy Allison states that while it certainly does have its limitations, realism is “helpful in alerting us to the fact that regionalism has often merely provided a power

⁶⁹ IBID, 352.

⁷⁰ ANNETTE BOHR, “REGIONALISM IN CENTRAL ASIA: NEW GEOPOLITICS, OLD REGIONAL ORDER,” *International Affairs* 83 (3), (2004), 494.

⁷¹ IBID, 494.

⁷² IBID, 495.

platform for a state [Uzbekistan]: interstate cooperation has indeed sometimes been driven by the pursuit of power and security, just as alliances have.”⁷³ It is the inherent properties of Central Asia that foster such realist tendencies, such as the fact that the states are hostage to geography. With the exception of isolationist Turkmenistan, only Kazakhstan has access to a sea. They are blocked in on all sides, with Russia to the north, China to the East, and lawless Afghanistan to the south. It is in this atmosphere that Central Asia is one of the “regions with little space for maneuver in decision-making, caught up in internal or regional conflicts, often with relatively weak or dependent economies, and characterized by strong nationalism and an emphasis on sovereignty.”⁷⁴ It is in situations such as these that commonly prized goods can become the focus of what is referred to as “resource capture”- when “a fall in quality or quantity of renewable resources encourages powerful groups to shift resource distribution in their favor.”⁷⁵ This often can lead to increased competition and tension over these new environmental scarcities.”

Thomas Homer-Dixon focuses on the possibility of war over environmental scarcities in many of his publications. In his book *Environment, Scarcity, and Violence*, Dixon notes that tensions over resources are “easily understood within the traditional realist paradigm of international relations theory... among scholars of international security, it has been conventional wisdom for some time that critical scarcities of natural resources can produce war.”⁷⁶ Among the environmental resources that are likely to cause conflict, water

⁷³ ROY ALLISON, “REGIONALISM, REGIONAL STRUCTURES AND SECURITY MANAGEMENT IN CENTRAL ASIA,”

⁷⁴ *IBID.* 465.

⁷⁵ THOMAS HOMER-DIXON, “ENVIRONMENTAL SCARCITIES AND VIOLENT CONFLICT: EVIDENCE FROM CASES,” *International Security* VOL. 19, NO. 1, (SUMMER 1994), PG. 5.

⁷⁶ THOMAS HOMER-DIXON, *Environment, Scarcity, and Violence*, PRINCETON UNIVERSITY PRESS, PRINCETON, NJ, 1999. PG. 138.

is among the top four (next to agriculturally productive land, forests, and fish).⁷⁷ Furthermore, Homer-Dixon elaborates on his criteria for environmentally fuelled conflict and the similarities become more obvious. Homer-Dixon notes that in order for a violence to erupt over fresh water, a set of criteria must be met (at least as has been proven historically). It is upon examining his writings that the “perfect fit” of realism becomes flawed in its application to Central Asia:

In reality, wars over river water between upstream and downstream neighbors are only likely in a narrow set of circumstances: the downstream country must be highly dependent on the water for its wellbeing; the upstream country must be threatening to restrict substantially the river’s flow; there must be a history of antagonism between the two countries, and, most importantly, the downstream country must believe it is militarily stronger than the upstream country. Downstream countries often fear that their upstream neighbors will use water as a means of leverage. This situation is particularly dangerous if the downstream country also believes it has the military power to rectify the situation.⁷⁸

The description is a near-perfect fit to the situation for Central Asia on all of its major points.

In her book on state building and environmental cooperation, Erika Weinthal translates theory into practice when viewing the Central Asia water dilemma. Specifically, she states that even “if an upstream riparian is less powerful militarily and economically,

⁷⁷ IBID. PG. 138.

⁷⁸ IBID, PG. 139.

than a downstream riparian and international organizations can facilitate new negotiations over water-sharing institutions.”⁷⁹ This has not happened, however, as primarily Uzbekistan has blocked nearly every and any attempt of Kyrgyzstan to be compensated for its water. The relative strength of Uzbekistan militarily *has* however served as a catalyst and cornerstone for regional integration under the auspice of security.

3.3 Regional Hegemon?

In order for a “power based” argument to underlie the creation of a water formation, there must indeed be a regional hegemon whom can assert its will over the weaker regional members. Traditionally, Uzbekistan is considered heir apparent as the most powerful state in the region and has indeed tried to use that leverage over the much weaker upstream states.⁸⁰ Theoretically, such knowledge should temper the actions of Kyrgyzstan and Tajikistan when negotiating with the Uzbeks, but this hasn’t stopped the Kyrgyz Republic from such provocative actions as releasing an excessive amount of water in January of 2002 for electricity production, which flooded nearly 350,000 hectares of land downstream in both Uzbekistan and Kazakhstan, causing nearly \$770 million dollars worth of damage.⁸¹ The fact that the downstream states are so reliant on the upstream states suggests that military might does not necessarily give one the upper hand in negotiations, especially when one state is so reliant on the other. Furthermore, the Uzbekistan’s position as the true regional power can be questioned by empirical data.

In terms of military spending, Uzbekistan is in fact *not* the primary spender in

⁷⁹WEINTHAL, PG. 160.

⁸⁰ THE ECONOMIST, “CENTRAL ASIAN WATER- GOING WITH THE FLOW,” *The Economist*, 4 MAY 2009.

⁸¹ INTERNATIONAL CRISIS GROUP, PG. 14.

Central Asia. Despite the military training and supplies it acquired during its short-lived with the United States after September 11, 2001, it is *Kazakhstan* who spends the most money on defense and its military of the Central Asian Republics. Additionally, Kazakhstan is the strongest *economic* actor in the region and is geographically part of the European continental shelf, which encourages foreign investment. The result is that Kazakhstan views itself as the leading regional actor. Uzbekistan does however, have the largest standing military in the region. This information is irrelevant however, as the Republics engage in bandwagoning behavior in order to offset the influence of the other one, specifically by joining into multilateral security agreements and organizations. In doing so, any possibility of a preponderance of power being concentrated into the hands of a single state is nullified. It can be further said that the main guarantor of security and responsible party for cohesion in regional security organizations, and thus true regional hegemon, is the traditional *pater familia* of Central Asia: the Russian Federation. Every Central Asian Republic maintains extremely close ties with Russia as a preeminent foreign partner, and it is the Russian hand that has helped form an epistemic community based on security while it plays the vital role as contributing third party.

3.4 Security and Regionalism

The irony of the Central Asian discord over water is the similarities present amongst the states. The states are geographically close to one another, share a similar culture, social structure through the extensive clan system, possess a similar cultural value system, and most importantly, share the common history of being part of the Soviet Union.⁸² Despite this, there is an extremely limited amount of regional trade, as there is a

⁸² ANNETTE BOHR PG. 485.

significant overlap in the exports from the states, for example in cotton, carbon-based resources, and metal products which inhibits cooperation and encourages competition.⁸³ Turkmenistan and Uzbekistan have for example constructed serious blockades to the flow of both people and goods across their borders. However ineffective, they *did* manage to create the Central Asian Union in 1994 that had the goal of creating a common economic area. This has morphed over the years to become the Central Asian Economic Union in 1998, and in 2001 became the Central Asian Cooperation Organization. For reasons stated above though, CACO as a trade alliance has been a largely unsuccessful venture with trade amongst the states not exceeding 7-8 percent of their total foreign trade turnover.⁸⁴ The states do however share one very important concern: security.

Since independence the CARs have been involved in a number of security agreements and organizations that reflect the growing regionalism in Central Asia. In the 1990s it was more or less alternative bandwagoning with Russia, and the CST that sprung from the Commonwealth of Independent States and included Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan, Georgia, Belarus, and Azerbaijan. The CST became the CSTO in 2002 and is comprised of a similar grouping of states (see table), and has actually carried out multilateral military exercises with the active participation of all members in 2008.⁸⁵

⁸³ IBID, PG. 496.

⁸⁴ IBID, PG. 486.

⁸⁵ EURASIAN HOME WEBSITE, [HTTP://WWW.EURASIANHOME.ORG/XML/T/DATABASES.XML?LANG=EN&NIC=DATABASES&INTORG=5&PID=24](http://www.eurasianhome.org/xml/t/databases.xml?lang=en&nic=databases&intorg=5&pid=24), (ACCESSED ON 22 MAY 2009).

Organization	Year Formed	Member States
CIS	1991	ARMENIA, AZERBAIJAN, BELARUS, GEORGIA, KAZAKHSTAN, KYRGYZSTAN, MOLDOVA, RUSSIA, TAJIKISTAN, TURKMENISTAN, UKRAINE, UZBEKISTAN
CSTO	2002	ARMENIA, AZERBAIJAN, BELARUS, GEORGIA, KAZAKHSTAN, KYRGYZSTAN, MOLDOVA, RUSSIA, TAJIKISTAN, TURKMENISTAN, UKRAINE, UZBEKISTAN
EURASEC	2000	BELARUS, KAZAKHSTAN, KYRGYZSTAN, RUSSIA, TAJIKISTAN, UZBEKISTAN (SUSPENDED)
SCO	2001	CHINA, KAZAKHSTAN, KYRGYZSTAN, RUSSIA, TAJIKISTAN, UZBEKISTAN

The states of Central Asia always have been wary of Islam as a potential threat to the legitimacy and control of the regional dictators. The emergence of the Taliban just south in Afghanistan underscored the potential of militant Islam and the threat it posed, which made the Central Asia states all the more uneasy. The heavy-handed states of Uzbekistan and Turkmenistan only allow a state-sponsored version of Islam; this has worked more or less in Turkmenistan due largely to the extent of its isolation, but in Uzbekistan things took a more grim turn. The Islamic Movement of Uzbekistan formed with the goal of overthrowing the presidency of Islam Karimov; initially a local problem, it became a regional problem when the IMU made armed incursions into both Tajikistan and Kyrgyzstan in 1999 and 2000 that catalyzed regionalization to focus on intraregional security.

September 11, 2001 again altered the regional structure as the United States invaded Afghanistan to attack the Taliban; the CARs clamored over one another to appease the US, hoping to gain aid money, military equipment, and military training. Uzbekistan reaped the majority of the benefits as it offered the US bases on its territory from which it could send supplies and troops into Afghanistan; Kyrgyzstan did the same. Fearful of losing its influence in the region, the Russian Federation and China created what would

become the Shanghai Cooperation Organization (then known as the Shanghai Five), with the goal of creating a single economic space, but most importantly to ensure regional security against the three evils: separatism, terrorism, and extremism.⁸⁶ Although there is speculation as to whether or not the goal of the SCO is to indeed fight terrorism, it is true that the SCO has been the most significant multilateral security organization in the region, and has conducted several multilateral military exercises.⁸⁷ The SCO recently has signed a cooperation agreement with the CSTO to improve the sharing of information and possibly conduct joint military exercises; it is this organization that has made security and economic cooperation most likely in Central Asia.⁸⁸

It can thus be said that while there may be significant differences amongst the CARs, there is indeed a growing regionalism in Central Asia. The states have proven themselves more or less incapable of cooperating with each other independently due to obstinacy and hard-headedness on the part of the leaders, bent on maintaining a full Westphalian notion of sovereignty. On the surface, the states have displayed the typical realist tendency to pursue policies of aggregation, coalition forming, and integration in order to offset any undue influence of an outside power; this is sometimes referred to as the “security dilemma.”⁸⁹ However, the realist argument seems to belie a subtle fact that none of the Central Asia countries are alone powerful enough to be considered truly hegemonic

⁸⁶ STEPEHN ARIS, “THE SHANGHAI COOPERATION ORGANIZATION: ‘TACKLING THE THREE EVILS’. A REGIONAL RESPONSE TO NON-TRADITIONAL SECURITY CHALLENGES OR AN ANTI-WESTERN BLOC,” *Europe-Asia Studies* 61(3), MAY 2009, PGS. 457-482.

⁸⁷ IBID. 462.

⁸⁸ DAILY TIMES, “SECURITY ORGANIZATIONS HEADED BY RUSSIA, CHINA LINK UP,” *Daily Times Website*, http://www.dailytimes.com.pk/default.asp?page=2007\10\06\story_6-10-2007_pg4_3, (ACCESSED ON 16 MAY 2009).

⁸⁹ GREGORY GLEASON, ASEL KERIMBEKOV, AND SVETLANA KOZHIROV, “THE RETURN OF REALISM?” *International Politics* 45 (2008), PGS. 40-51.

to the extent that they can militarily engage and defeat an upstream or downstream country. Furthermore, the CARs have indeed been brought together into regional coalitions along the shared concern for their domestic and regional security but *only with the help of an outside regional player*- either in the form of Russia, China, or both as in the SCO. The individual weakness possessed by the CARs is directly related to three main factors outside of the hands of the states themselves according to Allison, such as: 1) the possibility of Russia's presence being replaced by another player (such as China or the US), 2) the affect of the regional balance by external major powers and 3) the overbearing demands of each state (particularly Uzbekistan) made to ensure complete and utter sovereignty is maintained.⁹⁰

This set of problems outlined by Allison regarding the inherent weakness in independently created regional structures is directly transferrable over to the problem of water regime formation on the Syr Darya Basin. Seeking to ensure total sovereignty on the part of Uzbekistan has created obstacle after obstacle that has effectively prevented an independent solution. Given the fact that Russia has recently conferred a loan upon the Kyrgyz Republic for the completion of the Kambarata dams upstream of Toktogul, Uzbekistan has been given an impetus for increased cooperation.

All of the CARs would ultimately benefit from final agreement on the Syr Darya River, as the importance of the water is not in question. As such there is indeed an extent communal need of such an agreement, but the security situation has prohibited any independent resolution on such an agreement. It is here that both Lindemann's "knowledge-based," "interest-based" arguments, and Weinthal's theory of external third party patronage and mediation become complementary avenues through which to explain

⁹⁰ ALLISON, PG. 478.

the growth of regional cooperation. Realism helps to explain the *problem*, but institutionalism does a far better job in explaining the growing solution facilitated by external third parties: namely international organizations and NGOs. They have played a central role in facilitating agreements in both the cases of the Mekong and the Indus, and are doing the same in the Syr Darya Basin.

4. Regional Institutionalization Through Third-Party

Facilitation

4.1 Incentive to Cooperate

While it may be true that historically states have gone to war over non-renewable resources in recent history (such as Japan's invasion of China for oil and minerals or its attack of Pearl Harbor over the oil blockade imposed by the United States), it is difficult to trace conflicts back to water alone.⁹¹ Water is indeed a crucial resource worldwide, and the exception is no different in Central Asia with its heavy reliance on water-intensive crops and the need for hydroelectricity. The leaders of the CARs recognize the true effects of water scarcity: shortages from reduced food production along with increased poverty and disease which could induce migrations from troubled areas (such as the exodus from Karakalpakstan) and ultimately undermine the leadership of the existing regimes by dissolving the bonds which hold society together.⁹² Furthermore, they realize that waging a war would be prohibitively expensive that does not "cost out."⁹³ The leaders of the CARs are not interested in dominating their fellow states and realize that they ultimately cannot force the upstream countries into an agreement; they are simply seeking to maintain power in their own territories. That said, it is logical to conclude that they cooperation is ultimately inevitable.

Reaching such an agreement has ultimately proven impossible for the Central Asian

⁹¹ THOMAS HOMER-DIXON, "THE MYTH OF GLOBAL WATER WARS," *Toronto Globe and Mail*, 9 NOVEMBER 1995.

⁹² IBID, PG. 2.

⁹³ AARON T. WOLF, "CONFLICT AND COOPERATION OVER REGIONAL WATERWAYS," *Water Policy 1* (1998), PG. 261.

republics independently due to mistrust, the withholding of information, and regional competition. With the only independently reached agreement being the Almaty Agreement of 1992 proving untenable due to the lack of enforcement of its stipulations, there has been only one alternative for the Syr Darya basin to turn to, and that was the international community.⁹⁴ The international community has been a driving force in the continued attempt of water regime formation in Central Asia, and the ongoing presence of organizations such as the World Bank, USAID, and the EU have proven to be the most promising option for the Central Asians. An examination of *why* these organizations are able to keep the leaders of the CARs at the bargaining tables is possible through traditional liberal institutional theory.

4.2 The Role of Third Parties

The role of international organizations in resolving the Syr Darya crisis is by no means unique to Central Asia; in fact in the developing world it is quite common that the lead in the process is not taken by individual states but by intergovernmental organizations or by international non-governmental organizations when they themselves are not able to find a resolution.⁹⁵ Oran Young points out that “contemporary international society features many situations in which a number of states possess blocking power or the capacity to veto institutional arrangements they dislike, even if they cannot impose their own preferences on others.”⁹⁶ Central Asia is thus a classic case of just such a problem, with Uzbekistan objecting to suggestions or simply not showing up at meetings held to find amicable agreements. Similarly, local parties to the agreements don’t trust their

⁹⁴ WEINTHAL, PG. 127.

⁹⁵ ORAN YOUNG, PG. 353.

⁹⁶ IBID. PG. 354-355.

counterparts due to the “veil of uncertainty” present in determining exact amounts of energy to trade for water, how much can rightfully be charged for water, or whether or not the agreed upon allocations will indeed be delivered as promised.⁹⁷ It is because of this that such institutional bargaining “exhibits a natural tendency to become bogged down into a kind of sparring match in which participants jockey for positional advantages and lose track of their common interest in solving the relevant collective-action problems.”⁹⁸

Thus, the role of the international organization is to find the acceptable common ground to which all parties can ultimately concede without feeling cheated- referred to as the “Pareto frontier.” Doing so helps to ameliorate the collective action problems faced by acting as independent monitors, ensuring that there is a flow of information between members of such agreements, and providing mechanisms for dispute resolution and enforcement of disciplinary action against infractions which may have been committed.⁹⁹

Prior to the collapse of the Soviet Union, all of these functions had been carried out by Moscow. It has been theorized that the original system devised was done so in such a manner as to ensure that the states would not be able to function *without* the help of an external hand (presumably a Russian one) due to the physical interdependence of the republics; whether or not this is indeed true, the prediction of helplessness without the Muscovite Hand has proven prophetic. Moscow’s Ministry of Water Resources was fiscally responsible for the construction and maintenance of the massive irrigation systems in the downstream states, as well as the hydrologic system of dams and reservoirs upstream.¹⁰⁰ Moscow’s role as mediator was evident in June 1990 when it had to quell

⁹⁷ IBID. PG. 367.

⁹⁸ IBID. PG. 371.

⁹⁹ LISA L. MARTIN, “NEOLIBERALISM,”

¹⁰⁰ INTERNATIONAL CRISIS GROUP, PG. 7.

violence with Soviet troops- one of the few occasions when blood was actually spilt over water in Central Asia- when fighting broke out in Osh.¹⁰¹ Indeed, it too was the responsibility of managers in Moscow to find a solution to the vanishing Aral Sea; it began to do so and created the BVO Amu Darya and BVO Syr Darya (BVO: Basin Water Organization)¹⁰² to monitor levels of the rivers and to ensure a gradually increased inflow to the Aral Sea. Without the presence of a deep-pocketed manager and mediator in 1992 however, the CARs found themselves incapable of resolving either the Aral Sea dilemma or the question of water allocation. Thus, they were forced to turn to the international community for both funding and expertise, which has resulted in the heavy involvement of IOs and international NGOs all attempting to resolve the Syr Darya crisis today.

4.3 International Organizations and the Syr Darya River

There are a number of organizations present in the Syr Darya Basin that were created in order to 1) save the Aral Sea and 2) ensure that the current system of water allocation would continue. The Soviet-made BVO Syr Darya and its counterpart the BVO Amu Darya survived the USSR's collapse despite the withdrawal of Soviet funds, though it became something of a paper tiger without mechanisms in place to ensure that states followed their water quotas. The 1992 Almaty Agreement created the Interstate Coordinating Water Commission (ICWC), aided by a Scientific Information Center (SIC) that serves as the information and logistics hub for monitoring water allocation, with the BWA Syr Darya to monitor data and ensure quotas are kept; the Syr Darya's offices are all based in Uzbekistan which raises upstream suspicions and welcomes the quintessential

¹⁰¹ WEINTHAL PG. 110.

¹⁰² TRANSLATED FROM RUSSIAN: *Basseinovoye Vodnoye Obyedineniye*.

“prisoners dilemma.” One of the major drawbacks of the ICWC though, is that its jurisdiction does *not* extend over the Toktogul Reservoir in Kyrgyzstan, which is at the root of the current disagreement.

There are also several regional organizations whose purpose are to “save” the Aral Sea, such as the Interstate Council on the Aral Sea Basin or the International Fund for the Aral Sea, though none of can be considered truly “effective” in reaching their goals due to fundamental flaws in their construction, which ultimately leave them with little credibility.¹⁰³ Such gaps include a lack of transparency despite the supposed availability of unbiased data, and most importantly, failure to mention where the funds would come from to guarantee the functioning of the organizations.

Not long after the collapse of the dissolution of the USSR, the governments of Central Asia requested the assistance of the World Bank to handle the Aral Sea crisis. The World Bank agreed, but stipulated a focus be placed on increased regional cooperation, and suggested as a viable solution to the Aral Sea crisis that the downstream states switch crops; this suggestion was distasteful as removing cotton from the state budgets could potentially undermine the existing social order, and by extension the grip on power held by downstream leaders.¹⁰⁴ Thus the effectiveness of the World Bank’s first foray into the Central Asian water dilemma bore little fruit.

USAID played the dominant role of financing the Syr Darya Long Term Agreement of 1998, which was to cement the terms for the barter system of water for energy. USAID succeeded in helping to create the Long Term Framework Agreement in 1998 which

¹⁰³ DAENE C. MCKINNEY, “COOPERATIVE MANAGEMENT OF TRANSBOUNDARY WATER RESOURCES IN CENTRAL ASIA,” IN *In the Tracks of Tamerlane- Central Asia’s Path to the 21st Century*, NATIONAL DEFENSE UNIVERSITY PRESS, 2003. MORE NEEDED

¹⁰⁴ WEINTHAL PG. 148.

explicitly stated that water storage had a cost and as such must be compensated either through barter or cash payments. Problematically, the specifics of *what* the cost of water storage was to be were not discussed though, and lengthy negotiations are repeated each year to set the annual quotas. Ultimately, the Syr Darya Long Term Agreement has more or less hovered between failure and success.

The United Nations has also played an important role in increasing regional cooperation through SPECA, an offshoot of the UN's ESCAP program. Established in 1998, SPECA (UN Special Program for the Economies of Central Asia) serves as a forum for the leaders of the Central Asian states and IOs in order to promote "rational and efficient use of energy and water resources of the economies of Central Asia."¹⁰⁵ Its membership includes all five CARs, as well as Afghanistan and Azerbaijan, and is jointly supported by ESCAP and the UN Economic Commission for Europe. SPECA initially identified a number of problem areas in Central Asia and set about creating them through the creation of Project Working Groups (PWGs) in areas such as water, energy, trade, transport and border crossings. Governed by vice-prime ministers and ministers from the representative countries as well as UNESCAP and UNECE Executive Secretaries, it encourages regional dialogue and cooperation by offering a forum for cooperation coupled with external assistance and expertise. Funding is covered by the governments of the member states, with additional funds coming from UNESCAP and UNECE, and through donations from multilateral and bilateral donors for technical assistance and operations.¹⁰⁶

There are additionally a number of other IOs working with the CARs on the

¹⁰⁵ IBID, PG. 7.

¹⁰⁶ UNITED NATIONS, "TERMS OF THE PROJECT WRKING GROUP ON WATER AND ENERGY RESOURCES," *UNESCAP Website*, http://www.unescap.org/oes/SPECA/about/pwg_WER.asp, (ACCESSED ON 25 MAY 2009).

resolution of a water regime for the Syr Darya River. While this lack of visible success may appear inconsequential, the presence of the IOs has proven to be instrumental towards the construction of regional cooperation in terms of the environment, due to the “power of the purse.” Due to the lack of forthcoming funds from Russia, the CARs were in a desperate situation. It is because of their staggering debts that the regional environmental, and arguably actual physical security has been held in check. The presence of financial donations has proven so tempting that they have been a direct cause of the creation of a multitude of interstate agreements between the states.¹⁰⁷ These same agreements, and the threat of withholding funds have repeatedly prevented violent conflict; they have in effect “kept people talking... when push came to shove, they never fought.”¹⁰⁸

Even though the Syr Darya has been the source of enduring inertia and discord, there are positive signs that suggest the current crisis may prove to be the exception rather than the rule. A regional success story has quietly unfolded between Kazakhstan and Kyrgyzstan; the two countries have reached a regional agreement that was composed of all the necessary prerequisites: a third party, a transnational river, and most importantly, the existence of a general consensus between the parties. The Agreement on the Chu-Talas Basin is not only a regional success story, but is also emblematic of the growing regional integration present in Central Asia today.

4.4 The Chu-Talas Basin Agreement

Despite the current state of arrears present in the Syr Darya river regime, there is proof that the Central Asia states are indeed capable of reaching an agreement with the

¹⁰⁷ WEINTHAL, PG. 203.

¹⁰⁸ *IBID.* PG. 184.

assistance of an IO in the Chu Talas Basin, in this case SPECA PWG-Energo, which served as a forum for the agreement. Similar to the Syr Darya, the Talas River originates in Kyrgyzstan and flows downstream to Kazakhstan where it is used for irrigation. The Kirov reservoir is located in Kyrgyzstan, though unlike the Toktogul Reservoir it is used solely for irrigation instead of hydroelectricity. At present, the Talas Basin consists of 114,000 hectares of irrigated land in Kyrgyzstan and 79,300 hectares in Kazakhstan.¹⁰⁹ The river itself was already the subject of an international agreement between both states during Soviet times, with the amount of water split between the two states 50-50 in 1983.¹¹⁰ Also similarly to the Syr Darya, both states continued to respect the pre-existing conditions for the sharing of Talas water and more or less abide by its conditions; the disputes that arose were mainly over sharing the costs of the maintenance infrastructure of the Kirov Dam. As early as 1998, Kazakhstan began to shoulder the costs of maintaining the reservoir. In 2005, the Chu-Talas Commission was established to cement the agreement and to offer an official body through which information is shared to ensure transparency and continued functioning of the agreement.

It should be stated that from the outset, neither Uzbekistan nor Turkmenistan appeared interested in the meetings; Turkmenistan still boycotts the meetings, though Uzbekistan began sending observers in the sixth session, and then full delegations from the eleventh session.¹¹¹ The meetings were not open solely to the CARs however, and were

¹⁰⁹ A. DEMYDENKO, "THE EVOLUTION OF BILATERAL AGREEMENTS IN THE FACE OF CHANGING GEO-POLITICS IN THE CHU-TALAS BASIN," *Summary of the Keynote Address at International Convention "Water: a Catalyst for Peace,"* ZARAGOZA, SPAIN, 6-8 OCTOBER 2004.

¹¹⁰ KAI WEGERICH "PASSING OVER THE CONFLICT. THE CHU TALAS BASIN AGREEMENT AS A MODEL FOR CENTRAL ASIA?"- MORE DATA NEEDED

¹¹¹ *IBID.* PG. 10.

attended by IOs such as the OSCE, CAPC, ISAF, USAID, the Agency for International Ecology Fund, TACIS, UNDP, the Swiss Coordination Office, and the Embassy of the Russian Federation.¹¹² Thus, the meetings, though originally intended as a forum for the resolution of the Syr Darya Basin, broadcast the Chu-Talas Basin to a wider audience who then became involved to facilitate a working agreement.

The Chu Talas Basin Agreement is, admittedly, on a much smaller scale than the problems facing the Syr Darya Basin. The absence of antagonistic Uzbekistan and reclusive Turkmenistan are most likely major factors in the ease with which the agreement was reached. Kyrgyzstan and Kazakhstan are on much better terms than either state are with Uzbekistan, and without active participation of Uzbekistan that the Syr Darya will reach a similar agreement seems unlikely. That is not to diminish the fact that the bilateral agreement between both Kazakhstan and Kyrgyzstan is nonetheless worthless. Through the recognition of a common problem, the states were able solidify an agreement which had been in place for years. International organizations and NGOs were able to contribute services and expertise not outwardly available to the states, and thus served as a sort of mortar which strengthened the agreement. As the ink is still drying on the agreement, it is still soon to call the Chu-Talas Agreement a bona fide success, but it *does* display the potential for environmental cooperation in Central Asia with the assistance of the international community.

¹¹² IBID, PG. 10.

Conclusion

Despite the rhetoric issued from both upstream and downstream countries, there is no real threat of violent conflict in Central Asia over fresh water. The Central Asian leaders are “rational actors whose primary preference is the preservation of power,” not regional domination, and furthermore, are not in a position to wage war. Though the CARs are deadlocked over the security, it is ironically the commonly shared interest of security that incorporates environmental cooperation by default. By ensuring that the system of cotton monoculture continues unabated, the leaders are forced to return to the negotiating tables again and again, as any change in the system will compromise the presidents’ hold on power.¹¹³ That they are able to do so is largely the result of International Organizations or foreign powers playing a mediating role in securing both security and environmental cooperation in the Syr Darya Basin.

In terms of military security, foreign hegemony have compelled the CARs to regionalize. Due to the commonly shared fear of “Islamic extremism, terrorism, criminal networks dealing in narcotics and weapons, the Tajik civil war, and the Afghan situation,” the CARs have sought to become involved in a number of regional security organizations with true hegemony in order to provide security which they know cannot be afforded domestically.¹¹⁴ The growth and increasing importance of organizations such as the CSTO and the SCO are tangible proof that the states are brought together through an external hand, capable of directing, mediating, and financing the guaranteed security of the CARs.

¹¹³ KATHLEEN COLLINS, “ECONOMIC AND SECURITY REGIONALISM AMONG PATRIMONIAL AUTHORITARIAN REGIMES: THE CASE OF CENTRAL ASIA,” *Europe-Asia Studies* 61(2), MARCH 2009, PG. 270.

¹¹⁴ *IBID*, PG. 260.

Similarly, international organizations and NGOs have played their own significant role in the regional growth based on the Syr Darya River Basin. Not only have they helped to avert conflict, but also “help build and construct states [themselves] thru transfer of knowledge and financial and material assistance at the domestic level through their development programs.”¹¹⁵ IOs and NGOs such as USAID or the World Bank have been able to force the CARs to cooperate with one another by withholding crucial funds needed to carry on with the irrigation practices which have kept them afloat for so long. Through a system of “sticks and carrots,” they have been able to exercise power and wield influence while at the same time pushing the CARs towards the *pareto frontier*. Thus, were it not for the existence of a common problem- the mutual need for fresh water, there would be no incentive for the states to hand over sovereignty to an external organization. It can thus be deduced that an epistemic community has proven crucial for cooperation in Central Asia.

Neo-realism, or Lindemann’s “power-based” argument for the creation of a water regime in Central Asia with its focus on relative gains, is inherently skeptical of regional structures. If it were indeed a theoretical framework which we could apply to Central Asia, we would expect much less regional cooperation, or a hegemonically- forced agreement in place over the Syr Darya. The notion of a downstream hegemon being required for regime formation fails Central Asia mainly because there does not exist a true regional hegemon. While downstream states such as Kazakhstan and Uzbekistan may be wealthier or have larger military budgets, without access to a reliable source of water in the spring and summer months they suffer both economic loss and social unrest, which are equally problematic for the existing power structures.

Stefan Lindemann’s framework was not created with the intention of arguing for

¹¹⁵ WEINTHAL, PG. 162.

the validity of any single type of theoretical argument in explaining water regime formation, but rather to display that such an idea is indeed erroneous. Such a notion falls under the “fallacy of composition,” which argues that in the social sciences often times there is no “one size fits all” approach. Wolf states that “no single discipline, neither law, nor economics, nor engineering will provide all of the answers for resolving water disputes... rather, policymakers and their institutions will have to foster an active dialogue between all approaches to this critical resource.”¹¹⁶ Weinthal states that that ultimately, time is the most crucial element in the formation of an international water regime.¹¹⁷ Most water agreements “often take decades to complete... and are concluded on the basis of UN laws on the transboundary status of rivers that defines access to water resources as a human right independent of citizenship, and on upstream countries’ right to sell water services to downstream countries.”¹¹⁸ It is in fact quite remarkable that the CARs were able to independently create a water regime in the form of the 1992 Almaty Agreement of their own accord, so quickly after the demise of the Soviet Union.

Due to the great array of specificities in the more than 250 transnational riparian basins, it is impossible to identify a single theory that seeks to explain why water regimes do or don’t work; this was not the attempt of this thesis. The argument could easily be made that the benefits conferred upon the Central Asian states by third parties is non transferable to other crises, such as that of the Jordan or Nile River where true regional hegemony exist. What it has accomplished however, is to refine a potential framework in order to better explain an existential situation that does not fit perfectly to the virtual reality

¹¹⁶ WOLF, PG. 263.

¹¹⁷ LINDEMANN, PG.

¹¹⁸ ERIKA MORAT, “TOWARDS A WATER REGIME IN THE SYR DARYA BASIN,” *CACI Analyst*, 11 DECEMBER 2008.

of theory. That there is discord amongst the CARs over the status of the Syr Darya basin is not unique, and that discord will very likely continue into the future. If a water regime *is* to be formed however, it will most likely be with heavy assistance from a third party due to the continued inability of local states to reach the pareto frontier independently. Given the example of Kyrgyzstan and Kazakhstan though, such an idea is far from unimaginable; once the realization that collective cooperation can signify relative over absolute means in Central Asia, cooperation over the Syr Darya Basin will come much more easily.

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