

2015

Environmental Freshwater Resources and Conflict: Case Studies From the Former Soviet Union

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Environmental Freshwater Resources and Conflict: Case Studies From the Former Soviet Union

By

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A Thesis

Presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

Master of Arts

in

Environmental Policy Design

Lehigh University

May 2015

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Acknowledgments

A research project is never the burden, responsibility, and once finished, the pride of a single person. There are many who deserve recognition for their support throughout this endeavor. I would especially like to thank J. M. Gillroy for starting me on this journey, and for guiding me through every step of the process. His efforts provided invaluable insights through a helpful, positive attitude, while his own writing remains a personal inspiration. I would also like to thank Arman Grigoryan for providing his support as the second reader, and Chad Briggs for introducing me to the work of Jane Dawson. Sarabeth Brockley deserves praise for our early morning meetings and late afternoon rants. Finally I would like to thank the faculty and staff at Lehigh University as well as my family and friends for supporting me throughout my education.

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Abstract:

Natural resources have become a factor of interest in conflict. Unfortunately scholars and policymakers alike choose to focus on oil and natural gas, not freshwater, even when freshwater resources play a significant role in their conflict of interest. Utilizing a theoretical logic developed from Jane Dawson's "resource-identity" model of conflict, freshwater resources are understood to be fundamental factors in the causation of conflicts as well as in the strategy and tactics used within the conflict. Case studies from Central Asia, Georgia-Abkhazia, and Russian intervention demonstrate this in the Former Soviet Union.

Introduction

The end of the Cold War shifted both the political reality of the world and the focus of the academic community. One academic field that has significantly grown since the 1990s focuses on the political ramifications of the natural environment. Of particular interest is the idea of environmental security, or the protection of both the environment from human-created harm as well as the protection of humans from environment-created harm.¹ Scholars and policymakers are beginning to understand how the environment influences conflict and societal stability. Unfortunately this research has been mostly limited to the study of oil and natural gas, largely ignoring other natural resources.

Freshwater resources, the rivers, aquifers, and all other land-based water sources, along with the resources directly provided by this water, such as hydropower, are one of the natural resources that scholars and policymakers are starting to consider as a possible fundamental factor in conflict around the world. This inquiry is critically needed. Having impacted global politics from the beginning of mankind's history, freshwater resources are intricately woven into society. For example, a theory proposed by Karl Wittfogel finds that the need for controlled irrigation led to the first bureaucratic government structures.² Yet freshwater resources are not only a beneficial factor in politics, influencing both societal growth, and conflict. World Bank officials have declared that if "the Wars of the twentieth century were fought over oil, the wars of [the twenty-first]

¹ Heather Beach, et al., "Transboundary freshwater disputes resolution: Theory, practice, and annotated references," United Nations University Press, (New York, 2000), 58.

² Stephen McCaffrey, *The Law of International Watercourses*, 2nd, (Oxford University Press, New York, 2007), 59.

century will be fought over water.”³ Additionally, former United Nations Secretary General Kofi Annan predicts that “fierce competition for fresh water may well become a source of conflict and wars in the future.”⁴ Much of this fear over freshwater-based conflict stems from a serious decline of world water quality due to pollution, and quantity due to drought, climate change and population growth. At least 40% of the global population is now threatened by water scarcity.⁵ It therefore seems natural that freshwater would enter into the realm of conflict. It is, after all, more essential to human life than oil and natural gas. Water scholar Brahma Chellaney has mapped out one potential conflict cycle disruption of essential freshwater resources can create: freshwater issues leading to high food prices, leading to social unrest, leading to extremism and fundamentalism, leading to overpopulation and thus increased freshwater issues.⁶ Following similar logic, the New York Times recently reported that a long drought in Syria appears to be one factor fueling the current political unrest in that country.⁷ Central Asia is another excellent example of this, rural farmers in the region igniting conflict because of a lack of clean freshwater to irrigate their crops (For more on Central Asia see the case study below).⁸ Governments around the world have started to respond to the increasing influence freshwater is having on politics and global stability. In the United States the Central Intelligence Agency, the Department of Defense, and the Department

³ Ibid, 16.

⁴ Ibid.

⁵ Helen Ingram, David Feldmen, John Whiteley, “Water and Equality in a Changing Climate,” *Water, Place, Equity*, ed. John Whiteley, Helen Ingram, and Richard Perry, (MIT Press, Cambridge, 2008), 271.

⁶ Brahma Chellaney, *Water, Peace, and War: Confronting the Global Water Crisis*, (Rowman & Littlefield, New York, 2013), 221.

⁷ Henry Fountain, “Researchers Link Syrian Conflict to a Drought Made Worse by Climate Change,” *The New York Times*, 3 March 2015, A13.

⁸ Dominic Stucker, “Environmental Injustices, Unsustainable Livelihoods, and Conflict: Natural Capital Inaccessibility and Loss among Rural Households in Tajikistan,” *Environmental Justice and Sustainability in the Former Soviet Union*, ed. Julian Agyeman, Yelena Ogneva-Himmelberger, (MIT Press, Cambridge, 2009), 239.

of State have all started initiatives to focus on water-based national security issues. Former Secretary of State Hillary Clinton even created a five-step approach for the US to engage freshwater issues abroad, an initiative that includes the United States' maintenance of freshwater supplies in Afghanistan as a major aspect of its Counter-Insurgency Operations (COIN).⁹

The United States' use of freshwater in a counter-insurgency operation demonstrates that freshwater resources can be critical in all levels of conflict, from protests and diplomatic disputes to violent wars of both an interstate and intrastate nature. The main challenge levied against those who argue for a better understanding of freshwater in conflict is that there have been few wars between sovereign states over freshwater resources to date.¹⁰ Intrastate conflict however, separatist movements, ethnic fighting, and other forms of internal political instability, already witnesses significant influence from freshwater resources. A study conducted by Ravnborg et al. found that, while it is true that interstate freshwater conflict is rare, water-based conflict on the sub-state level is more common and growing.¹¹ Brahma Chellaney further points out that freshwater's role in conflict is often hidden within other, more superficial factors. He says that "conflicts, even when they are rooted in resource scarcity, are often camouflaged as civil wars or political or sectarian hostilities."¹² Put another way, "The competition for scarce resources likely carries greater conflict potential than the rivalries between disparate

⁹ Committee on Foreign Relations of the U. S. Senate, "Avoiding Water Wars: Water Scarcity and Central Asia's Growing Importance For Stability in Afghanistan and Pakistan," S.PRT 112-10, 22 February 2011.

¹⁰ Matthew Schnurr and Larry Swatuk, "Towards Critical Environmental Security," *Natural Resources and Social Conflict: Towards Critical Environmental Security*, ed. Matthew Schnurr and Larry Swatuk, (Palgrave MacMillan, London, 2012), 2.

¹¹ Helle Munk Ravnborg, et al., "Challenges of local water governance: the extent and intensity of local water-related conflict and cooperation," *Water Policy*, 14(2012), 336-357.

¹² Chellaney, *Water, Peace, and War*, 27.

cultural blocks. After all, underneath the cultural and religious divides are universal aspirations for a better life.”¹³ Even conflict ostensibly based on culture and religion is often at least partially about securing scarce natural and freshwater resources for the betterment of one’s group. Chellaney says that as a natural resource, freshwater is essential to human society, impacting human life, energy, and economics. The essentialness of freshwater as an increasingly scarce natural resource makes it more political than even oil, the natural resource traditionally studied in conflict. Researchers John Whiteley, Helen Ingram and Richard Perry agree. They say that “even more so than oil before it, water permeates the larger part of political, economic, social, and even religious conflicts...water will dominate world resource politics by the end of the twenty-first century much as oil dominated the late twentieth century.”¹⁴

It is therefore necessary for policymakers to understand the implications of freshwater resources within conflict. Freshwater is often a fundamental factor, both as a causation of the conflict and as a factor affecting the consequences and outcome of the conflict. Infrastructure related to freshwater resources is often targeted during conflict, water treatment plants and hydropower plants the subject of many attacks.¹⁵ Chellaney refers to this as a “water weapon,” targeting freshwater resources for political gain.¹⁶ As a target, freshwater resources become political in nature, entering into the power dynamics of the conflict. Chellaney addresses power in freshwater conflicts, finding that if an upstream

¹³ Ibid.

¹⁴ John Whiteley, Helen Ingram and Richard Perry, “The Importance of Equity and the Limits of Efficiency in Water Resources,” *Water, Place, & Equity*, ed. John Whiteley, Helen Ingram, Richard Perry, (MIT Press, Cambridge, 2008), 1.

¹⁵ Chad Briggs, Moneeza Walji and Lucy Anderson, “Environmental health risks and vulnerability in post-conflict regions,” *Medicine, Conflict and Survival*, 25:2(April-June 2009), 127.

¹⁶ Chellaney, *Water, Peace, and War*, 177.

group risks “affecting the quality or quantity of transboundary flows, the response of the downriver party- or lack of it- will likely be shaped by prevailing power factors.”¹⁷

The idea of power and its distribution in conflict must be understood when considering the role of freshwater resources. As a critical resource, control of freshwater can lead to changes in the power dynamic with serious consequences within conflict. Control, in this sense, refers to the potential ability to use a resource, in this case freshwater resources, for direct, political or military use. An entity with complete control can use the resources as it pleases while an entity with no control is unable to use the resource, often having limited access to the resource. To understand control of freshwater it might be helpful to explore some examples from North American politics. Canada currently bemoans the difference between its ability to manage fish populations in the Fraser River, which it has complete control over, and the Columbia River which it shares with the United States. Joint control, created by the Columbia River flowing through both countries, allows the United States to have leverage over Canadian policy, preventing Canada from accomplishing the same fishery protection it has in the Fraser River.¹⁸ However context is important and every freshwater power relationship is unique. For example compare Canada’s superior “bargaining position” over freshwater resources to Mexico’s inferior position. Canada has greater control over freshwater it shares with the United States because it is the upstream state, and has more freshwater in total than Mexico to use against a thirsty United States. It is also wealthier than Mexico, making it

¹⁷ Ibid, 180.

¹⁸ Ibid, 20.

more the United States' equal, and therefore granting it a stronger bargaining position.¹⁹ Canada has thus historically had greater success in diplomatic freshwater disputes with the United States than Mexico which must live with the limited and mostly unusable freshwater it currently receives from the United States.²⁰ Control of freshwater resources therefore involves many different, interrelated factors, some natural, some political, making each situation of freshwater conflict unique.

This thesis argues freshwater resources are a fundamental factor in conflict. It emphasizes that this is often true even in conflict where freshwater has not traditionally been considered significant. For instance, while oil and natural gas are often discussed in relation to conflict in the Former Soviet Union, there are many examples of freshwater also being fundamental in these conflicts. In order to truly understand conflict in the Former Soviet Union and find solutions for lasting peace in the region therefore requires a better understanding of freshwater's role in conflict. This thesis will focus on conflicts in Central Asia, Georgia, and on Russian intervention to demonstrate that freshwater resources are a fundamental factor in conflict of all types, and need to be considered even in regions whose conflict is not commonly associated with natural resources beyond oil, such as in the Former Soviet Union.

¹⁹ Paul Hirt, "Developing a Plentiful Resource: Transboundary Rivers in the Pacific Northwest," *Water, Place, & Equity*, ed. John Whitely, Helen Ingram, Richard Perry, (MIT Press, Cambridge, 2008), 148-149.

²⁰ Marc Reisner, *Cadillac Desert: The American West And Its Disappearing Water*, (Penguin Books, New York, 1993), 463-465.

Philosophical/Theoretical Foundation

Several scholars are advancing the field of natural resources in conflict with ideas that are potentially beneficial to this thesis. Nina Casperson reports that a separatist group must believe in its ability to have a stable, “viable” state if it is going to start and maintain conflict.²¹ Control of natural resources is consequently a fundamental factor because it reassures the group of its ability to thrive once political goals are met. In order to consider separating a group must have the needed resources to not just survive, but to grow and prosper. This can include freshwater for direct human consumption as well as for industry, agriculture and hydroelectricity. The work of Philippe Le Billon on the effects of government control of natural resources is also intriguing. He says that “not only does resource dependence create a political and economic context that increases the risk of armed conflict, but whether or not a resource is more accessible to the government or to a rebel group may shape the likelihood and course of civil war.”²² He defines control through two sets of factors. The first is *point vs diffuse*; point resources being confined to a limited area or limited number of actors while diffuse resources are scattered or widespread throughout a territory. The second is *proximate vs distant*; proximate meaning the government has easy control of the resource which is not in territory controlled by rebels while distant means it is hard for the government to control

²¹ Nina Casperson, “The South Caucasus after Kosovo: Renewed Independence Hopes?,” *Europe-Asia Studies*, 65:5, (2013), 932.

²² Philippe Le Billon, *Fueling War: Natural Resources and Armed Conflicts*, (Routledge, New York, 2013), 29.

the resources as they are located in remote or rebel controlled territory.²³ Le Billon believes that through these factors the following outcomes are realized:

Point/Proximate: Coup d'e'tat

Point/Distant: Secession

Diffuse/Proximate: Mass Rebellion

Diffuse/Distant- Warlordism²⁴

He further says that "a government's greater access to resources can motivate rebel groups to defect to the government, provide an incentive to enter peace negotiations, or lure rebel leaders to the capital to join a government of national reconciliation."²⁵

These scholars have however failed to advance the field adequately for a complete understanding of natural resources, including freshwater, in conflict. Nina Casperson's focus is too narrow. She addresses reasons why freshwater resources could help lead a group to start a conflict, but not how they may be used during the conflict. Le Billon's theory correctly predicts the type of conflict present in many cases. For instance his theory correctly suggests that the Georgian-Abkhazian conflict, discussed in the case studies below, would be a secessionist movement because of its point and distant freshwater resources.²⁶ However his theory has limited reach beyond often accurate predictions of the form a conflict will take. Le Billon focuses mainly on the ability of

²³ Ibid, 32-35.

²⁴ Ibid, 37.

²⁵ Ibid, 46.

²⁶ Ibid, 36.

natural resources to provide monetary support to sustain separatist movements.²⁷ Such narrow focuses are a common limitation in the field. This thesis instead takes a more holistic approach, exploring how power distributions and identity can cause natural resources, specifically freshwater resources, to take on a larger role in the causation, strategy and cessation of conflict. To get past these limitations requires a philosophical focus beyond economic profits, with both the decision to create conflict and how the conflict is carried out accounted for.²⁸

Instead of being held back by the limitations that characterize many of this field's scholars, a more appropriate understanding of freshwater resources in conflict can be acquired through an application of the theoretical framework utilized by Jane Dawson, a notable scholar in the field of the environment and politics. Dawson's work focuses on how the anti-nuclear movement in the Former Soviet Union was used by nationalist groups to help their cause, eventually leading to the collapse of the Soviet Union. This connection between ethnicity, national identity, and the environment is what Dawson has termed "eco-nationalism."²⁹ Dawson's case studies demonstrate how nationalist groups used the anti-nuclear movement to rally support against the Soviet government as a foreign, Russian, unsympathetic organization willing to see locals suffer for its own gain. Even when nationalist movements were not strong enough to rally around nationalist ideals outright, anti-nuclear sentiment was able to act as a "surrogate issue" becoming the

²⁷ Ibid, 44.

²⁸ Essentially these scholars fail to develop an all-encompassing understanding of freshwater resources in conflict because their theories are largely based on an economic or market paradigm of thinking that is unable to accurately account for environmental factors in politics. A more complete understanding requires thinking beyond the simple economics of the matter (Gillroy, 3-37).

²⁹ Jane Dawson, *Eco-Nationalism: Anti-nuclear Activism and National Identity in Russia, Lithuania, and Ukraine*, (Duke University Press, Durham, 1996), 5.

movement through which peoples confronted the Soviet government.³⁰ The idea of ec-nationalism therefore demonstrates the ability for environmental issues to transcend monetary benefit to conflicting parties, additionally factoring into the causation and tactics utilized by these groups. The premier argument against freshwater resources as a factor in conflict is that there have been limited outright water wars. Often the counterargument provided is that freshwater resources factor into the causation of conflict, such as scarce freshwater resources leading to crop failure and then social unrest. However, Dawson's case studies demonstrate that this need not be the only connection between freshwater resources and conflict. Even more intimate, fundamental connections are possible. Environmental factors can be one and the same with other movements, an integral part of the marginalization of a group and in turn part of the strategy to reverse that marginalization.

Dawson's work is based on a "resource-identity hybrid" model of conflict.³¹ This two tier model suggests that to understand any conflict requires the study of both factors. Exploration of only half of the model would be an incomplete analysis. Within her discussion of the model, Dawson brings up Mancur Olsen's theory that it is in an individual's best interest to free-ride off of the efforts of others instead of personally entering into a conflict, gaining the benefits without the risks.³² Dawson accounts for this, finding that conflict is only rife if there is a group that can mobilize itself as a victim that needs change. She says that those in conflict are:

³⁰ Ibid, 163.

³¹ Ibid, 12.

³² Ibid.

seeking a forum through which to express their feelings and to strengthen self-identity. In charting the development of a movement, it is therefore necessary to look beyond strategic calculations and to also consider the movement's function in affirming and developing group identity.³³

For this reason part of Dawson's model is *identity*. The anti-nuclear movements in the Former Soviet Union demonstrate that an environmental factor can help fuel a group's cohesion against a perceived negative foreign influence. In areas where there was a strong sense of nationalism environmental factors increased this feeling and were used by nationalist movements, while in areas with a low sense of nationalism the environment was of little concern. For instance, the anti-nuclear movement was stronger in Lithuania where it helped fuel a strong sense of Lithuanian identity versus the outside world, while in Crimea, with a large Russian ethnic population, the anti-nuclear movement sputtered with no nationalist tension or victimized group's identity to associate with.³⁴ The environment, its health and group control over it, was therefore an essential aspect of the group identities of nationalists seeking to gain independence from the Soviet Union. The connection between environmental factors and the identity that sparks conflict should therefore not be underplayed. Dawson says that "in numerous inter-state environmental battles as well as domestic struggles between regions or ethnically defined territories, the potential certainly exists for environmental struggles to take on nationalist overtones."³⁵ However the reverse is also true, nationalist struggles could easily take on environmental overtones as they work to enhance group identity through conflict. Environmental factors

³³ Ibid.

³⁴ Ibid, 171.

³⁵ Ibid, 163.

enhance group identity while group identity enhances the importance of environmental factors. Dawson's model thus suggests that environmental resources, such as freshwater, can be significant to the cause of conflict, fueling the group identity that makes people demand, and more successfully attain, change.

For the purposes of exploring freshwater resources' role in conflict, Dawson's idea of identity will be expanded upon; group identity's connection to freshwater resources being a characteristic that factors into the *causation of conflict*. Dawson's logic of identity is introduced to understand why people create conflict. Essentially people need to have their sense of self, their identity, threatened if they are to start conflict. When freshwater resources in some way either threaten, or bolster a group or individual identity they act as a causation of conflict. Freshwater resources, with their strong influence on all parts of human life and society will certainly have a comparably deep connection to group identity and survival, intimately connecting freshwater to conflict. While freshwater resources can create conflict through the money, electricity, and other goods they provide, economic consideration alone does not actually describe why the conflict was started. A group's identity may be threatened or bolstered by how much control it has over necessary resources. A group may start a conflict if they feel their group is discriminated against, not receiving its fair share of freshwater resources. Likewise, should the group not have enough freshwater resources for basic survival the very existence of the group depends on conflict. Freshwater can cause conflict through a famine that unites farmers for better irrigation, or by raising food prices and therefore causing regional social unrest, groups clinging to their homes, land and way of life, all that identifies them to a certain group. A group may additionally be given the confidence

it needs to revolt should they control enough freshwater resources to guarantee they could survive as a viable independent entity. Freshwater resources may be a tool used to enhance one's identity, serving as a border between opposing group territories, unifying a group, being of cultural significance to the group, or be used as a powerful tool with which to gain independence or concessions. Freshwater resources can therefore have numerous connections to the threatened group identities that lead people to seek solutions through conflict. The context of a specific situation determines the degree to which a group's identity is either threatened or bolstered by freshwater resources, suggesting that care be taken in understanding freshwater's role. Ethnic violence, or a land grab could, after all, be caused by freshwater resources creating ethnic tension or providing impetus for snatching more land. One critical way to understand freshwater resources as a fundamental factor in conflict is therefore to explore when and how freshwater resources are a factor in the causation of conflict because of their impact on identity.

In the introduction of this thesis a common understanding of control of natural resources was explained. Dawson's resource-identity model not only accounts for control, but expands upon it through the idea of *resource mobilization*, the second tier of her model. Control, after all, is important in that it creates the ability to mobilize resources. Mobilization is the actual utilization of resources for a group's, political, military, or other gain. Dawson characterizes resources that may be mobilized for a cause as both tangible resources, like natural resources and food, as well as intangible resources like the ability to associate with alternative political movements during Perestroika. Understanding what resources a movement controls and how, in context, these resources

are mobilized allows for a better understand of the movement and enhances the ability to predict the movement's actions, Dawson saying that:

Collective actors are assumed to utilize strategic instrumental rationality to determine how best to pursue movement goals within a given context. Given specific resource availability, preexisting organizational form, and opportunities, the collectivity will rationally select its tactics and strategy to maximize its potential for success. Thus, according to this school of thought, knowledge of resource availability, of organization, and of opportunity structures should yield a greater understanding of mobilization patterns utilized by a particular social movement. Movement tactics, development, and level of success are expected to depend on these structural factors.³⁶

This moves beyond the typical idea of monetary gain from natural resources by suggesting that quantity, access, and control of resources all factor in to a conflict. Resource poor groups must take up defensive strategies while rich and powerful groups are insulated from threat.³⁷ While freshwater resources are not prevalent in Dawson's case studies, it is a logical extension of her argument to see how this thinking can apply. Dawson does point out that the Soviet system, characterized by a lack of individual control over material and natural resources through deferment to the state, made it harder for people to organize the other, more intangible resources needed to sustain a growing

³⁶ Ibid, 11.

³⁷ Ibid, 20.

social movement.³⁸ For instance people cannot worry about finding a place to meet to discuss grievances if it is a struggle to simply ensure that irrigation is provided for their fields. Dawson points out that one must consider the consequences of joining a political movement.³⁹ If a group does not control their own resources the consequences of conflict may simply be too high. Maintaining “stable participation” in a movement requires a lack of scarcity when it comes to key resources in the conflict.⁴⁰ If one controls key resources, often including freshwater, then one can mobilize these resources as a tool to sustain the conflict and reach political goals.

Dawson’s logic of resource mobilization forms the foundation of freshwater resources affecting the *strategy and tactics* of conflict. The resources a group does and does not have the ability to mobilize factors greatly into how they carry-out conflict and their abilities vis-à-vie their opponent. In this way mobilization of freshwater resources can be understood as a power dialectic between the groups in conflict. When, in context, a freshwater resource has the potential to be used politically, the groups involved will jockey to gain greater control over the freshwater resource so that they may mobilize the resource for the greatest political, military, or social gain. The more a state or dominant group is able to mobilize freshwater resources, the less such resources may be mobilized by another group to weaken the majority or even break away. This allows the dominate group to use freshwater resources to stifle rebellion. The marginalized group in the conflict will attempt to gain control of key freshwater resources because mobilization of such resources can shift power to their side, preventing harm to itself and ensuring the

³⁸ Ibid, 15.

³⁹ Ibid, 20.

⁴⁰ Ibid, 17.

group's identity, or sovereignty. The more that this group gains control of the resources the more it can mobilize freshwater as a political tool to extract concessions from others. The first seeks to mobilize freshwater resources to ensure the status quo while the second seeks to mobilize freshwater resources to challenge the status quo. Through this dialectic freshwater resources can be viewed within the lens of realpolitik as another, more fundamental factor leading to fluctuating power between two groups in conflict, with the potential to seriously alter the outcomes of said conflict. Another way that this thesis will demonstrate that freshwater resources are a fundamental factor in conflict is therefore by providing examples of when freshwater resources are mobilized as part of the strategy and tactics utilized in conflict to obtain political and military goals.

Dawson's theory thus demonstrates how freshwater resources can have a stronger and more fundamental connection to the causation of conflict than previously considered, while contextually also altering the strategy and tactics utilized in the conflict based on freshwater's essential contribution to changing power dynamics. Through an expansion on Dawson's "resource-identity hybrid" model this thesis finds a philosophical logic that has the holistic theoretical structure necessary to understand how freshwater resources fundamentally impact empirical conflict. To argue that freshwater resources are a fundamental factor in the Former Soviet Union, however, requires that case studies from the area in question now be explored, detailing how freshwater resources played a significant role in them. To accomplish this the following case studies have been arranged in accordance to the framework developed above. First freshwater resources as a causation of conflict through identity will be demonstrated using a case study on the Central Asian region of the Former Soviet Union. Following this, freshwater resources as

a factor in conflict strategy and tactics through resource mobilization will be demonstrated through case studies on the Georgian-Abkhazian conflict as well as Russian intervention.

Identity and Causation of Conflict: Central Asian Case Study

Utilizing Dawson's logic of identity, examples of when freshwater resources are a causation of conflict should be explored. If freshwater resources are fundamental they should threaten group identity, creating the conditions which push people to seek political redress and conflict. An excellent example of freshwater resources being the causation of conflict through group identity in the Former Soviet Union is in the Central Asian region.

The Central Asian region of the Former Soviet Union has experienced both interstate and intrastate violence and conflict. This violence is usually small in scale, but its presence and frequency demands that such conflict not be ignored. While it is popular to discuss religious fundamentalism, and oil and natural gas as major factors in this conflict, freshwater resources are also an important factor; perhaps even the most important factor. Interstate conflict in the region has included Kyrgyzstan stopping freshwater flows to Kazakhstan for ten days in 1998, and Tajikistan threatening to use the Syr Darya River as an "offense weapon" against Uzbekistan in a territory dispute.⁴¹ Additionally Uzbek soldiers attacked a Turkmen water installation in 2001 (the Kara-Kum Complex).⁴² Several times violence and military operations have been used by the Central Asian states to claim control of land that contains large amounts of freshwater among other natural

⁴¹ Stuart Horsman, "Water in Central Asia: Regional Cooperation or Conflict," *Central Asian Security: The New International Context*, ed. Roy Allison and Lena Jonson, (Brookings Institute, Washington D.C., 2001), 74-76.

⁴² Eric Sievers, "Water, Conflict, and Regional Security in Central Asia," *New York University Environmental Law Journal*,(2002).

resources.⁴³ Beyond violent conflict, many of the diplomatic disputes between neighboring states in the region are over control of regional freshwater resources. Intrastate conflict in Central Asia includes the Tajik civil war, and violence that has flared in the regions of Batken-Isfara, Zeravshan and the Ferghana Valley.⁴⁴ Furthermore, a dispute over the Rogun Dam on the Vakhsh River, part of the Amu Darya Watershed, led to turmoil between Tajikistan and its downstream neighbors, including ethnic violence that was not sanctioned by the relevant state governments.⁴⁵

The above are only a few examples out of many conflicts in Central Asia that, underneath the superficial power confrontations have freshwater resources as a fundamental factor in their causation. This begs the question of why freshwater resources create so much conflict in the region. The short answer is that the freshwater resources needed to maintain Central Asian societies are mismanaged and increasingly scarce. The heart and soul of the Central Asian region are the Amu Darya and Syr Darya Rivers which make up the Aral Sea Basin. All of the local countries are dependent on these two rivers and their tributaries, ranging from Tajikistan which is completely enclosed in the Aral Sea Basin, to Uzbekistan, Turkmenistan and Kyrgyzstan each 70-99 percent in the basin and Kazakhstan which is 13 percent in this disputed basin.⁴⁶ Agriculture that is dependent on the Aral Sea Basin's freshwater employs 40% of a growing population in the region while supplying greater than 50% of regional GDP. The regional economy and the survival of many locals are reliant upon freshwater dependent cash-crop agriculture,

⁴³ BBC Monitoring Central Asia Unit, "Reporter looks at possibility of Kyrgyz-Tajik conflicts over disputed land," BBC World Service, 8 April 2009.

⁴⁴ Horsman, "Water in Central Asia: Regional Cooperation or Conflict," 77.

⁴⁵ Shokhrukh-Mirzo Jalilov, Saud Amer and Frank Ward, "Water, Food, and Energy Security: An Elusive Search for Balance in Central Asia," *Water Resource Management*, 27, (2013), 3960.

⁴⁶ Philip Micklin, "Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation?," *Eurasian Geography and Economics*, 43:7, (2002), 507.

especially cotton. The basin is politically arranged so that upstream states like Tajikistan and Kyrgyzstan have 90% of the hydropower potential of the region, and control over 65% of the freshwater itself while the downstream states of Kazakhstan, Turkmenistan and Uzbekistan consume 85% of the freshwater resources.⁴⁷ These two rivers can consequently be regarded “as a cultural, economic, geographical and political core for Central Asia.”⁴⁸ Freshwater is therefore a fundamental component of the region’s identities, and a spark for conflict. This is especially true because the state borders of the post-Soviet reality mix ethnic groups and freshwater resources between multiple states and regions. As people try to control the water they need to survive, ethnic and cultural problems arise.⁴⁹ It has been found that as many as two-thirds of provinces within Central Asian gain at least 50% of their freshwater from sources that have in some way been under another province’s, or state’s control.⁵⁰ Add ethnic group identity to this mix and conflicts between opposing groups attempting to control the same scarce resources materialize. For people, their community, their ethnic group, and their state to survive and prosper, control of adequate amounts of the freshwater resources now dispersed haphazardly between groups, is needed.

Within the Soviet Union freshwater disputes were internal issues solved by the state. Now freshwater is seen to have a “fugitive nature” with states attempting to appease their local populations through attempts to control as much of the local freshwater resources as

⁴⁷ Jalilov, Amer and Ward, “Water, Food, and Energy Security,” 3960.

⁴⁸ Horsman, “Water in Central Asia: Regional Cooperation or Conflict,” 70.

⁴⁹ Lena Jonson and Roy Allison, “Central Asia Security: Internal and External Dynamics,” *Central Asian Security: The New International Context*, ed. Roy Allison and Lena Jonson, (Brookings Institute, Washington D.C., 2001), 13-14.

⁵⁰ Horsman, “Water in Central Asia: Regional Cooperation or Conflict,” 71.

possible.⁵¹ However no state is in a position to completely control the Aral Sea Basin, leaving the possibility for conflict open, and creating a real threat to the people who are dependent on the region's freshwater.⁵² There are some legal frameworks controlling regional freshwater relations, such as the Central Asian Water Sector Coordination Initiative, and the Aral Sea Basin Program, but none of these have accomplished much in their attempts to alleviate the potential for freshwater conflict. The identities connected to regional freshwater resources are too strong to allow normal diplomacy and cooperation.⁵³ While the people of the area are used to the free freshwater of the Soviet Era, they now face declining government budgets which limit the allocation of water and the maintenance of irrigation lines and water pumps that are critical for continuation of the local way of life. The regimes governing the Central Asian states will never be stable until they provide the means for their people to maintain their identity through the ability to prosper, clean water a leading factor of progress in the region. Instability will grow if increased scarcity of freshwater is allowed to continue. Central Asian scholar Eric Sievers finds that though governments use propaganda and rhetoric about the importance and historical value of freshwater in the region, they fail to create adequate safeguards for freshwater resources.⁵⁴ In international relations, however, these governments are nationalist and zero-sum over freshwater issues, refusing to surrender freshwater to other groups, creating conflict to enhance their individual freshwater distribution. Interstate conflict is therefore created by states to prevent intrastate conflict. Local governments are

⁵¹ Micklin, "Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation?," 506.

⁵² Ibid, 507.

⁵³ Dhirendra Vajpeyi and Brittany Brannon, "Conflict and Cooperation: The Aral Sea Basin," *Water Resource Conflicts And International Security: a global perspective*, ed. Dhirendra Vajpeyi, (Lexington Books, New York, 2012), 170-175.

⁵⁴ Sievers, "Water, Conflict, and Regional Security in Central Asia."

right to worry about freshwater-created internal violence. Christopher Bosch of the World Bank says that “efficient water management requires advanced engineering, expertise in water saving and resource planning in a region where most water simply vanishes” and money is scarce.⁵⁵ People need quantities of water that in the current political, social and physical landscape of the region cannot possibly be provided. This is especially true for farmers who need irrigation for cash crops like cotton. One wife of a Tajik farmer characterized her family’s dependence on freshwater by lamenting that “water is all we have.”⁵⁶ It is this desperate need for freshwater resources that often moves people to violence in the region. When a people are threatened by the loss of this critical resource they turn to their state, their ethnic group, or any other group they closely identify with as a means for collective survival through increased acquisition of the resource. Unfortunately since freshwater is scarce this often comes at the expense of another group, sparking ethnic or other forms of identity violence.

There are many factors that lead freshwater resources to threaten identities, causing unrest and conflict in Central Asia. Scarcity of freshwater is a major issue, and only growing because of skyrocketing demand. From 1911-1960 about 56 km cubed per year flowed into the Aral Sea, but growing demand for freshwater caused only around 6 km cubed of freshwater to enter the Aral Sea per year in the 1980’s.⁵⁷ This increase in freshwater withdrawal has only gotten worse, leading to the disappearance of almost all of the Aral Sea. The countries’ annual withdrawal from the Aral Sea Basin is as follows: Uzbekistan 58 km cubed (52% withdrawal), Turkmenistan 23 km cubed (21%),

⁵⁵ Maria Golovkina, “Tajikistan battles drought,” *The New York Times*, 12 June 2008.

⁵⁶ Ibid.

⁵⁷ Micklin, “Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation?,” 512.

Tajikistan 12 km cubed (11%), Kazakhstan 11 km cubed (10%), and Kyrgyzstan 5 km cubed (4%).⁵⁸ These large withdrawals create freshwater scarcity and demonstrate the incredible demand for freshwater resources in the area. This demand forces groups into conflict to obtain the necessary freshwater for their livelihood and survival. Just as anti-nuclear campaigns bolstered anti-Soviet sentiment, as shown in Dawson's work, increased demand and, as a result, increased scarcity of freshwater in Central Asia has bolstered ethnic, religious and other group identities in the region as locals struggle to obtain the resources required to prosper, blaming "outsiders" and foreigners for their freshwater woes. States therefore have conflicts with other states over freshwater to appease their citizens while internally ethnic groups have disputes over what little freshwater the state is able to provide.

The problem is, however, more complex than increasing demand for freshwater withdrawals alone. Control of the actual flow of freshwater resources also creates conflict. The region's rivers flow from low use states like Tajikistan and Kyrgyzstan, who control much of the freshwater resources despite their low use, to heavy users like Turkmenistan and Uzbekistan. This puts stress on interstate relations because those with control of the headwaters have the least need for the freshwater itself.⁵⁹ Inter-seasonal variability to the flow of the rivers, made worse by the dams controlled by upstream countries which release freshwater when they need more electricity (winter) not when those downstream need freshwater for irrigation (summer) has also sparked diplomatic

⁵⁸ Ibid, 513.

⁵⁹ Martha Olcott, "Regional Cooperation in Central Asia and the South Caucasus," *Energy and Conflict in Central Asia and the Caucasus*, ed. Robert Ebel and Rajan Menon, (Rowman & Littlefield, New York, 2000), 137.

conflict.⁶⁰ Instead of cooperating, groups attempt to gain the most from the resources they control to the detriment of others. Kyrgyzstan once caused uproar when it declared through the 2001 Law on International Use of Water Objects, Water Resources and Water Management Facilities of the Kyrgyz Republic, that freshwater is an economic entity, and that any freshwater that originates in Kyrgyzstan is property of the state and therefore ought to be purchased from the Kyrgyz.⁶¹ Here again freshwater resources are connected to nationalist gain as Dawson's logic predicts. One group, the Kyrgyz, feel they may use the freshwater resources in their territory without thought of others' interests, leading to greater scarcity of resources available to the latter groups and increased identity-based conflict and tensions between the Central Asian states, as well as worsening intrastate relations between local Kyrgyz and other ethnicities.

Beyond this upstream versus downstream power dynamic, regional irrigation networks are currently in desperate need of repair, failing to deliver adequate resources to those who need them. It is estimated that necessary repairs throughout the region would cost over \$16 billion which neither locals nor state governments in the region are able to provide.⁶² The region's states have acknowledged that the disrepair of irrigation networks has led to social unrest; Uzbekistan's leadership even suggesting that privatization of irrigation is wrong, control of freshwater resources needing to remain under government control so that corruption can be prevented and ethnic conflict avoided.⁶³ Uzbekistan therefore maintains stability through government maintenance of control over freshwater

⁶⁰ Micklin, "Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation?," 510.

⁶¹ Jenniver Sehring, *The Politics of Water Institutional Reform in Neopatrimonial States: A Comparative Analysis of Kyrgyzstan and Tajikistan*, (Deutsche Nationalbibliothek, 2009), 119.

⁶² Micklin, "Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation?," 522.

⁶³ Ibid.

resources. The majority of conflicts over violations of freshwater quota agreements happen intrastate not interstate, suggesting that more identity violence between ethnic groups would erupt if governments did not have some control over freshwater resources.⁶⁴ Unrest is fueled by the loss of livelihoods and rural identity, as well as economic hardships from growing food prices in cities, created by crumbling infrastructure unable to provide farmers in the region with necessary freshwater resources. To obtain freshwater resources, people are apt to attack whoever is perceived as preventing their group from obtaining its desired freshwater, whether it be the state or the easier target of another ethnic group.

The period directly following the collapse of the Soviet Union additionally witnessed abnormally high freshwater flows in Central Asia. For this reason the people of the region laid claim to more freshwater than the Aral Sea Basin is normally able to provide.⁶⁵ Conflict arises now that people are not being supplied with what they feel they are entitled to, based on their ethnic or other identified group's previous claim. Historical control of freshwater resources by certain groups also plays a role. For instance the Tajiks historically controlled the Isfara River, which is now under the control of the Kyrgyz, leading to disputes between the two.⁶⁶ We therefore see that freshwater resources' connection to conflict in the region is more fundamentally a question of identity and entitlement than economic deprivation. These freshwater resources have cultural significance to ethnic groups and communities in the region, who feel entitled to freshwater and believe in their own historical connections to it. Now that these

⁶⁴ Ibid, 524.

⁶⁵ Ibid.

⁶⁶ Valery Tishkov, *Ethnicity, Nationalism and Conflict in and after the Soviet Union: The Mind Aflame*, (Sage Publications, California, 1997), 74.

connections between man and resource have been broken, groups are trying to win back what they feel is theirs, a part of who they are, violently if need be.

It is not just quantity that is important however. The quality of freshwater supplied also plays a role in the politics of the area. Increases in the salinity of water, and the presence of pesticides and fertilizers in freshwater resources means that those downstream are being slowly poisoned by the freshwater controlled and first used by those upstream. For instance protests have occurred in Uzbekistan over an aluminum plant in Tajikistan that pollutes a shared river.⁶⁷ Additionally the Kara-Kalpak minority in Uzbekistan finds that 70% of adults and 60% of children are unwell because of exposure to upstream pollution. Such high percentages of sickness have caused political angst in the regions of Uzbekistan where the Kara-Kalpaks live.⁶⁸ Uzbekistan has also found that 3 million acres of its farmland is now too salty to be farmed, putting the whole state's economy at risk.⁶⁹ Downstream groups consequently feel like the victims of upstream groups, sparking acts of retribution, both through state action and through smaller-scale ethnic violence and protest. It is therefore more correct to say that lack of *clean* freshwater resources is what threatens local identities, creating conflict in the region.

A focus on some of the Central Asian states and regions may be helpful in understanding how freshwater resources create identity conflict in Central Asia. First there is Uzbekistan and its large cotton-farming economy. In a survey 90% of Uzbekistan's population answered in the affirmative that social order and discipline need

⁶⁷ Ibid, 79.

⁶⁸ Ibid.

⁶⁹ Joost Van Der Meer, et al., "Perceived Health and Psychosocial Well-being in the Aral Sea Area: Results from a Survey in an Area of Slow Environmental Degradation," *Toxic Turmoil: Psychological and Societal Consequences of Ecological Disasters*, ed. Johan Havenaar, Julie Cwinkiel, Evelyn Bromet, (Kluwer Academic, New York, 2002), 167.

to be strengthened in their country, suggesting Uzbekistan is unlikely to see much internal unrest.⁷⁰ One reason people are settling for active government control of their lives is because of their dependence on freshwater for cotton growing which makes them in turn dependent on government maintained irrigation. This does not mean that there is no unrest. Many Uzbeks believe in an “Uzbeks first” distribution of resources which strains interethnic relations, demonstrating once again the link environmental resources can have to nationalism.⁷¹ There have been clashes over ethnicity and freshwater especially in the regions of Uzbekistan within the Ferghana Valley such as Andijan in May and Osh in June of 1990.⁷² Additionally internal conflicts have included a spat in which the Suirkhandarya and Bukhara minorities were blamed for water shortages in the Khorezm Province.⁷³

In the realm of interstate politics, while Uzbekistan is a downstream state, it also has the military and political power to make it a potential leader in Central Asian politics.⁷⁴ Uzbekistan has used military incursions and boundary claims in attempts to widen its control of regional land and freshwater resources including in the Osh region of Kyrgyzstan and the Khujand region of Tajikistan (both in the Ferghana Valley).⁷⁵ Additionally Uzbekistan is quick to defend its freshwater from upstream threats, Brahma Chellaney saying that “In the Amu Darya Basin, an activity that was viewed positively in the soviet times- to increase upstream water-storage capacity for the benefit of the regional economy- is in the post-independence era of sharpening intercountry and cross-

⁷⁰ Ibid, 396.

⁷¹ Ibid, 393.

⁷² Ibid, 374.

⁷³ Christine Bichsel, Kholnazar Mukhabbatov and Lenzi Sherfedinov, “Land, Water, and Ecology,” *Ferghana Valley: The Heart of Central Asia*, ed. S. Frederick Starr, (M.E. Sharpe, New York, 2011), 263.

⁷⁴ Micklin, “Water in the Aral Sea Basin of Central Asia: Cause of Conflict or Cooperation,” 524.

⁷⁵ Olcott, “Central Asia: Common Legacies and Conflicts,” 35-39.

identity rivalry considered a threat to the interests of the dominant user of water, the downriver power, Uzbekistan.”⁷⁶ Uzbekistan has used threats of military action to stop dam projects by both Tajikistan and Kyrgyzstan on the Vakhsh River. Uzbekistan is a state with strong dependence on freshwater resources originating in upstream states. The government takes a very active role in securing freshwater for its citizens and attempts to control as much of the regional freshwater resources as possible, ensuring its economy, well-being and therefore identity of its citizens through conflict and the bullying of other states. Should Uzbekistan have all the freshwater resources it needs to maintain its identity as a state, it would have little reason to constantly be a thorn in the side of the other Central Asian countries.

Tajikistan is another good example because it shows the complex web of “debts and obligations” that cotton farmers in the area are saddled with. Many farmers in Tajikistan are contractually obligated to have a crop that is 80% cotton and stack up endless debts, mostly with the government which exploits the debt in its quest to maintain control.⁷⁷ The government retains control of the majority of internal irrigation systems, which only provide 36% of Tajikistan’s citizens with the necessary 20-50 L of freshwater per day thought suitable for survival, let alone fruitful farming.⁷⁸ This is particularly problematic considering Tajikistan is an upstream state with control over significant amounts of regional freshwater resources. Because non-irrigated farms produce at best a third of what an irrigated farm does in Central Asia, such policies have made the people of

⁷⁶ Chellaney, *Water, Peace, And War*, 178.

⁷⁷ David Stern, “In Tajikistan, Debt-Ridden Farmers Say They Are the Pawns,” *The New York Times*, 15 October 2008, A12.

⁷⁸ Stucker, “Environmental Injustices, Unsustainable Livelihoods, and Conflict,” 251.

Tajikistan increasingly dependent on family, ethnic and regional group support.⁷⁹ When loss of freshwater threatens the individual they turn to these groups for help, increasing their identification with the group and their distrust of others. Freshwater scarcity additionally produces unemployment in the young which is believed to have led to an increase in religious fundamentalism.⁸⁰ One explanation for the Tajik civil war is that this religious fundamentalism and increase in regional identity mobilized the population.⁸¹ Since lack of freshwater resources helped create the regional identities as well as the religious fundamentalism, it was alienation from local freshwater resources that created a crisis of identity which led to the civil war. During the civil war some of the heaviest fighting witnessed was in Qurghonteppa Province which has access to large amounts of irrigation resources, suggesting that freshwater was a major prize to be won in the conflict.⁸² However the civil war has not been the only conflict weathered by Tajikistan. For example in 2008 Tajik villagers stopped the construction of a dam on a river that feeds both Tajiks in Khoja-i alo, and Kyrgyz in Yakkaterak and Samarkandek. One of the Tajik activists claimed this was done because they felt the Kyrgyz were trying to make claims to a disputed border. He claimed that should the Kyrgyz win this dispute the local Tajiks would lose access to much of their freshwater and therefore their livelihoods and rural identities.⁸³

Finally, no discussion of freshwater conflict in Central Asia is complete without an examination of the Ferghana Valley, part of the Syr Darya Watershed. While “in terms of

⁷⁹ Ibid, 255-257.

⁸⁰ Ibid, 243.

⁸¹ Ibid, 241.

⁸² Ibid, 294.

⁸³ BBC Monitoring Central Asia Unit, “Tajik paper warns against interethnic conflicts at borders with Kyrgyzstan,” translated from Russian 16 April 2008, Khujand Varorud, 9 April 2008.

geography, economics, and culture, the Ferghana Valley is a single country,” it is now split by the state borders of Uzbekistan, Tajikistan and Kyrgyzstan.⁸⁴ The Ferghana Valley is a major cotton growing region and features a large network of irrigation pipes that are now also split and divided by state borders, just like the region’s ethnic groups.⁸⁵ It is because of this that the Ferghana Valley is now known to be a hot spot for conflict and violence over freshwater rights, resulting in hundreds of deaths in recent history.⁸⁶ Some of the ethnic violence includes Turks attacking Uzbeks and Tajiks in 1989 and Uzbeks fighting Kyrgyz in 1990.⁸⁷ Additionally smaller minority ethnic groups have sparked violence in the valley, including a community of Meskhetians living in the Uzbek part of the valley.⁸⁸ States have additionally used freshwater as a coercive measure for national interests leading to identity violence in the valley.⁸⁹ For instance Uzbekistan’s threat to send troops into Kyrgyzstan’s area of the Ferghana Valley led to Kyrgyzstan’s counter threat to blow up a dam that would have killed thousands throughout the valley.⁹⁰

Before being split into different states, the Ferghana Valley was peaceful with most people “unaware” of ethnicity, not associating as strongly with various divisive identities as they do today. Local people have now been forced into the middle of ethnic conflicts

⁸⁴ Baktybek Beshimov, Polat Shozimov, and Murat Bakhadyrov, “A New Phase in the History of the Ferghana Valley 1992-2008,” *Ferghana Valley: The Heart of Central Asia*, ed. S. Frederick Starr et al., (M.E. Sharpe, New York, 2011), 224.

⁸⁵ Bichsel, Mukhabbatov and Sherfedinov, “Land, Water, and Ecology,” 259.

⁸⁶ Michael Wines, “Grand Soviet Scheme for Sharing Water in Central Asia Is Foundering,” *The New York Times*, 9 December 2002.

⁸⁷ Dru Gladney, “China’s Interests in Central Asia: Energy and Ethnic Security,” *Energy and Conflict in Central Asia and the Caucasus*, ed. Robert Ebel and Rajan Menon, (Rowman & Littlefield, New York, 2000), 220.

⁸⁸ Yaacov Ro’i, “Central Asian Riots and Disturbances, 1989-1990: Causes and Context,” *Central Asian Survey*, 10:3, (1994), 23.

⁸⁹ “Report analyzes water pressures in Central Asia,” *The Times of Central Asia*, 12 September 2014.

⁹⁰ Sievers, “Water, Conflict, and Regional Security in Central Asia.”

over resources.⁹¹ It is important to point out that states have been unsuccessful in creating national identities in the region, but that ethnicities have formed the focus of people's attempts to allocate and control freshwater resources.⁹² The Ferghana Valley, rife with several dispersed groups all of which need access to shrinking freshwater resources, is consequently the center of violent freshwater conflict in Central Asia. Now that people are faced with new political borders and senses of community, and therefore new freshwater rights, local identities have become critical and something worth killing for in the Ferghana Valley.

Central Asia is therefore unstable, state, ethnic, and community identities fueled by problems with the freshwater resources that have become the very core of life in the region. Conflict arises as these groups attempt to gain greater control of freshwater resources for their own group's security and well-being. This makes Central Asia an excellent example of how freshwater resources can be the causation of conflict. Causation of conflict is, however only part of why freshwater resources are a fundamental factor in conflict. In the following sections additional case studies will demonstrate mobilization of freshwater resources impacting the strategy and tactics of conflict in the Former Soviet Union.

⁹¹ Beshimov, Shozimov, and Bakhadyrov, "A New Phase in the History of the Ferghana Valley 1992-2008," 206.

⁹² Sievers, "Water, Conflict, and Regional Security in Central Asia."

Resource Mobilization as Strategy and Tactics: Georgia-Abkhazia Case Study

Based on Dawson's idea of resource mobilization, freshwater resources can additionally be understood as a fundamental factor in conflict through their influence on power equations within conflict, dictating strategies and tactics that various entities may have at their disposal. In this way freshwater resources act as political tools leading a conflict either closer to peace or deeper into instability. Though focused on causation, the Central Asian case study above demonstrates many examples of freshwater resources additionally being mobilized as a weapon in the conflicts they created. In the following argument this characteristic of freshwater resources in the strategy and tactics of conflict will be examined in greater detail. First the ability to harness freshwater resource mobilization to create peace or stability will be shown through a case study on the Georgian-Abkhazian conflict, and then freshwater resource mobilization as intervention will be shown through a case study on Russian intervention.

In many contexts freshwater resources may be mobilized in ways that stabilize a conflict and bring about peace. Like in any peace there are certainly winners and losers, or groups that are happy with the results as well as some who are not. The critical element is that freshwater resources were mobilized to create this political reality. Within the Former Soviet Union an excellent example of this is the conflict between the sovereign state of Georgia and the separatist region of Abkhazia.

Since before it became an independent state, several ethnic groups within Georgia have attempted to separate from the whole; seeking either independence or recognition

under a different political entity. While South Ossetia and its struggle are better known in the West because of the 2008 conflict between Georgia and Russia, Abkhazian separatism has been just as deadly and consuming for the Georgians. Abkhazia initially fought to be an independent soviet republic, however when the Soviet Union collapsed it suddenly found itself under the sovereign control of Georgia.⁹³ There has been off-and-on violence between the two, a bloody but short civil war in 1992, and again some fighting during the 2008 conflict, leaving both sides bloodied and bitter. Abkhazia not only faces many casualties, but also the costs of rebuilding after these conflicts and living with the lingering consequences of seeking independence. The destruction even includes the Abkhazian capitol, Sukhumi, which fell during the civil war. During this conflict Georgian military forces proved superior, only being pushed out of Abkhazian territory when the Russian Army and Chechen guerillas entered the fray.⁹⁴ Over all estimates conclude that 10,000-15,000 people were killed in this conflict alone.⁹⁵ Beyond the direct violence, Georgia has blockaded Abkhazia for years, forcing Abkhazia to have a limited economy based mostly on subsistence farming and what is provided to them by their ally Russia.⁹⁶ While military and economic power has been important within this conflict, the mobilization of freshwater resources has also been a factor.

The Inguri River in particular has played a critical role in the on-going conflict between Georgia and Abkhazia. This river serves as a rough border between the lands claimed and controlled by Abkhazia and Georgia proper and has since become the focus

⁹³ Darrell Slider, "Democratization in Georgia," *Conflict, Cleavage, and Change in Central Asia and the Caucasus*, ed. Karen Dawisha and Bruce Parrott, (Cambridge University Press, NYC, 1997), 170.

⁹⁴ *Ibid*, 172.

⁹⁵ Tom Trier, Hedvig Lohm, and David Szakonyi, *Under Siege: Inter-Ethnic Relations in Abkhazia*, (Columbia University Press, NYC, 2010), 17.

⁹⁶ Dov Lynch, *Engaging Eurasia's Separatist States: Unresolved Conflicts and De Facto States*, (United States Institute of Peace Press, Washington D.C., 2004), 65.

of Commonwealth of Independent States (CIS) peacekeeping. Mobilization has been threatened should incursions be made across the river by either side. Abkhazia even destroyed bridges over the river for physical protection from Georgian raids conducted in part to rescue kidnapped Georgian officials in 1992, but that have since continued to occur as part of the ethnic cleansing attempts by both sides to control the region.⁹⁷

Additionally Abkhazia has threatened raids of Georgian establishments across the river to gain Georgian concessions.⁹⁸ Mobilization of the freshwater resources of the Inguri River as a political and military boundary is therefore critical, both sides fighting for control of the river, one to mobilize the river to close the border, the other to keep it open.

Mobilization of the river for Abkhazia equals prevention of Georgian invasion while Georgia needs to mobilize the river if it is to regain control of this separatist region. This power dialectic, the ability to mobilize the river as a boundary, is what makes the Inguri River the natural choice as a border for peacekeepers to maintain. Peacekeeper presence at the river has prevented a significant Georgian military excursion in Abkhazia since the 1992 civil war, except during the 2008 Georgian-Russian conflict.

The Inguri River is more than a boundary though. Historically both sides have maintained joint control of the river and its resources. Joint control or joint mobilization means that both sides maintain the ability to partially mobilize the river and its resources, having physical control of some parts of the river but not all. This mobilization balance of power continues to have implications on the conflict and has led to greater Abkhazian autonomy. It has been a factor of peace, or at least stability and cooperation throughout

⁹⁷ Thomas Goltz, "The Paradox of Living in Paradise: Georgia's Descent into Chaos," *The Guns of August 2008: Russia's War in Georgia*, ed. Svante Cornell and S. Frederick Starr, (M.E. Sharpe, NYC, 2009), 23.

⁹⁸ Jonathan Aves, *Georgia: From Chaos to Stability?*, (Royal Institute of International Affairs, London, 1996), 28.

the conflict. This is particularly true for the freshwater and hydroelectric resources provide by the dam complex on the river.

The Inguri River hydropower complex provides around 5.5 billion KWH yearly, meeting over forty percent of Georgia's energy needs.⁹⁹ Traditionally Georgia has controlled the dam itself while Abkhazia has controlled the power plants, with operations being run by both Georgian and Abkhaz managers.¹⁰⁰ (For a map of the hydroelectric complex please see the Appendix). This means that both sides have some ability to mobilize the river's hydropower resources. Should either side reap the benefits of the hydropower facility, they must work with the other, helping prevent sabotage by either group. It is this splitting of the hydropower complex that best characterizes either side's ability to mobilize the Inguri River for political gain. All in all this joint mobilization has historically provided a 60-40 percent split of the hydroelectricity to Georgia and Abkhazia respectively.¹⁰¹ With this one resource providing much of the energy utilized by both groups, the Inguri River is important not only for economic reasons. Its joint mobilization is critical for everyday life in Georgia and Abkhazia. These resources are so critical to both societies that during the civil war cooperation over the river continued, the hydroelectric complex being untouched though chaos reigned all around it.¹⁰² Scholars Paula Garb and John Whiteley say that the hydroelectric "complex is simply too vital for either side to lose," and so battle plans were made to specifically leave the Inguri River

⁹⁹ BBC Monitoring Trans Caucasus Unit, "Abkhazia may demand fresh energy distribution balance with Georgia," BBC World Service, 13 October 2008.

¹⁰⁰ Paula Garb and John Whiteley, "A Hydroelectric Power Plant Complex on Both Sides of a War: Potential Weapon or Peace Incentive?," *Reflections on Water: New Approaches to Transboundary Conflicts and Cooperation*, ed. Joachim Blatter and Helen Ingram, (MIT Press, Cambridge, 2001), 221.

¹⁰¹ BBC Monitoring Trans Caucasus Unit, "Abkhazia may demand fresh energy distribution balance with Georgia".

¹⁰² Garb and Whiteley, "A Hydroelectric Power Plant Complex on Both Sides of a War," 214.

hydropower complex in operation.¹⁰³ Cooperation has been cemented, the river's joint-mobilization now a major focus of diplomatic initiatives such as the Georgian-Abkhaz Coordinating Committee on Practical Issues.¹⁰⁴ In 1997, for instance, the Coordinating Council stated that one of its focuses was the "establishment of effective cooperation" towards energy, the economy and the environment including the Inguri River.¹⁰⁵ There have also been several negotiations seeking to ensure that joint mobilization of the hydroelectric complex continues. The United Nations and European Union have focused on restoration of the dam and hydroelectric plants, finding that such a project "has set a positive example for the donor community in terms of promoting economic development as a means of conflict resolution and establishing trust between two sides."¹⁰⁶

Additionally workers at the hydroelectric plant point out that sharing the power complex has been one of the only, and also most effective, institutions starting dialogue, trust building, and cooperation between the two warring groups.¹⁰⁷ Garb and Whiteley even recall a story where an Abkhaz veteran of the civil war, use to seeing only the worst in Georgians, was surprised and touched by Georgian engineers at the Inguri plant who expressed legitimate empathy and regret over a power-line problem that temporarily limited power to Abkhazian territory.¹⁰⁸ Joint mobilization of this hydropower complex

¹⁰³ Ibid, 225.

¹⁰⁴ Ibid, 224.

¹⁰⁵ "Statute of the Coordinating Council, 18 December 1997," *Regional Conflicts in Georgia: The Collection of Political-Legal Acts, 2nd*, ed. Tamaz Diasamidze and Nana Tchikoidze-Japaridze, (OSCE Mission to Georgia, Tbilisi, 2008), 301.

¹⁰⁶ Trier, Lohm, and Szakonyi, *Under Siege: Inter-Ethnic Relations in Abkhazia*, 14-15.

¹⁰⁷ Garb and Whiteley, "A Hydroelectric Power Plant Complex on Both Sides of a War," 225.

¹⁰⁸ Ibid, 231.

therefore acts as a source of cooperation, peace, and goodwill in the middle of an ugly conflict.¹⁰⁹

While the above influence is economic in nature, the relevant freshwater resources are not simply salient for their ability to fund either group. The Inguri River is being mobilized for political gain and cooperation, not just monetary compensation. The Inguri River is critical for both Georgia and Abkhazia to survive as independent entities. Garb and Whiteley have even said that “water in this case is a security issue, because its use in the production of electricity at the Inguri complex is fundamental to national survival and to the building of the nation-state,” in both Georgia and Abkhazia.¹¹⁰ This is not a rebel group attempting to mobilize resources for money, or a rebellion for an equal share of local resources. This is a separatist movement using its joint mobilization of a necessary

¹⁰⁹ It should be noted that the Inguri River complex is not the only hydropower complex that has been viewed as a potential source of peace in a conflict within the Former Soviet Union. The conflict between Armenians and Azerbaijanis over the Nagorno-Karabakh region has also seen some similar influence. Gegham Baghdasaryan, a politician from Nagorno-Karabakh believes that the separatist region needs better freshwater supplies, worrying if the region will survive. (Casperson, 939). Additionally one Azerbaijani news source reports that Armenian fighters have purposely polluted waters used by Azerbaijani farmers (Rajabova). BBC however reports the claims of a Nagorno-Karabakh official that “it is noteworthy that from time to time, Azerbaijan becomes obsessed with environmental issues, but all of its interest is somehow connected to either Armenia or the Nagornyy Karabakh republic, be it wild fires, the nuclear power plant, or the Sarsang Dam” (BBC Monitoring Trans Caucasus Unit, 3 July 2013). The Sarsang Dam on the Tartar River is of particular interest. Azerbaijan claims that the dam is in serious disrepair and could collapse causing major destruction to Azerbaijan while Armenia tries to downplay such claims. Additionally Azerbaijan claims that Armenians have used the dam to prevent freshwater from reaching Azerbaijani farmers (The Caspian Review). US Diplomat James Warlick has called for the joint mobilization of the Sarsang Dam for freshwater, irrigation and electricity. He says that “people on both sides of the contact line could work jointly in order to make a direct and positive impact on those who are living in areas affected by the conflict. We [the US government] continue to support any measures that could reduce tensions and begin restoring trust between both sides” (BBC Monitoring Trans Caucasus Unit, 24 May 2014). Nagorno-Karabakh spokesman Davit Babouya agrees saying that it “is good that the US co-chair is also of the opinion that the joint use of Sarsang water reservoir can be the start of cooperation between the two independent states, Nagornyy Karabakh and Azerbaijan” (BBC Monitoring Trans Caucasus Unit, 19 May 2014). The Deputy Prime Minister of the region further claims that the dam was already being mobilized for the benefit of both parties and that the agreement could further good relations, but that Baku refuses to work with the separatist region (Turan Information Agency). Similar to the Georgian example we therefore see a dam and its mobilization factor into a volatile separatist situation.

¹¹⁰ Garb and Whiteley, “A Hydroelectric Power Plant Complex on Both Sides of a War,” 214.

resource to win its independence through the benefits provide by both cooperation and at times coercion.

As in any conflict, cooperation is often matched with coercion. A group may, for instance, mobilize a river to demand concessions from another. Some would call this a “coerced, but effective cooperation,” both sides attempting to gain more control of the resources and therefore more control over the political situation.¹¹¹ The hydroelectric complex on the Inguri River has been used for political coercion many times. In 1993 an explosion at the plant temporarily shut down power. This act was seen as retribution for the ousting of Georgian President Zviad Gamsakhurdia more so than part of the conflict between Georgia and Abkhazia, but it demonstrates the political nature of the river and its resources.¹¹² Events directly linked to the conflict between Georgia and Abkhazia started before Georgia was an independent state, just as the rift between Georgia and Abkhazia is older than the fall of the Soviet Union. In 1989 saboteurs broke into the hydroelectric plant and released water, preventing power production and creating a blackout across the Georgia Soviet Republic until Soviet authorities diverted energy from other sources.¹¹³ In 1997, Abkhazia temporarily cut Georgian power to force Georgia to reverse aggressive actions such as blocking Abkhazian international phone communications. The coercion worked and Abkhazia was able to get the Georgians to reverse many of their aggressive actions and to agree to a diplomatic meeting to discuss the stabilization of Georgian-Abkhaz relations.¹¹⁴ Instead of turning to violence, Abkhazia was able to mobilize a freshwater resource to meet political goals, such as the

¹¹¹ Ibid, 215.

¹¹² “Power-Plant Blast Darkens Much of Post-Soviet Georgia,” *The New York Times*, 5 May 1993.

¹¹³ “Power Supplies Sabotaged in Georgia,” *Sydney Morning Herald*, 22 July 1989, 13.

¹¹⁴ Garb and Whiteley, “A Hydroelectric Power Plant Complex on Both Sides of a War,” 226.

restoration of communication to the outside world, the joint mobilization of the Inguri River in the conflict creating unique opportunities for stability-creating coercion.

A jointly mobilized freshwater resource has therefore been utilized by the separatist movement, Abkhazia, to demand concessions from Georgia while protecting itself from Georgian aggression, leading to a more stable situation in the region. Because of the power distribution created by joint mobilization of the Inguri River, Abkhazia is able to have a stable freshwater and energy source through which to rebuild its material and economic infrastructure, while alternatively coercing and cooperating with Georgia so as to have less military and political interference, allowing the political infrastructure of self-government to be created. The joint mobilization of freshwater resources forces both groups to open dialogue and diplomacy while allowing the stability needed for the Abkhazians to strengthen their republic. The Inguri River acts like a strategic tool for political gain. If Georgia had the ability to completely mobilize the Inguri River, Abkhazia would have little recourse since it would be able to threaten Georgia neither militarily nor through the use of the Inguri River as a political weapon. Should Abkhazia gain full mobilization of the river, Georgia would have to react violently to at least restore the current power balance since it is so dependent on the river. If it wants to prevent Abkhaz independence, the contextual evidence suggests Georgia will have to increase its position in this freshwater resource power dialectic, gaining more control of the Inguri River. One reason this power balance has such an effect may be because Georgia, as the larger user of Inguri resources, has more to lose. Abkhazia, however, is also greatly dependent on Inguri River resources and suffers from their interruption as well. Perhaps as the group seeking its independence and freedom, it is more willing to

accept the consequences of mobilizing the Inguri River as a political tool. Control of the power plants as opposed to the dam itself may additionally facilitate easier mobilization of the Inguri River for political gain. In any case, Abkhazia has become increasingly independent from Georgia, suggesting that the joint mobilization and subsequent cooperation and coercion is working. Stability has been found through the utilization of joint mobilization of a freshwater resource.

Resource Mobilization as Strategy and Tactics: Russian Intervention Case Study

The Georgian-Abkhazian case study therefore suggests that joint mobilization of freshwater resources can be used as a peaceful yet political tool. Like any factor in a power relationship, however, freshwater resource mobilization also has the power to destabilize and can even allow outside influence, acting as a weapon of intervention. Russian intervention into the politics of its neighbors, into the Georgian-Abkhaz and Ukrainian conflicts specifically, demonstrates how mobilization of freshwater resources may also be utilized by an outside power to intervene in the affairs of a separate entity.

While the previous Georgian-Abkhazian case study presented an accurate depiction of the situation in the region historically, this conflict continues to be dynamic, changing in nature. Through increasing Russian influence, the power to mobilize the Inguri River is shifting, altering the political reality of the situation. Russian intervention appears to be granting Abkhazia a greater ability to mobilize the Inguri River, weakening Georgia's position. Unfortunately for Abkhazia their gains from this power shift are superficial at best. Russia has nearly complete control over its relationship with Abkhazia, making it the main power holder in the conflict today. One way that Russia has been able to make the conflict work towards its own, third-party interests has been through Russian mobilization of the Inguri River.

There are many reasons that Russia could be interested in gaining full mobilization of the Inguri River and, as a result, control over Georgia and Abkhazia. It may be attempting to widen its political influence over the Russian periphery including Georgia and

Abkhazia, a Council of Europe resolution finding Russian actions in Abkhazia to be “attacks on the economic and strategic infrastructure of the country which can be deemed to be either a direct attack on the sovereignty of Georgia...or an attempt by Russia to extend its influence over a "near abroad".”¹¹⁵ This is particularly important for Russian interests because it would assist in foiling Georgia’s plans to make a “Caucasus corridor” of gas pipelines that do not transverse Russia.¹¹⁶ Russia may, however, wish to simply bring peace to the region, helping the Abkhaz gain independence to quiet a turmoil ridden area that has significant impacts within Russia’s own slice of the Caucasus region.

Regardless of why, Russian “support” for Abkhazia has increased steadily, Russia even recognizing Abkhazia as an independent and sovereign state in 2008.¹¹⁷ Abkhazians are both thankful for Russian support but also weary, realizing that they are gaining independence from one state while losing it to another. Russia assisted the Abkhaz in their civil war, and again during the Georgian-Russian War of 2008. Currently Russian troops act as peacekeepers within the Abkhaz republic. Russia has propped up the Abkhazian economy and improved its infrastructure; however this has translated into Abkhazian economic dependence on Russia. Hundreds of thousands of Abkhazians have also been awarded joint citizenship in the Russian Federation.¹¹⁸ Russia has additionally corrupted Abkhazian politics, such as when Abkhazian President Bagapsh fell from Russia’s favor leading to a Russian blockade of Abkhazia until the Abkhaz agreed to a

¹¹⁵ “Resolution 1633 of the Parliamentary Assembly of Council of Europe,” 2008, *Regional Conflicts in Georgia: The Collection of Political-Legal Acts, 2nd*, ed. Tamaz Diasamidze and Nana Tchikoidze-Japaridze, (OSCE Mission to Georgia, Tbilisi, 2008), 616.

¹¹⁶ Aves, *Georgia: From Chaos to Stability?*, 1-2.

¹¹⁷ Decree of the President of the Russian Federation on Recognition of the Republic of Abkhazia,” 26 August 2008, *Regional Conflicts in Georgia: The Collection of Political-Legal Acts, 2nd*, ed. Tamaz Diasamidze and Nana Tchikoidze-Japaridze, (OSCE Mission to Georgia, Tbilisi, 2008), 608.

¹¹⁸ Trier, Lohm, and Szakonyi, *Under Siege: Inter-Ethnic Relations in Abkhazia*, 8-20.

new government involving more Russian-friendly politicians.¹¹⁹ Deals made between Georgia and Russia, especially over energy, have created fears within Abkhazia of an attempt to sideline them, privatizing control of Abkhaz resources including perhaps the Inguri River.¹²⁰ Most recently President Putin of Russia solidified his country's control over Abkhazia through the signing of a treaty in November 2014 granting the Russian government decision-making power and increased control over the Abkhazian military, its foreign policy and economy. While Georgia called this an illegal movement towards annexation, it suggests that the Abkhaz have become so dependent that they are unable to truly saying no to Russia.¹²¹

Full mobilization of the Inguri River has long been a focus of the Russians as they attempt to gain influence over both Abkhazia and Georgia. For instance while traveling in the area scholars Alexander Cooley and Lincoln Mitchell remember feeling like Russia controlled the Inguri River, its helicopters patrolling above while Russian FSB officers often stopped people in the surrounding area.¹²² This presence is part of what is officially a Russian peacekeeping mission in Abkhazia. The Russians claim that their troops need to patrol the area around the Inguri River because the “withdrawal of Russian peacekeepers can lead to catastrophic consequences for the civil population and destabilization of the situation in these regions.”¹²³ While this may be true, it is also clear

¹¹⁹ Ellen Barry, “Self-Ruled Region Remains Wary of Russian Backers,” *The New York Times*, 17 May 2009, A12.

¹²⁰ *Ibid.*

¹²¹ David Herszenhorn, “Pact Tightens Russian Ties with Abkhazia,” *New York Times*, 24 November 2014, <www.nytimes.com/2014/11/25/world/europe/pact_tightens_russian_ties_with_abkhazia.html?_r=0>.

¹²² Alexander Cooley and Lincoln Mitchell, “Abkhazia on Three Wheels,” *World Policy Journal*, 27:2 (2010), 76.

¹²³ “Statement of the State Duma on policy of the Russian Federation regarding Abkhazia, South Ossetia, and Transdnistria,” 21 March 2008, *Regional Conflicts in Georgia: The Collection of Political-Legal Acts*, 2nd, ed. Tamaz Diasamidze and Nana Tchkoizde-Japaridze, (OSCE Mission to Georgia, Tbilisi, 2008), 592.

that nobody uses the Inguri River anymore without Russian military approval, drastically changing the previous joint mobilization of the river and the security it provided to Georgia and Abkhazia. One paramount Russian military installation in the area is a joint Abkhaz-Russian military base near the Kodori Gorge and the hydropower complex on the Inguri River.¹²⁴ This base provides Russia the capability to rapidly restore order to the power complex, but also to ensure its influence over transmission of hydropower leading many to wonder if Russia truly favors joint mobilization of the Inguri River. Though the Russian government does not physically control any of the hydropower complex, its ability to militarily influence it on a whim suggests that Russia can mobilize the Inguri River for its own gain.

One thing is certain; Georgia has lost some of its power to mobilize the resources of the river because of Russia's increasing influence, an important factor to consider when studying Georgia's position in the conflict. Energy expert Davit Ebraldidze fears that "the fact that the dam of the Inguri plant is on the Georgian-controlled territory and the remaining is in Abkhazia does not mean that both sides enjoy the same rights" since "[t]he unfortunate fact is that Georgia possesses no real levers" to pressure Abkhazia or Russia over Inguri River disputes.¹²⁵ Now with Russia behind them and willing to provide them with electricity should Inguri hydroelectric production be interrupted, the Abkhaz have fewer potential consequences from political mobilization of the river by either side, and are therefore less fearful of Georgia. Forty percent of Georgian power

¹²⁴ Tracey German, "Securing the South Caucasus: Military Aspects of Russian Policy towards the Region since 2008," *Europe-Asia Studies*, 64:9, (2012), 1655-1656.

¹²⁵ BBC Monitoring Trans Caucasus Unit, "Abkhazia may demand fresh energy distribution balance with Georgia."

still comes from the Inguri River complex, leaving Georgia dangerously dependent.¹²⁶ An emboldened Abkhazia is consequently starting to demand more control of the plant, former President Bagapsh saying that “The Inguri hydro-electric power plant has always been ours...Georgia has no rights whatsoever to it...during any kind of talks it will be us who will dictate the conditions.”¹²⁷ Though the Abkhazian Foreign Minister Sergey Shamba claims that there are however no plans to end joint mobilization or to prevent Georgians from working in the dam, it seems inevitable that in the future Abkhazia will gain full control of the plant, at least superficially, with Russia as a backer. Unfortunately for Abkhazia such a situation would actually function as a Russian full mobilization of the river and its resources. Davit Ebralidze claims that Russia is behind Abkhazian demands for more control while trying to remain diplomatically hidden itself, so that the West does not blame it for bullying Georgia.¹²⁸ It is known that after the war in 2008 Abkhazia did gain control of parts of the hydroelectric operation that had previously been under Georgian control, but it remains unclear how much since some of these reports were likely Abkhazian propaganda.¹²⁹

Interestingly enough, Georgia has recently made a deal with the Russian company InterRAO to share control of the Inguri dam for a guarantee of forty to fifty percent of the hydropower outputs, the Georgian Minister of Economic Development Lasha Zhvania claiming that “one hundred percent of Inguri hydroelectric plant was, is, and will be the property of Georgia forever,” with a Georgian director leading a mixed Russian and

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ Ibid.

¹²⁹ Hasan Kanbolat, “The New Balances in the Caucasus After the “Five-Day War”,” 31 May 2009, *Independence of Abkhazia and Prospects For the Caucasus*, ed. John Colarusso, (CSA Global Publishing, 2010), 112.

Georgian workforce in the dam. However this shows that Georgia is actually losing its hand to Russia, Georgian opposition leader Levan Vepkhvadze claiming that the \$9 million agreement is “a very low price for losing this vitally important object in Abkhazia.” Additionally this deal demonstrates that Russia, not Abkhazia, is truly increasing its ability to mobilize the Inguri River, Abkhazian Foreign Minister Sergey Shamba complaining in vain that any deal should have been agreed to by Abkhazia.¹³⁰ Additionally Georgia has passed a law reconfirming its ability to control the Inguri River Basin and to regulate resources in occupied territory like Abkhazia.¹³¹ How much they will be able to stand up to Russia to enforce this law has yet to be seen, but it is clear that Georgia realizes it is losing its joint mobilization and therefore its previous position in the power balance over the Inguri River. It is now attempting to regain some of the ability to mobilize the river that it has lost. Russia is however slowly gaining the ability to fully mobilize this paramount regional resource, increasing its influence in Georgian and Abkhazian affairs.

It is unclear what the consequences of increased Russian mobilization of the Inguri River will be. However, it is clear that both Georgia and Abkhazia are likely to suffer as a result of losing their joint mobilization of the freshwater resources. The stability created by the joint mobilization of the river will likely be ended as Russia mobilizes the river to gain concessions from Georgia. The Inguri River no longer acts as a means for Abkhazian independence, but as a means for cementing Abkhazia’s subservience to

¹³⁰ Olesya Vartanyan and Ellen Barry, “Georgia’s Energy Minister Is Assailed for Deal with Russia,” *The New York Times*, 14 January 2009, A10.

¹³¹ “Law of Georgia on occupied territories,” 23 October 2008, *Regional Conflicts in Georgia: The Collection of Political-Legal Acts, 2nd*, ed. Tamaz Diasamidze and Nana Tchikoidze-Japaridze, (OSCE Mission to Georgia, Tbilisi, 2008), 621.

Russia. Abkhazia will therefore suffer from a lack of independence and successful political concessions similar to what their situation would be if Georgia had full mobilization of the river. Losing its joint mobilization of the river, Georgia will have to either militarily or diplomatically retake what it has lost, or quickly find alternate sources of both freshwater and electricity to avoid the possibility of destructive mobilization of the Inguri River by Russia. In this way the Inguri River is a political tool for Russian interests, similar to Russia's use of oil and natural gas as a political weapon, according to western governments and media.

Beyond the Georgian-Abkhazian conflict, the mobilization of freshwater is also influencing Ukrainian-Russian relations, which have recently descended into serious conflict. This turmoil all started with the Euromaidan protests in late 2013 which led to President Viktor Yanukovich fleeing the country as well as Russia annexing Crimea and supporting a rebellion in Eastern Ukraine that continues to this day.

The mobilization of freshwater had previously been one of many limiting factors preventing the ethnically Russian majority in Crimea from seeking independence from Ukraine. In the past the Ukrainian government doubted Crimea had the resolve to separate from the country, pointing out that "Crimea's lack of viability as a separate state because of its total dependence on Ukraine for energy, water, and transportation links, as well as Russian wariness about annexing the peninsula, would bring Simferopol into line" should conflict occur.¹³² Crimea could never separate partially because Ukraine controlled all the freshwater. This demonstrates that it is not just in Central Asia that the

¹³² Janusz Bugajski, "Ethnic Relations and Regional Problems in Independent Ukraine," *Ukraine: The Search for a National Identity*, ed. Sharon Wolchik and Volodymyr Zviglyanich, (Rowman & Littlefield, New York, 2000), 174.

mobilization of freshwater determines who fights and who does not. However once Russia got involved in the separation Crimea knew that it would be able to mobilize the freshwater resources it needed, ending Ukrainian control of its freshwater. On March 25th in 2014 acting Ukrainian President Oleksandr Turchynov shut down electrical power to Crimea to remind Crimea and Russia that Ukraine controls the electricity and freshwater that they depend upon. Russian Prime Minister Dmitri Medvedev addressed the event, admitting the weakness, saying that “another infrastructure problem is Crimea’s dependence on Ukrainian power and water supplies...this dependency periodically makes itself felt, including last night.” He then called for Russia to quickly work to mobilize new freshwater and energy sources in Crimea while providing humanitarian aid in the meantime.¹³³ Crimean fears of being unable to survive once cut from the resources, including freshwater, provided by Ukraine were thus eased, part of Russia’s intervention and annexation being the immediate elimination of Crimean dependence on Ukrainian electricity and freshwater resources. Russian intervention, and its guarantee to mobilize alternative freshwater resources was therefore an important factor leading to the unrest in the region and an important step for Russia in securing its authority and control over Crimea.

Additionally freshwater is a hidden factor in the conflict raging in Eastern Ukraine. This rebellion has ethnic roots, but also entails economic and political self-interests. The fact that most of the freshwater resources needed to maintain Eastern Ukrainian industry are self-contained has helped fuel separatism in the region.¹³⁴ Should these regions have

¹³³ David Herszenhorn, Neil MacFarquhar and Andrew Higgins, “Kiev Blamed for Blackout in Capital of Crimea,” *The New York Times*, 25 March 2014, A8.

¹³⁴ Bugajski, “Ethnic Relations and Regional Problems in Independent Ukraine,” 171.

been more dependent on the rest of Ukraine for freshwater resources, for daily life and economic output, the rebels would have either needed to secure Russian freshwater resources like Crimea or fight for control of a larger portion of Ukraine, ensuring that the Ukrainian government not be able to mobilize freshwater, starving the breakaway republics of this critical resource.

The mobilization of freshwater resources has therefore been a fundamental factor in Russian interventions into the political affairs of its neighboring states like Georgia and Ukraine. While many have debated Russia's use of oil and natural gas in an interventionist manner, these case studies demonstrate that the mobilization of other natural resources, such as freshwater, ought to also be considered. Russia certainly appears to understand the role of freshwater resource mobilization in these conflicts, requiring that scholars and policymakers from other countries account for freshwater mobilization as well.

Conclusion

The above case studies demonstrate that both identity and mobilization through freshwater resources are fundamental factors in conflict that need to be considered even in regions like the Former Soviet Union. The Central Asian case study explores how freshwater connects to identity to be a causation of conflict, while the Georgian-Abkhazian and Russian intervention case studies show freshwater resources being mobilized to impact the strategy and tactics utilized in conflict. Freshwater resources are certainly not the only factor in modern conflict, but frequently they do impact when groups enter into conflict and how this conflict is carried out. Lack of freshwater resources can cause famine and consequently unrest, it can threaten group identities leading to violence between groups, and in the right context be mobilized as a political tool or weapon to solidify the political position of a group in conflict. Understanding freshwater resources through the lenses of identity and mobilization leads to the conclusion that while freshwater resources are often part of the problem they can also be part of the solution. If peace is to be had in several regions currently plagued by conflict, freshwater resources must be accounted for.

I have argued, by enhancing the theoretical model of Jane Dawson, that freshwater resources have the ability, in theory, to be a fundamental factor in conflict. The case studies demonstrate this logic occurring in actual situations within the Former Soviet Union. Any complete analysis of these conflicts therefore requires the discussion of the connection between both identity and mobilization with freshwater resources. Even in

regions like the Former Soviet Union where oil and natural gas gain most of the attention, other natural resources have significant influence.

Freshwater resources are expected to become an even greater part of conflict, not just in the Former Soviet Union, but around the world. This is because of climate change and increasing demand. Climate change, especially unabated, will drastically alter hydrological cycles around the planet. This will bring drought and decreasing freshwater supplies, even to regions that traditionally have had few fears of freshwater problems. Freshwater is also plagued by increasing demand because of population and economic growth. More people means more thirsty mouths, but also more hands to pick up arms should adequate freshwater not be supplied, or be perceived to be controlled by an opposing group. Freshwater resources are also critical for industry. Any government that hopes to keep power through the provision of economic growth will quickly find that an ample freshwater supply is necessary for progress and that freshwater is a matter of national interest and even security.

Critics may find freshwater resources to be of limited influence in modern conflict, despite the evidence against such a claim. However, just as oil was once a trifling matter that suddenly became a major factor in wars and conflict, freshwater will increasingly become a part of conflict the world over. Freshwater can therefore no longer be ignored by scholars and policymakers. As is beautifully stated by Brahma Chellaney:

Given that academics have debated endlessly the nature and causes of war without being able to reach agreement even on what actions amount to waging a war, the debate on water wars is likely to be similarly never

ending. But understanding the connections between water scarcity and ...conflict is essential if the international community is to avert water wars by reining in the rasping hydroconflicts.¹³⁵

Stephen McCaffrey agrees saying:

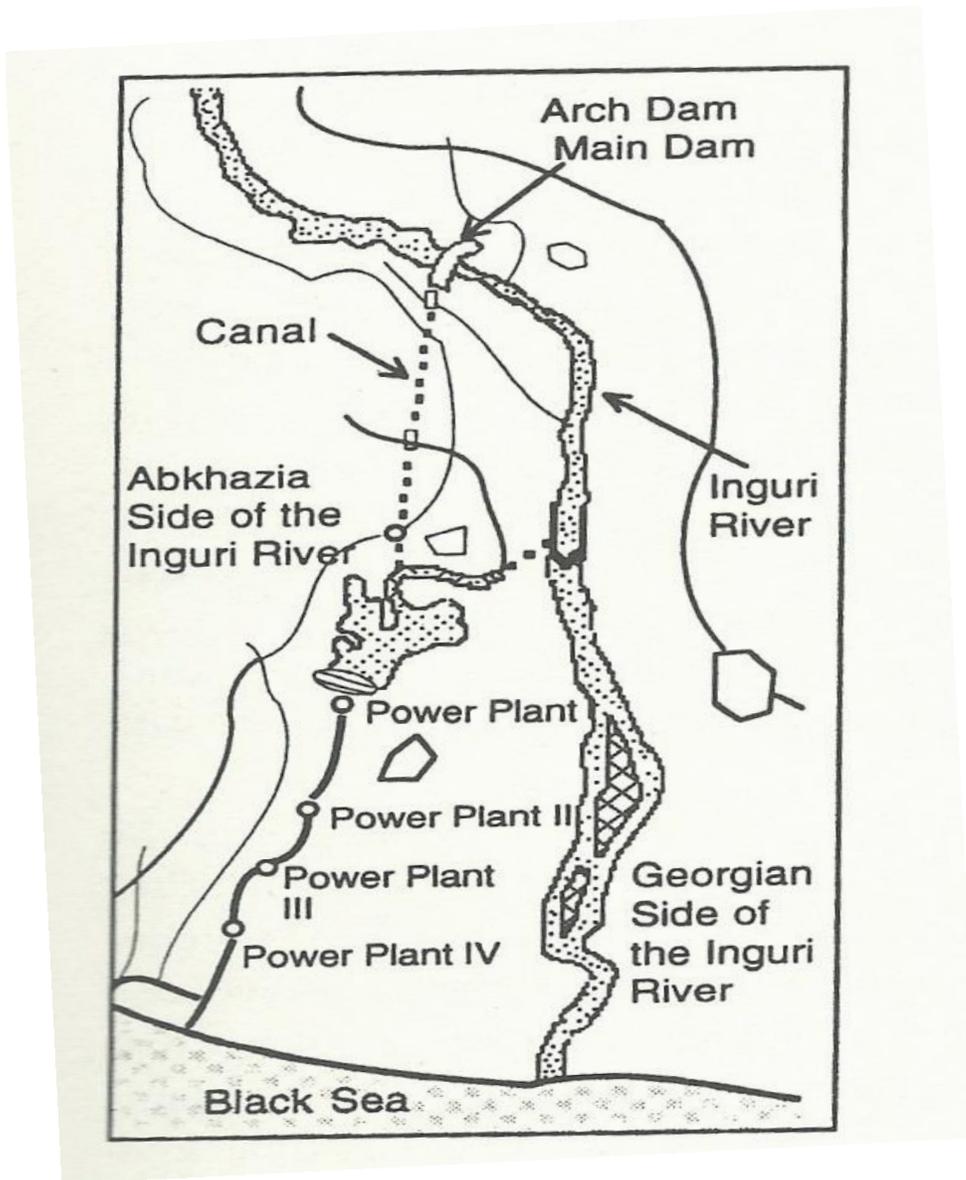
Indeed, in view of the growing scarcity of fresh water per capita, as well as the expanding threats to water quality and the integrity of freshwater ecosystems, it is not unlikely that disputes over shared freshwater resources will actually increase in the future, as we have seen. This ominous prospect calls for the development of new approaches – legal, institutional and conceptual- to these problems.¹³⁶

The world has never faced freshwater issues like those of modern times. Not only will freshwater-caused conflict increase, but freshwater as a mobilized political tool is also on the rise. Freshwater resources are therefore a fundamental factor in modern conflict. It is time to get serious about this issue, as a means for both war and peace, instead of holding fast to the limitations of traditional understandings of power structures and conflict.

¹³⁵ Chellaney, *Water, Peace, and War*, 55.

¹³⁶ McCaffrey, *The Law of International Watercourses*, 56.

Appendix: Inguri River Map



Map Showing the Inguri River Hydropower Complex.¹³⁷

¹³⁷ Garb and Whiteley, "A Hydropower Complex on Both Sides of a War," 222.

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