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**Conflict over Water Related Resources in Uzbekistan and Tajikistan and Its Impact on
Local Security**

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But if it comes to slaughter, you will do your work on water... Rudyard Kipling, *Gunga Din*

Water has recently been the focus of an international dispute between Uzbekistan and Tajikistan over the building of the Roghun Dam.¹ If Uzbekistan perceives this as a threat to its security, then it could take military action to ensure water supply; this could result in an international conflict.² This would be the third conflict in U.S. Central Command's (CENTCOM) area of operations. Equally important, and less considered, is the possibility that water could cause domestic conflict in these countries. Water in Central Asia should not be looked at as a resource alone, but rather a catalyst and driver of local economies. Access to and control over economic resources, not solely access to water, is often at the core of ethnic, religious, and other types of conflict in post-Soviet Central Asia. Certain groups, with an ethnic or extremist slant, exhort the population in this region to violence, especially those people disaffected by a lack of access to resources. Examples of this range from the Civil War in Tajikistan from 1992-1997, the May 2005 clash between government forces and extremists in Andijan, Uzbekistan, and even several conflicts in Kyrgyzstan.³

A domestic conflict would destabilize Uzbekistan and Tajikistan and have serious consequences on U.S. military efforts in Afghanistan. Central Asian countries, particularly Uzbekistan, have historically closed their borders during periods of unrest.⁴ Kazakhstan closed its border with Kyrgyzstan for a month following the April 2010 revolution in Kyrgyzstan, and Uzbekistan did the same with Kyrgyzstan during the June 2010 violence there.⁵ Any disturbance will likely disrupt regional transportation networks and hinder logistics on the Northern

Distribution Network (NDN). The main line, primarily rail, of this logistics network starts in Latvia and runs through Russia, Kazakhstan, and Uzbekistan into Afghanistan. An estimated 40 percent of U.S. and coalition non-lethal supplies are now transiting this network and supplies are purchased along the route when possible. These supplies include construction materials and basic necessities, such as food and water.⁶ This network will continue to be an important supply line for U.S. and coalition forces in Afghanistan.

Conflict over Water-Related Resources and the Central Asian Network Dynamic

Water is a vital resource in Central Asia and is an important part of the Central Asian countries' gross domestic product (GDP) due to its link to agriculture.⁷ In Uzbekistan, agriculture is 21 percent of the GDP and employs 28 percent of the population. In Tajikistan, it comprises 19 percent of the GDP and employs nearly 50 percent of the population.⁸ Historically there is conflict over water-related resources rather than over access to water. Agriculture is the most important water-related resource and provides the livelihood for a good percentage of the population, but in Central Asia there is an additional dynamic of how business is conducted. Understanding this shows how conflicts over resources begin among various groups of people in each country.

Until 1991, the Soviet Union managed water distribution to local agriculture in these countries. When the Soviet Ministry of Agriculture managed this system, water and related resources were not a problem in the Central Asian republics. The ministry managed everything from seed distribution and planting and harvesting, to the transfer of the raw products to the manufacturer. When the Soviet Union dissolved, this central control mechanism disappeared. It

forced Central Asian countries to manage their own agricultural sectors and export crops to new markets.

A limited number of people in Central Asia gained better access to resources previously under outside control. These people are a network of associates that include individuals in government or private sector positions. When an individual from this network gained a powerful position, he would often appoint fellow members of that network to positions below them. This opened up opportunities and access to resources for network members. When one member lost his position, other members of the network would be replaced, starting the process over.

In the Turkic population in Central Asia, including Uzbekistan, a network is also known as a clan. The majority populations in Kazakhstan, Kyrgyzstan, and Turkmenistan are also Turkic. Clans may include extended family members, but also non-family members such as classmates, business associates, and people with common city or regional ties. They determine how resources, including those that are water-related, are distributed among the population in their network. The dynamic in Tajikistan is not the same as in Uzbekistan, since Tajiks are not Turkic people. However, there are still common traits, and in Tajikistan these networks are known as regional groups. These groups, like clans, also comprise people who attended school together and developed partnerships, and provide for other members in their region.⁹

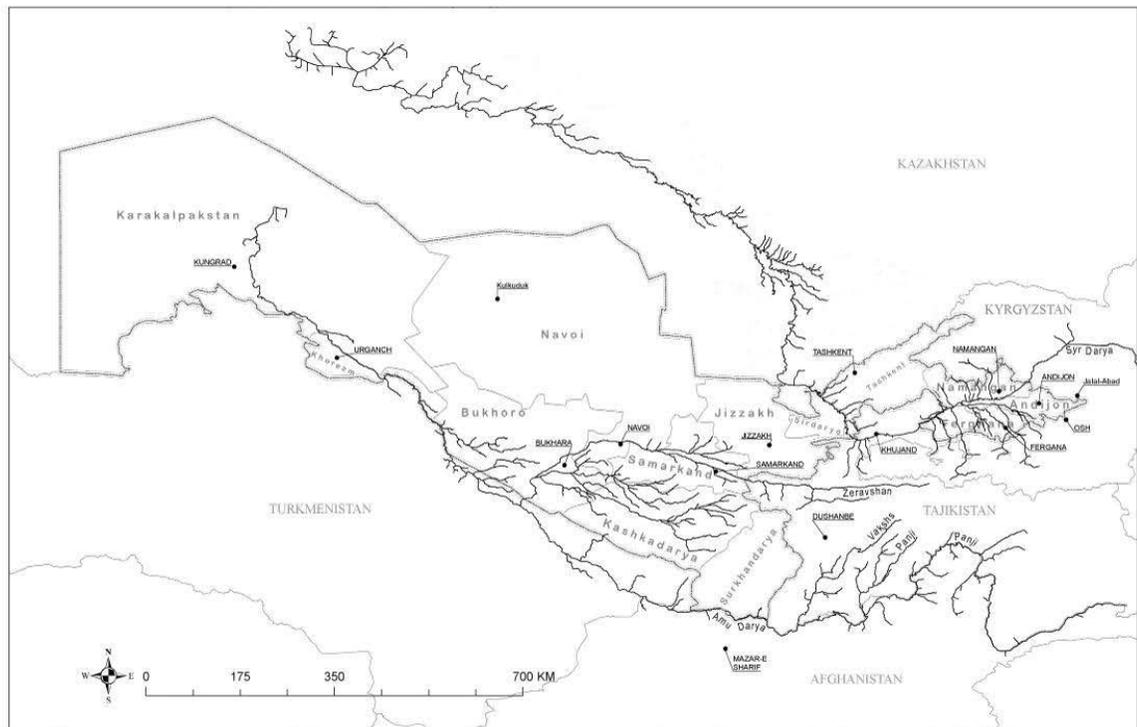
The clash in Andijan, Uzbekistan shows the nuances of the network dynamic and conflict. The Andijan incident was a battle between the illegal Akromiya Islamic movement and government troops on May 13, 2005.¹⁰ Armed men broke into a prison in Andijan in order to free 23 local businessmen suspected of being members in Akromiya. They freed the men and then attacked and occupied a government building in the city's central square. Government forces put down the insurrection and killed or captured the majority of the militants. While the

23 men may have been involved with the Islamic movement, in the eyes of the community they were simply successful businessmen: community members, including relatives of the men, claimed that because of the businessmen's success, government officials fabricated charges tying them to the illegal movement in order to seize their assets. Protested around the prison lasted for months.

Regardless of its validity, it is a plausible accusation. Seizing assets of businessmen in the name of criminal charges is a fairly common occurrence in Uzbekistan.¹¹ The businessmen in Andijan may not have held high positions, but they were a part of the clan structure. The asset seizure had a more immediate effect on the families that relied on the men for income. It also provided more incentive for armed militants to take action. Over a year later, Uzbek president Islam Karimov acknowledged that socio-economic factors in Andijan played a role in the violence there.¹²

Though these networks are in continual competition with each other, their actions do not always result in conflict. Leaders will sometimes appoint rivals to important positions in an effort to avoid disputes. When leaders do not distribute these positions, there tends to be contention among other networks and within the population. An analysis of the agricultural sector in each country can help determine the likelihood of hostile activity, especially where the population depends on agriculture for most income and food production.

Uzbekistan



Uzbekistan was the main source of cotton in the Soviet Union. Cotton remains an important crop (nearly every province with arable land cultivates it), but over the past several years the government has diversified and grown more grain to be more self-sufficient in food production. This also helped lower overall demand for water, as cotton requires more water than grain, (wheat, for example).¹³ In Uzbekistan, water for irrigating crops comes from three sources: the Amu Darya, Syr Darya, and the Zarafshan Rivers. The Amu Darya provides irrigation for the southern and western parts of the country, while the Syr Darya irrigates the eastern parts, most notably the Fergana Valley region. The Zarafshan irrigates areas in the central part of the country before it flows into the Amu Darya.

The cotton and grain market is controlled by the government. These crops are grown on large state-run farms or alternatively on smaller *dehkan* farms; (*dehkan* translates to ‘peasant’

and refers to family or individual farm plots). At harvest time the crops are sold to government institutions that either export the raw product or process it domestically. Select *dehkan* farms can grow cotton or grain within quotas set by the government, but they mostly grow crops like fruits and vegetables to be consumed domestically. Some *dehkan* farms are allowed to export to Kazakhstan and Russia.¹⁴

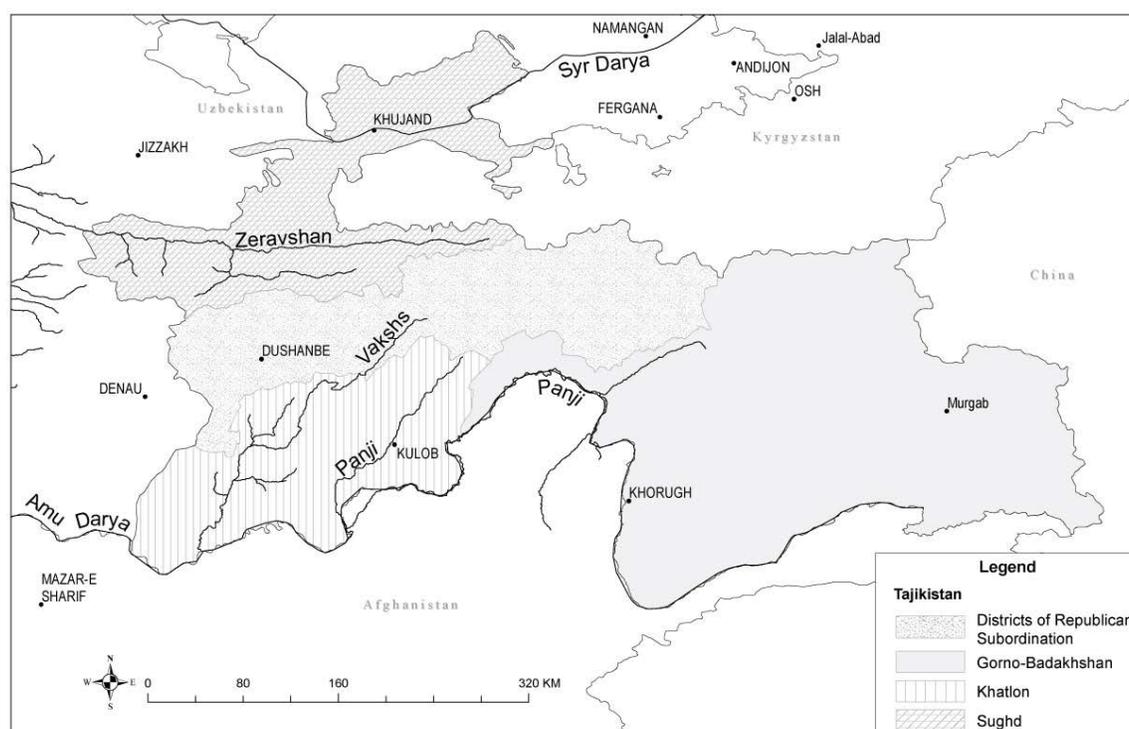
In Uzbekistan, cotton and grain are the most lucrative water-related products. The sale of cotton produces an estimated one billion dollars annually out of an overall GDP of \$86 billion, although with the less-than-transparent nature of Uzbekistan this is a difficult number to determine precisely. International prices for cotton can change how much Uzbekistan profits from the crop annually, and farmers along the borders often smuggle their yields to Kazakhstan and Kyrgyzstan when it is more economically favorable. In any case, growing cotton is worthwhile. The grain market is also valuable, and while it may not generate as much income as cotton, it provides options for Uzbekistan. Because more grains are now grown in Uzbekistan, the government does not have to import as much as it did during the first years of independence.

High levels within the Uzbek government control these markets. Senior government leaders manage the market and then redistribute wealth down through their clan. A transfer of control at the top of these institutions is not always violent. The recent demise of Zeromax, a company involved in several sectors of the economy, including cotton, provides an example. In May 2010, the government dismantled the company, seized its assets, and jailed a company executive.¹⁵ This did not lead to another Andijan.

Andijan resulted from loss of livelihood on a local, non-elite level. It affected a localized, middle or lower-class farming population. Land users' rights and the quality of farm land available were the problems. The government of Uzbekistan holds ownership of land, but

allows tenure of it to *dehkan* farms. These farms can obtain land leases according to a 1991 land reform act. These leases can be terminated by the government for a variety of reasons, including those that led to the Andijan incident. Additionally, the quality of soil has declined over the last few decades, due to poor irrigation and over-use of fertilizers and pesticides.¹⁶ While this affects overall crop yields and damages the environment, it is not a cause of conflict.

Tajikistan



Cotton was also an important crop in Tajikistan in the Soviet period and continues to be exported, although in smaller quantities. Grain is also cultivated but not in significant quantities. The Tajik Civil War, fought from 1992-97, damaged the agricultural sector, particularly cotton. Tajikistan does not have a large amount of arable land (only seven percent, due to the mostly

mountainous terrain), but does have plenty of water. Water sources are rivers flowing westward and down from the mountains into the flat lands and valleys of the country.

The river sources feed two main regions. The northern region is fed by the Syr Darya River, which originates in Kyrgyzstan and flows through Tajikistan on its way to Uzbekistan and eventually Kazakhstan. In the southern region, several tributaries, including the Panj and Vakhsh Rivers, join the Amu Darya River as it flows between Uzbekistan and Afghanistan and into Turkmenistan. These important agriculture regions include the Sughd Province in the north and the Khatlon Province and the Districts of Republican Subordination in the south and west, where cotton and grain are grown. The Districts of Republican Subordination are under central control of the national government in its capital Dushanbe.

Due to the economic effects of the Civil War, the government stopped directly controlling and financing the cotton sector in the mid-1990s because it could no longer afford to. International donor organizations stepped in to assist Tajikistan with financing the cotton sector. Agriculture in Tajikistan underwent financial and structural reform, which was intended to open up the cotton sector to private investors to meet stipulations from donor organizations. However, the government still indirectly controls the cotton sector; private investors merely provide the financial backing for farms. Tajikistan inherited the Soviet era *kolhoz* (collective) farms, some of which the government divided into *dehkan* farms in a move similar to Uzbekistan.¹⁷ Cotton is mainly grown on the state-controlled collective farms.

As in Uzbekistan, cotton is the most lucrative water-related resource in Tajikistan, for whose control the Tajik networks compete. Estimates valued Tajik cotton in 2010 at \$170 million. While this is a small number compared to the overall GDP of \$14.6 billion, it is a lifeline for those employed on farms that cultivate it. For farmers, there are few other

employment options in Tajikistan; many farmers now work in Russia, sending money back to their families. Grain is grown in the same regions as cotton, but not in sufficient quantity to satisfy domestic food demand, requiring Tajikistan to import grain to meet those needs.

Despite reform and efforts from donor organizations, control of the cotton sector is indirectly in the hands of the Tajik government. Because of the history of the regional network structure, groups outside the main network of those currently in power have limited access to resources, especially in the agricultural sector. Leaders in certain regions maintain some control over agriculture, but the real power remains with the government in Dushanbe. The Tajik Civil War provides the best example of how competition for resources arose.

The war pitted the ruling elite from the Sughd Province and the Kulyab district of the Khatlon Province against the United Tajik Opposition (UTO), which was made up of democratic, Islamic, and regional groups from Garm (a district in the area of Republican Subordination) and Gorno-Badakhshan (an autonomous region in eastern Tajikistan). The power holders in government at the time of independence came from the Sughd Province. During the 1920s and up until the 1960s, the Soviet government resettled people from Garm into areas of the Khatlon Province to work in agriculture. People in Khatlon felt that the Garmis were given better agricultural land, and this created tension that would last for years. This tension added to the larger political fight between the various groups over control of the government. Many of those killed in the war were people from Garm, and the fighting took place largely in the areas of Khatlon and Dushanbe.

By the end of the war, leadership from the Kulyab district eventually forced out those from the Sughd Province. The peace agreement of 1997 stated that the opposition, the UTO, should receive 30 percent representation in government posts. Then the government never fully

included the opposition, so a few regional leaders still opposed the central government and remained in control of their respective regions, particularly in the Sughd Province and Garm district.¹⁸ Recent violence in Tajikistan comes from several factors, but is very-likely related to the regional divisions.¹⁹

In August 2010, 25 militants escaped from a prison in the capital Dushanbe. The hunt for the militants led to the Rasht Valley and resulted in the deaths of around two dozen Tajik soldiers (some from a helicopter crash). The fighting in the Rasht Valley was no surprise, since this was a strong area of opposition during the Civil War. One theory behind the recent fighting alleged that the government wanted to eliminate any remaining threat to its power from this area. While this is difficult to prove, it is plausible. The government holds tighter control over Dushanbe and the Khatlon Province than the Rasht Valley or the Sughd Province. A professionally planned suicide bombing took place at a police station in September 2010, and there was an attempted bombing in January 2011 in the city of Khujand in Sughd, an area where the regional network lost most of its access to resources and a number of positions in the government following the Civil War.²⁰

Land is another problem affecting the population in Tajikistan that is not limited to any particular region. What long term land rights does a *dehkan* farm have? The government of Tajikistan holds ownership of land. It allows the land to be used by collective or *dehkan* farms through a land-certificate system; the certificates are a lease agreement. The main certificate is sent to the collective or *dehkan* head and sub-certificates are issued to each member of the collective, stating the percentage of their share. Many members of collectives do not fully understand their rights with their sub-certificates or often never receive them. Managers of the collective, a third party or a go-between, do not distribute the sub-certificates to collective

members. These members then do not have proof of their share or their rights to the land. They are effectively tied to working on the land for low wages and no other work options. Perhaps most importantly, the government can terminate the certificate and reclaim the land for use by another person or collective. This is often a case of arbitrary eminent domain.²¹

Access to Water and Water Users Associations

From the Uzbek and Tajik perspective, access to water is serious issue. Many farmers often over-irrigate during times of sufficient water availability. There were drought periods in Uzbekistan in 2000-2001 and 2008. These droughts caused irrigation and quality of life problems, but they also forced water users to better manage the existing supply. The crop yields from this period were not as low as predicted, due to better management of available water. Cotton in particular was not harshly affected. Karakalpakstan, an autonomous republic in western Uzbekistan on the far end of the Amu Darya River, was most adversely affected by the drought.²² It is possible that even during a 40-50 percent decline in available water, crop yields can be maintained so long as water is used efficiently.²³

Access to water is not a cause for conflict largely due to Water Users Associations (WUAs). WUAs are non-government, non-profit groups that came into existence in 2000. They have a democratic and grassroots make-up to them and handle most problems associated with water distribution. WUAs operate in both countries with the consent of the government. Most non-government organizations have difficulty operating without official Tajik and Uzbek government backing. This support of WUAs demonstrates that both governments view water access as an important issue with security implications. So long as these governments allow WUAs to operate, domestic conflict over access to water is not likely to happen.

A potential problem with WUAs is that the word ‘user’ in the title of these groups could change to ‘consumer’ in the next few years. The main goal of the associations would continue to be cooperation, but the word ‘consumer’ would come with a pricing structure for the amount of water used. Water users already pay for maintenance of irrigation canals and a water tax. The tax is estimated to be only one percent of their overall costs. It remains to be seen what affect this name and structure change will have.²⁴

Like water users in Uzbekistan, farmers in Tajikistan dealt with the droughts in 2000 and 2008. The biggest problem is water not reaching the end user because of a broken or inefficient system. There are also WUAs in Tajikistan that cooperate on fair water distribution among users and help alleviate associated problems. Donor organizations focused efforts on repairing the irrigation system damaged by years of underfunding and neglect. This neglect could take several years to reverse.²⁵ These water problems primarily cause hardships and could be a supplementary factor for conflict. Another factor that discourages conflict is the population’s memories of the Civil War. Except for the youngest generation, the Civil War is fresh in the population’s memory. For now, the population seems willing to endure hardships in order to avoid conflict. This may not last if the youngest generation is pushed into conflict or if the several hundred thousand Tajik citizens working in Russia suddenly return to Tajikistan without jobs.²⁶

Conflict and the NDN

There is always a possibility that access to water could cause an international or domestic conflict. Attention should continue to be paid to the dispute between Uzbekistan and Tajikistan over water and the Roghun Dam. However, evidence points to water causing a domestic

conflict, not an international one. If there is a “Water War” involving Uzbekistan or Tajikistan, it will most likely be over water-related resources, not over access to water. CENTCOM and the regional logistics network (NDN) will be affected when this kind of conflict occurs.

During periods of violence these countries, in particular Uzbekistan, will often close their borders as a security measure to prevent conflict from spilling over and to stop or control the flow of refugees. A conflict in Uzbekistan or Tajikistan could result in the disruption of service of this vital logistical network. Now that 40 percent of supplies for U.S. and coalition forces fighting in Afghanistan transit this region, a conflict over water-related resources would be a serious obstacle to maintaining the NDN.

Notes

¹ The Roghun Dam is a project started in the 1970s but cancelled due to a lack of funding. This planned hydroelectric dam will reach a height of around 325 meters and be situated on the Vakhsh River. The Vakhsh is a tributary to the Amu Darya River, which is an important irrigation source for Uzbekistan's, Afghanistan's, and Tajikistan's agricultural industry. In 2010, construction on Roghun continued despite objections from Uzbekistan. Although it could be several years until the dam is complete due to funding problems, it would interrupt water flow down river, affecting Uzbek agriculture.

² Uzbekistan violated Kyrgyzstan's and Tajikistan's territory while conducting operations against extremist groups in 1999 and 2000. From the Uzbek viewpoint this was necessary to ensure security interests. See: International Crisis Group (ICG), *Central Asia: Border Disputes and Conflict Potential*, ICG Asia Report No. 33 (Osh, Brussels, 2002), 4, <http://www.crisisgroup.org/~media/Files/asia/central-asia/Central%20Asia%20Border%20Disputes%20and%20Conflict%20Potential.ashx> (accessed March 28, 2011).

³ The Soviet Union resettled ethnic Garmis and Tajiks from northern Tajikistan to southern regions from 1920-1960 for cotton cultivation. This caused tension between the resettled and settled groups. The settled groups believed Garmis and others were given better land for agriculture. This later changed into larger regional tensions and the subsequent civil war. See: Lena Johnson, *Tajikistan in the New Central Asia* (New York: St. Martin's Press), 40-48; Adolat Najimova and Daniel Kimmage, "Uzbekistan: Karimov Reappraises Andijon," *RFE/RL*, October 19, 2006, <http://www.rferl.org/content/article/1072151.html> (accessed March 1, 2011); Alexander Shustov, "Replay of the 1990 Osh Drama," *International Affairs*, (June 2010); One of the causes of the riots between Uzbeks and Kyrgyz in the Osh Province in June 1990 was redistribution of agriculturally viable land, see: Kathleen Collins, *Clan Politics and Regime Transition in Central Asia* (New York: Cambridge University Press, 2006); Asyl Osmonalieva, "Kyrgyz Leaders Struggle With Land Wars," *Institute for War and Peace Reporting*, RCA Issue 610 (April 2010), <http://iwpr.net/report-news/kyrgyz-leaders-struggle-land-wars> (accessed March 2, 2011).

⁴ "Uzbekistan Zakryl Granitsu Dlya Tadzhikestantsev i Vozobnovil Blokadu Zheleznodorozhnykh Gruzov," [Uzbekistan Closed the Border For Tajiks and Resumed the Blockade of Rail Freight] *Fergana.ru*, <http://www.fergananews.com/news.php?id=14797&mode=snews> (accessed March 28, 2011).

⁵ "Nazarbayev Has Given Instructions to Open Kazakhstan's Border with Kyrgyzstan on May 20," *Interfax*, May 19, 2010; "Uzbekistan Sends Troops to Border Area," *24.kg*, June 12, 2010; "Uzbek, Kyrgyz Border Guards Allow Refugees to Pass Border," *Interfax*, June 12, 2010.

⁶ John C.K. Daly, "Are ISAF's Tenuous Supply Lines Sustainable?," *International Relations and Security Network (ISN)*, (March 2011), <http://www.isn.ethz.ch/isn/Current-Affairs/ISN-Insights/Detail?lng=en&id=127187&contextid734=127187&contextid735=127186&tabid=127186> (accessed March 2, 2011).

⁷ Interviews with subject matter experts (SME) in Uzbekistan and Tajikistan are a critical component of the information in this article. Interviews were conducted by the author, in October and November, 2010 in both countries.

⁸ *The World Factbook 2011*. Washington DC: Central Intelligence Agency 2011. <https://www.cia.gov/library/publications/the-world-factbook/index.html> (accessed March 28, 2011).

⁹ Collins, *Clan Politics and Regime Transition in Central Asia*

¹⁰ For an objective look at the Andijan incident, see: Shirin Akiner, "Violence in Andijan, 13 May 2005: An Independent Assessment," *Silk Road Paper, Central Asia-Caucasus Institute and Silk Road Studies Program*, (July 2005).

¹¹ "Uzbek Oligarchs Under Pressure," *Institute for War & Peace Reporting*, March 11, 2010, <http://iwpr.net/report-news/uzbek-oligarchs-under-pressure> (accessed March 11, 2011).

¹² Kimmage, "Uzbekistan: Karimov Reappraises Andijon"

¹³ Interview with SME, Uzbekistan, October, 2010.

¹⁴ Iskandar Abdullaev, Charlotte De Fraiture, Mark Giordano, Murat Yakubov, and Aziz Rasulov, "Agricultural Water Use and Trade in Uzbekistan: Situation and Potential Impacts of Market Liberalization," *Water Resources Development* 25 (March 2009): 47-63.

¹⁵ "Court shuts presidential daughter-owned Zeromax's operations in Uzbekistan," *uznews.net*, May 14, 2010, http://www.uznews.net/news_single.php?lng=en&cid=2&sub=top&nid=13753 (accessed March 28, 2011).

¹⁶ Abdullaev, et. al, "Agricultural Water Use and Trade in Uzbekistan: Situation and Potential Impacts of Market Liberalization," 47-63.

¹⁷ Interview with SME, Tajikistan, November, 2010; Don Van Atta, "White Gold' or Fool's Gold? The Political Economy of Cotton in Tajikistan," *Problems of Post-Communism* 56 (March/April 2009): 17-35.

¹⁸ Johnson, *Tajikistan in the New Central Asia*

¹⁹ Shukhrat Shodiyev, "Tadzhikistan: V Rasht I Obratno. Ot Grekha Podalsh'e" [Tajikistan: To Rasht and Back. Away From Sin] *Fergana.ru* (October 2010), <http://www.fergananews.com/article.php?id=6761> (accessed March 7, 2010).

²⁰ Nargis Hamroboeva, "Two terrorist acts prevented in Khujand," *ASIA-Plus*, January 22, 2011, <http://news.tj/en/news/two-terrorist-acts-prevented-khujand> (accessed March 8, 2011); Johnson, *Tajikistan in the New Central Asia*

²¹ Interview with Legal Expert, Tajikistan, November, 2010.

²² Kai Wegerich, "Natural Drought or Human Made Scarcity in Uzbekistan?," *Central Asia and the Caucasus* 14 (2002): 1-12.

²³ Interview with Agricultural SME, Uzbekistan, November, 2010.

²⁴ Interview with SMEs, Uzbekistan, November, 2010.

²⁵ Interview with Agricultural SME, Tajikistan, November, 2010.

²⁶ Interview with SME, Tajikistan, November, 2010.