

HYDROPOLITICS IN CENTRAL ASIA: TOWARDS A REGIONAL WATER REGIME?

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Abstract

Following the dissolution of the Soviet Union, in Central Asia five new independent states –Kazakhstan, Kyrgyztan, Tajikistan, Turkmenistan and Uzbekistan – found themselves in a highly globalised international system and a liberalized economic order. One of the reflections of the drastic changes in the dynamics of the region is the growing tension over the waters of Amu Darya and Syr Darya rivers. Since 1991, transboundary water management has become one of the most complex security problems among newly independent Central Asian states. This article analyses the efforts to form a regional water regime in the region, within the context of a regional security complex explanation, and explores the role of internal and external dynamics on regional cooperation over water resources.

INTRODUCTION

Following the dissolution of the Soviet Union in Central Asia, five new independent states – Kazakhstan, Kyrgyztan, Tajikistan, Turkmenistan and Uzbekistan – found themselves in a highly globalised international system and a liberalized economic order. Their present borders and infrastructure designed by the Soviet Union were based on the idea of an unbreakable union of republics. As a result, integration of these newly independent republics into a globalised international system and liberalized economic order was a real challenge. Besides the systemic challenge, Central Asian governments have had difficulties dealing with internal problems, such as stagnating economies, high levels of corruption and environmental degradation, each as a result of their loss of traditional revenue from Moscow (Weinthal 2000).

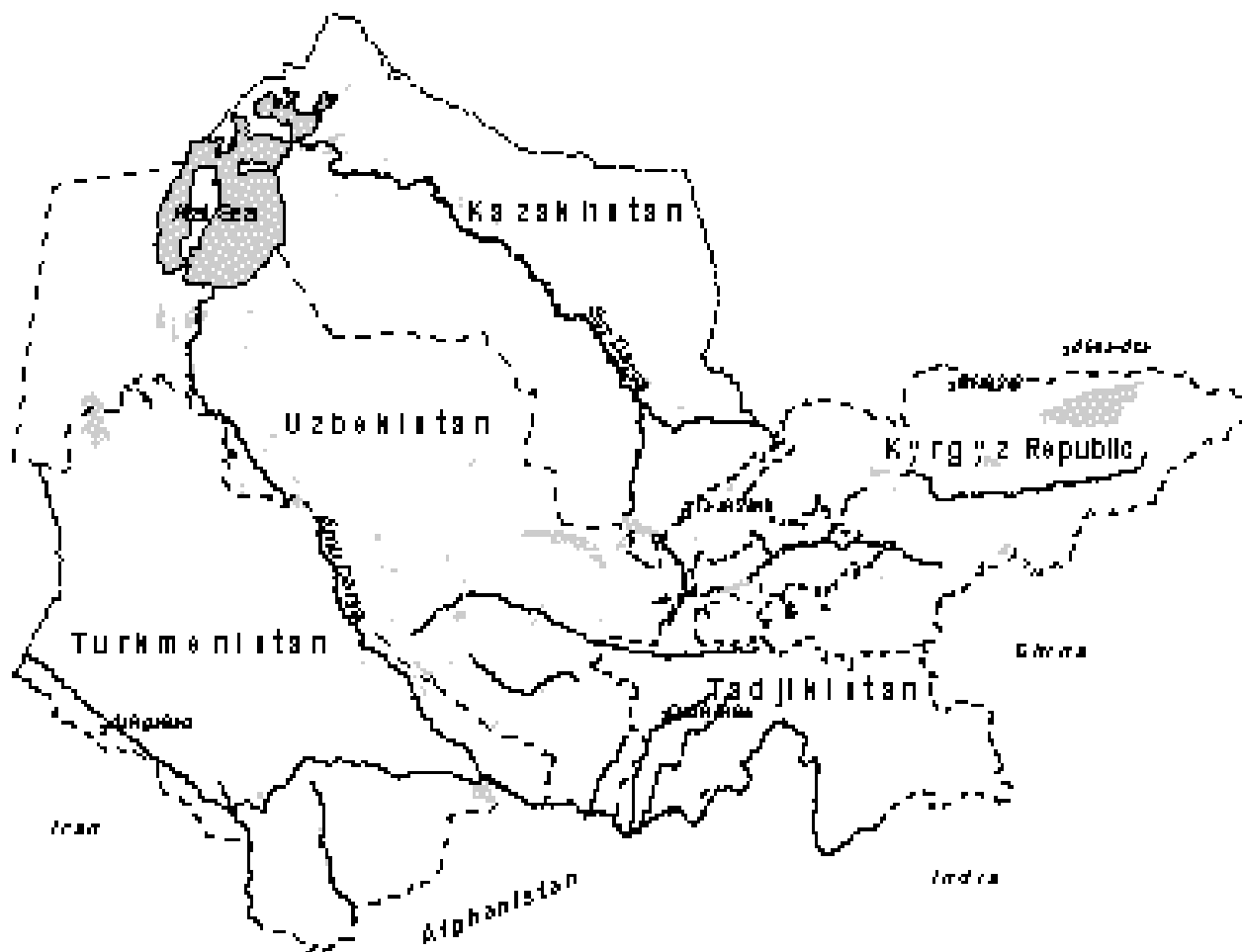
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After 1991, Russia's preoccupation with its internal economic and political crisis led to an involuntary disengagement from Central Asia. Thus, it has made it easier for the Central Asian governments to pursue their own foreign policies and national security agendas. Growing engagement of other regional powers - Turkey, Iran, China - into Central Asia as well as the global powers - the US and the EU - is a consequence of the Russian disengagement from the region (Jonson & Allison 2001).

Central Asia's location at the crossroads of Eurasia and its rich oil and gas reserves have attracted external actors' attention. Since its war against terrorism, the US has been actively involved in the region in terms of economic and military aid. But the claim that the active engagement of external powers in the region would pave the way for the Central Asian states to overcome economic and political problems and resolve conflicts has not yet been confirmed. Rather, the engagement of external actors' has caused intensification in the division among regional actors (Jonson & Allison 2001).

One of the reflections of the drastic changes in internal and external dynamics of the region is the growing tension over the waters of Amu Darya and Syr Darya rivers (see figure 1: Map of Aral Sea Basin) The misallocation of waters from these rivers has been one of the key issues contributing to the tension among riparian states. Disputes have developed between the downstream countries, Kazakhstan, Turkmenistan and Uzbekistan, which are heavy consumers of water for agriculture, and the upstream countries, Kyrgyzstan and Tajikistan. Whereas large scale water is required by the downstream states in order to support their growing agricultural sector, upstream countries also need more water for electricity generation and farming (ICG Asia Report 2002).

Given its economic value, water problems can be considered as a security threat for the Aral Sea basin republics, especially for Turkmenistan and Uzbekistan. As a result of the dissolution of the integrated Soviet economic system, water based economic structures have weakened and paved the way for the promotion of national economic interests and mutually incompatible demands for water (Horsman 2001). On the other hand, disputes over water allocation and desiccation of the Aral Sea have offered a soft issue for external actors, some of which have a more direct and negative influence on the security dynamics of the region.

FIGURE 1. THE ARAL SEA BASIN

Source: Dukhovny and Sokolov (2003)

The main hypothesis of this article is that hydropolitics are an indispensable part of the regional security complex that exists where states share the same river basin. Therefore, the possibility of conflict or cooperation over transboundary water issues should be analysed within the context of security dynamics of the particular region. In order to visualize this hypothesis, transboundary water management efforts on the Aral Sea basin among five Central Asian states will be examined. The efforts to develop a regional water regime will be analysed within the context of a regional security complex and security dynamics in Central Asia. In light of the analysis, the following question will be addressed: *To what extent are external and internal security dynamics interacting in the resolution of disputes over river basins and in the development of a water regime?*

In the first part of the article five Central Asian Republics will be analysed as a regional security complex. Here Barry Buzan and Ole Wæver's regional security complex theory will be applied since the theory aims at empirical studies on specific regions. Moreover, regional security complex theory offers a systematic framework in the study of internal conditions, relations among units in the region, relations between regions, and the role of global actors. In this section, internal and external security dynamics of Central Asia will be explored within the framework of regional security complex theory.

The second part of the article will focus on the hydropolitics of the Aral Sea. In order to analyse hydropolitics of the region and regional states' efforts to form an institutionalised water regime, international regime theory will be examined. In light of regime theory, the disputes and cooperation efforts over the allocation of waters of Amu Darya and Syr Darya will be explored.

CENTRAL ASIA AS A REGIONAL SECURITY COMPLEX

In *People, States and Fear* (1991), Buzan defines security complex as “a group of states whose primary security concerns link together sufficiently closely that their national securities cannot realistically be considered apart from another” (Buzan 1991:190). Later, the definition of a regional security complex was reformulated by Buzan and Wæver to include the possibility of different actors besides states and several sectors besides the military sector. It is redefined as “a set of units whose major processes of securitisation,³⁷ desecuritisation, or both are so interlinked that their security problems cannot reasonably be analysed or resolved apart from one another” (Buzan and Wæver 2003:44). The states in a particular regional complex must possess security interdependence sufficient enough to establish a set and to differentiate them from neighbouring security regions. That is to say, regional security complexes are defined as substructures of the international system by possessing a relative intensity of security interdependence among units and security indifference between and surrounding them (Buzan and Wæver 2003).

³⁷ According to Ole Wæver (1993) securitisation and de-securitisation are related to the questions of when, why and how do elites label issues and developments as security problems? When, why and how do they succeed and fail respectively? What attempts are made by other groups to press securitisation on the agenda?

Considering the anarchical characteristic of the international system, regional security complexes are defined with two types of relations: power relations and patterns of amity and enmity. Like the international system, regional security complexes could be examined in terms of power relations and they could be classified as unipolar, bipolar, tri-polar or multi-polar. Moreover, within a particular regional security complex the concept of regional balance of power plays a significant role (Buzan and Wæver 2003). On the other hand, external factors are also effective in stimulating changes in the power balance in the region, taking the form of alignments with particular regional units. Besides regional power relations, regional security complexes are mainly determined by patterns of amity (relationships ranging from genuine friendship to expectations of protection and support) and enmity (relationships set by suspicion and fear) among regional actors (Jonson & Allison 2001). The patterns of amity and enmity are socially constructed within historical factors or common cultures.

In order to better understand regional security dynamics, either cooperative or conflictual, it is inevitable to explore the interactions of internal and external factors. In most cases, regional security complexes are penetrated by outside powers. The interplay of internal and external factors determines the structure for interaction both at the regional and international level. As it can be observed in some cases like the EU, intensification of contacts and exchanges within particular regional security complexes promote security cooperation in the form of a security community (Jonson & Allison 2001).

According to Buzan and Wæver, the most well-established function of regional security complex theory is that it offers a framework for empirical studies of regional security by specifying four levels of analysis: (1) domestic, in the states of the region; (2) state-to-state relations; (3) the region's interaction with neighbouring regions; and (4) the role of global powers in the region. These four levels of analysis constitute the security constellation in the specified region (Buzan & Wæver 2003).

When it comes to the five Central Asian states, although they are defined as parts of a larger security complex around Russia, they could be considered a candidate for a separate regional security complex. Buzan and Wæver classify Central Asia as a sub-complex in a process of forming internal dynamics. Moreover, the Central Asian republics consist of a more or less consistent system based on geographical and cultural terms. In security terms the region has its own dynamics

and preoccupations, although each individual state pursues their own national policies, and their security policies are interconnected (Jonson & Allison 2001). On the other hand, there are questions raised with regards to a regional security complex consisting of five Central Asian republics. Are there obvious common grounds for security interactions among the units? Is it possible to consider a Central Asian security complex without Afghanistan, which plays a significant role in exporting instabilities across the region? Is it possible to distinguish a Central Asian security complex from a Caucasian security complex?

Given the configuration of forces, interests and threats, Burnashev discerns three circles of participants in the Central Asian Security Complex: (1) the Inner Circle, consisting of regional states including Afghanistan; (2) the Second Circle, including actors with vitally important and important national interests in the inner circle like Russia, China, Pakistan, Iran and Turkey; and (3) the Third Circle, encompassing actors that either have their own interests in the region or are capable of playing a substantial role such as the US and the EU (Burnashev 2002).

For the purpose of this article, only five Central Asian Republics will be taken into consideration with their ongoing process of forming a transboundary water regime as a part of their overall security considerations. Afghanistan and its possible involvement in the Central Asian water regime will not be considered as part of the analysis. Furthermore, the Caucasus sub-security complex will be separated from the Central Asian one because of the obvious geographical and geo-strategic differences, as well as cross cutting differences such as the importance and nature of religiosity and the possession or absence of oil.

Central Asia consists of five fairly weak states without any leading power among them, despite Uzbekistan's will to be most powerful actor in the region. Since their independence, dynamics of destabilization have played a major role in the regional states' development. For the regional states, with each passing year, problems are getting deeper and deeper. The main problems common for all regional states are various degrees of bad governance and internal instability; low socio-economic standards and varying degrees of dependence on Russia; shortage and mismanagement of natural resources, i.e. water; and a high degree of vulnerability to "new threats" such as crime, smuggling, drug trafficking, terrorist infiltration and uncontrolled migration (Bailes 2003). Furthermore, for most of the Central Asian governments, Islamic extremism is the major threat for their

countries' stability. As a result of these security challenges, military expenditures have been rising in most of the Central Asian republics. But, as illustrated in Figure 2 (Military Expenditures of Five Central Asian States), military expenditures constitute 1-2 percent of GDP for all these countries except Turkmenistan, whose military expenditure was 3.8 percent of GDP in 2000. This is an extension of Turkmenistan's neutral position and its ambition to be self-sufficient in terms of military security (Perlo-Freeman & Stålenheim 2003).

Tajikistan is the poorest among the five republics of Central Asia. With the dissolution of the Soviet Union, Tajikistan was faced with serious economic problems. The civil war in 1997 between Moslem opposition and the Tajik government has also caused damages to the infrastructure and economic structures of the country. As its economy is highly dependent on agriculture, the issue of water allocation is a vital issues for Tajikistan. However, in contrast to other regional states, Tajikistan has not suffered from water shortages due to its upstream position over both Amu Darya and Syr Darya. With regards to its relations with other regional republics, Tajikistan with its largely Persian population has a strategic inclination toward Iran and Afghanistan rather than toward "modern and secular" models. This is leading to fear among other republics that if Tajikistan's radical Islamic movement gains control, it will attempt to influence neighbouring countries (Alaolmolki 2001).

Krgyztan is the most vulnerable among the Central Asian Republics, in terms of dealing with security threats, due to its lack of military and economic structures. This was evident when armed militant Islamist groups attacked Fergana Valley - a valley shared by Kyrgyztan, Tajikistan and Uzbekistan. Because of this vulnerability, Kyrgyztan still depends on Russia for military assistance (Alaolmolki 2001). With regards to the importance of water resources for Krgyztan, like Tajikistan, Kyrgyztan's population heavily depends on agriculture. In addition, hydroelectricity is also of vital importance for the Kyrgyz economy (Alaolmolki 2001).

FIGURE 2. MILITARY EXPENDITURE OF THE 5 CENTRAL ASIAN REPUBLICS³⁸

All figures in US \$Million, at constant 2000 prices and exchange rates and for calendar year

.. = Data not available or not applicable () = Uncertain figure, [] = estimate.

UZBEKISTAN

Military expenditure in constant US dollars															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Uzbekistan	92.8	77.7	104	[121]	..	184	..	137	..
Military expenditure as a share (%) of gross domestic product (GDP)															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Uzbekistan	1.5	1.1	1.2	[1.4]	..	1.7	..	1.1	..

KAZAKHSTAN

Military expenditure in constant US dollars															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kazakhstan	(248)	(158)	163	177	165	188	137	143	210	[202]
Military expenditure as a share (%) of gross domestic product (GDP)															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kazakhstan	(1.0)	(0.9)	1.1	1.1	1.1	1.3	0.9	0.8	1.0	..

TURKMENISTAN

Military expenditure in constant US dollars															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Turkmenistan	102	90.5	87.1	132	112	121	[163]
Military expenditure as a share (%) of gross domestic product (GDP)															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Turkmenistan	1.8	2.3	2.0	4.0	3.1	3.4	[3.8]

³⁸ Source for all countries: The SIPRI Military Expenditure Database (2004)

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TAJIKISTAN

Military expenditure in constant US dollars															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Tajikistan	24.7	102	32.4	[9.4]	10.1	14.4	12.8	13.8	11.9	11.9	..
Military expenditure as a share (%) of gross domestic product (GDP)															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2001
Tajikistan	0.4	3.9	1.7	[1.1]	1.3	1.7	1.3	1.4	1.2	1.2	

KYRGYZTAN

Military expenditure in constant US dollars															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Kyrgyzstan	11.8	9.5	8.9	16.3	15.4	18.7	17.4	20.9	24.6	[24.9]	..
Military expenditure as a share (%) of gross domestic product (GDP)															
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2001
Kyrgyzstan	0.7	0.7	0.9	1.7	1.5	1.6	1.5	1.7	1.8	[1.7]	

Source: SIPRI Military Expenditure Database (2004)

In Uzbekistan, Islamic extremism and the fear of “Tajikisation” of the country are perceived as the main security threats. Thus, this situation has forced the Uzbek government to make the army, which is the largest military organization in the region, ready and reform the armed forces. As an extension of its aggressive policy against extreme Islamic movements, Uzbekistan has been one of the enthusiastic supporters of the US-led war against transnational terrorism. The Uzbek government has agreed to the deployment of 1500 American troops and, in return, the US provided Uzbekistan USD 160 million in aid in 2002 (Rasizade 2002). This economic assistance and security guarantees have paved the way for the Uzbek government’s ambitions to be the regional hegemon. Despite its military strength, Uzbekistan is very vulnerable in terms of maintaining its agricultural sector, which is the main sector of the Uzbek economy. The agricultural sector, based mainly on monocultures of cotton, is steadily declining because of the water supply problems, soil degradation and droughts. Due to its reliance on cotton production and its objectives for food self-sufficiency, Uzbekistan views irrigation as one of the key security issues.

Turkmenistan is the most stable country of the region. The Turkmen government has been successful in containing any significant political opposition within the

country. In contrast to other regional states, Turkmenistan has stressed its neutral position and within this context has started a massive increase in the size of its armed forces (Perlo-Freeman & Stålenheim 2003). As Turkmenistan has the fourth largest gas reserves in the world, its economy is mainly based on the export of natural gas and related products (Alaolmolki 2001). In spite of its sufficient income from natural gas, Turkmenistan has aimed to achieve food self-sufficiency. As a result, like Uzbekistan, the issue of water allocation is viewed as a part of national security by the Turkmen government.

Kazakhstan, thanks to its rich endowment of natural resources, has the most developed economy in the region. It is the second largest oil producer among the former Soviet Republics, producing over five hundred thousand barrels per day. Because of its oil and mineral resources, Kazakhstan has the potential for attracting foreign investment. Its economy is virtually self-sufficient with a well-developed agricultural sector, a productive extractive industry, and an extensive transportation network (Rumer 2002). In terms of social and political threats, unlike other Central Asian states, a militant Islamic threat has been less visible in Kazakhstan. As with Uzbekistan and Turkmenistan, water resources for irrigation is one of the security issues for Kazakhstan.

Since their independence, the Central Asian republics have tried to overcome the acute internal problems and external challenges. Another major problem of the region is the disunified character of the regional states due to the fact that each individual state has acted to defend its own interests and ensure its survival. This self-interested behaviour of the Central Asian states has led to tensions among them particularly in terms of conflicts over water and energy resources. As a result of these acute internal problems and external challenges accompanied with conflictual interests, the Central Asian republics remain as weak states and dependent on alignments with powerful external powers.

The major problems inherent in the internal dynamics of the region, which are also interlinked with each other, are the lack of regional cooperation and the unsettled disputes over natural resources. As already briefly touched upon, the Central Asian states are sharing similar problems after the dissolution of the Soviet Union with different paths to overcome these problems. As an extension of the common threats and problems, they have tried to form institutions for developing cooperation among them. Up until now, all of the institutional structural efforts were able to achieve full participation of all five republics except

for the case of water management institutions. In spite of these cooperative regional efforts, according to Jonson and Allison, conflictual dynamics are more deeply embedded in the region (Jonson & Allison 2001).

Apart from disputes over water allocation, security problems in the region are generally transnational, e.g. international terrorism (mainly Islamic terror activities) and illegal trafficking, not inter-state. According to Buzan and Wæver (2003), no pattern of amity and enmity has formed among regional states. The most remarkable characteristics of internal dynamics within the Central Asian security complex is the existence of lower level structural alignments among regional states. In general regional states have not formed structural alignments as a result of their self-interested policies. “Nobody is looking to set up a system of alliances between the republics of Central Asia” (Roy in Buzan and Wæver 2003). Thus, regional dynamics have formed at other levels. Regional states prefer to develop structural alignments with powerful actors from the second or third circle such as Kazakhstan’s relations with Russia, Uzbekistan’s pro-American attitudes, and Kyrgyzstan’s military dependency on Russia. Furthermore, within the regional context, the ongoing competition between Kazakhstan and Uzbekistan, and Uzbekistan’s ambition to be the regional hegemon on the one hand and Turkmenistan’s unilateral isolationist regional policy on the other have shaped the power relations within the inner circle of the regional security complex. Competitions have influenced Kazakhstan, Turkmenistan and Uzbekistan’s alignments with regional states as well as other external actors.

In the second and third circle of the regional security complex, the policies of Russia, China, Turkey, Iran and the US might be seen. The relations between these extra regional actors and regional actors are characterized by economic consideration, gaining control over the region’s rich energy resources, security concerns, and historical and cultural backgrounds. The strategic interests of external powers are changing in a broad spectrum from maintaining the status quo to increasing their own influence in the region. Within this context, Russia, China, Iran, Turkey and the US are the major external powers which link their national interests to Central Asia.

Besides its geo-strategic considerations, Russia has two reasons to be involved in Central Asia: (1) to protect ethnic Russians in the region; and (2) to maintain access to important natural resources, such as oil, natural gas and some other minerals, of the region (Jones 2000). However, Russia’s own internal problems

have not allowed a deep involvement in the region. With the exception of Kazakhstan, which has a long border with Russia and a fairly large Russian population, and Kyrgyzstan, which depends on Russia in terms of military assistance, Russia has not actively engaged with the Central Asian republics.

On the other hand, after the dissolution of the Soviet Union it was expected that Turkey and Iran would play crucial roles in the region. In order to fill the political vacuum after the collapse of the Union, both Iran and Turkey attempted to establish ties, mainly based on ethnicity, language, culture, religion, geography and economics, with particular Central Asian states. Iran has been attracted by the prospect of its own sphere of influence in the region. In the beginning, Iran tried to become a source of religious inspiration, especially for Tajikistan, but since then it has adopted a different policy. Besides its relations with Tajikistan, Iran has relations with Turkmenistan, with which it shares a long border, through proposals to construct new pipelines across Iran to the Persian Gulf (Rumer 2002). However, with the exception of Turkmenistan, the other Central Asian republics are reluctant to have close relations with Iran due to their suspicions of Iranian support for the Tajik Islamic groups. Furthermore, Iran's prospects to control Turkmenistan's natural gas resources through building pipelines have been opposed by the US, which has significant opposition to any plans to route Turkmenistan's gas through Iran and to any cooperation between Turkmenistan and Iran. As far as Turkey is concerned, it failed to follow its ambitions to play a leading role in Central Asia because of its own economic problems as well as a lack of enthusiasm in the region for Turkey's leading role (Winrow 2001). However, thanks to its status as a member of NATO and the Western world's willingness to show Turkey as a "modern and secular" model for the Central Asian republics, the situation turned in favour of Turkey especially in terms of pipeline routes.

On the other hand, because of its dominating Muslim region of Xinjiang, China has always supported oppressive regimes that have pursued policies against extremist Islam in Central Asia. It has also developed economic and trade relations with regional states. Furthermore, it is one of the important donors of military aid to Central Asia and is reported to have provided a total of USD 4.2 million in 2002 (Perlo-Freeman and Stålenheim 2003).

For the US, one of the most significant reasons to engage in the region is its campaign against the new threats of transnational terrorism, weapons of mass

destruction and “rogue states”. Since 9/11 the American military existence in the region has expanded. Within this context, all Central Asian republics signed agreements with the US for the use of their military bases and deployment of US troops. Even neutral Turkmenistan has granted permission for the US’ military overflights (Rasizade 2002). In return, the US has provided economic and military assistance and security guarantees for the regional states.

Since 1991, Russia, China and the US have attempted to exert power on Central Asia. On the one hand, China, with developing economic relations with the Central Asian republics, has gradually increased its own sphere of influence. On the other hand, the US also has paid greater attention to the region as a periphery of its foreign policy. Especially after 9/11 the existing power structure has drastically changed with some of the Central Asian states’ sudden turn towards the US. As a consequence of American and Chinese involvement in the region, Russia’s role in the region has been threatened. Accompanied by the regional states’ attitudes in favour of the US and China, a conflictual dynamic has developed in terms of relations between external powers engaging in the region. On the one hand, the Russian Central Asia agenda has been occupied with the growing American influence. On the other hand, the US has tried to fetter Iranian involvement in the region. Furthermore, both Russia and China have competed in developing economic and political ties with the Central Asian states. As a reflection of these conflictual external dynamics and previously mentioned disunified internal dynamics of the region, it can be foreseen that Central Asia is developing into a region of strategic rivalry.

The preceding section has analysed Central Asia as a regional security complex, examining the external and internal dynamics which determine the characteristics of the security. In the following section, hydropolitics as one of the major security issues among the regional states will be explored, and in light of the characteristics of the regional security complex, the possibility of a properly functioning water regime will be discussed.

HYDROPOLITICS IN CENTRAL ASIA: TOWARDS A REGIONAL WATER REGIME

Considering the vital importance of water for human beings and societies, water resources are one of the particular issues that reflects a link between environmental degradation and the outbreak of conflicts (Horsman 2001). Thus, water has security implications while maintaining the core foci of security –

competition and violence (Horsman 2001). In most cases, water threats are perceived as threats to national security, as in the case of deprivation of water for irrigation by other riparians which may lead to economic problems, which in turn makes a state vulnerable to foreign pressure (Møller 2003). According to Levy “for any environmental threat to be a security threat, there must be some demonstrable connection to some vital national interests” (Levy 1995:45). As a result of its security implications, disputes over water and efforts to form a water regime will be considered as an indispensable part of the Central Asian regional security complex.

International regimes have important effects on interdependent relations within the particular regional security complex. Since World War II, specific sets of rules have been applied as guides for international actors. International regimes are intermediate factors between the power structures and the bargaining that take place in it. Within this context, it is necessary to examine international regimes in order to understand their effects on the patterns of interdependence and power relations among units within a security complex.

Regimes are defined as:

sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations (Krasner 1991:2).

According to Krasner regimes are more than temporary arrangements which change with power and interest shifts. In this respect Keohane and Nye differentiate between agreements and regimes. According to them, agreements are “one-shot” arrangements while the purpose of regimes is to facilitate these arrangements (Keohane & Nye 1989). Furthermore, regime governed behaviour must be beyond short-term interests. In order to establish a regime, states should accept reciprocity and sacrifice short-term interests with the expectation that other actors reciprocate in the future (Krasner 1991).

According to Krasner, regimes are not regarded as ends in themselves, as they affect related behaviour and outcomes. In the international system, mainly based on the idea of sovereign states, the main function of regimes is to coordinate state behaviour in order to achieve desired outcomes. In other words, regimes help to achieve desired outcomes, which cannot be achieved through uncoordinated individual self-interests (Krasner 1991). According to Keohane, international

regime formation relies on rational-choice analysis, and self-interested actors within the international system try to establish international regimes through mutual agreement (Keohane 1991). Within this context, Stein is concerned with the demand for regimes and his argument is also based on rational choices of self-interested actors. He argues that:

...the same forces of autonomously calculated self-interest that lie at the root of the anarchic international system also lay the foundation for international regimes...there are times when rational self-interested calculation leads actors to abandon independent decision making in favour of joint decision making (Stein 1991:132).

Moreover, he states that by providing a legal framework, regimes may make agreements easy to enforce.

When it comes to regime formation, Young defines three different paths to regime forms: (1) spontaneous, in which regimes emerge from converging expectations; (2) negotiated, in which regimes are formed by agreements; and (3) imposed, in which regimes are forced by external powers. Among these formation shifts, imposed regimes are the most sensitive ones to power shifts in the division of power in the international system since it is closely tied with the power structures (Young 1991). Moreover, in all types of regime formation hegemonic powers use their powers to sustain a regime which promotes their interests, or they can veto the formation of a regime which challenges their interests. In other words, in regime formation power, defined by Keohane and Nye (1989:1) as “the ability of an actor to get others to do something they otherwise would not do”, plays a vital role. Besides the influence of hegemons, the power relations among actors within a sub-system should be taken into consideration. Both in formation and in continuation of a regime, interdependency among actors and the vulnerability of actors towards others’ actions within the system also play major roles. According to Keohane and Nye, the power structure affects the nature of a regime and the regime in turn governs the political bargaining and decision making within the system (Keohane and Nye 1989).

With regards to international waters, the concept of “water regimes” has been attracting more and more attention. Water regimes refer to the constrained mechanisms that guide the actions of parties in a river basin (Jagerskog 2001:1). Regime theory can be applied to the analysis of cooperation over river basins, and

offers a relevant tool for the analysis of how compromised solutions could be found (Jagerskog 2003:49).

According to Hafterdorn (2000:65), water regimes come into existence “when affected states to a conflict observe a set of rules designed to reduce conflict caused by use, pollution or division of a water resource or the reduction of the standing costs and the observance over time of these rules”. He distinguishes between regimes that are established to deal with all future water conflicts like the 1992 *Convention on the Protection and Use of Transboundary Water Courses and International Lakes* and the 1997 *UN Convention on the Law of the Non-Navigational Uses of International Watercourses*, and water regimes that are connected to a particular conflict.

As far as general water regimes that are established to deal with all future water conflicts are concerned, it is mainly the 1997 *UN Convention on the Law of the Non-Navigational Uses of International Watercourses* that can be applied for transboundary river management issues in addition to regional agreements aiming at the resolution of particular conflicts. In the 1997 Convention, development of rules of international law regarding non-navigational uses of international watercourses is aimed to promote and implement the main principles for non-navigational uses of transboundary watercourses. Furthermore, the general principles with regard to “equitable and reasonable utilization and participation” and “obligation not to cause significant harm” are determined by the convention (articles 6 and 7).

In fact, the existing international water law documents are ambiguous and vague in the case of transboundary waters because of the uniqueness of each water dispute. As a result of the ambiguity of the "equitable" and "reasonable" distribution of water definitions in international documents, generally the riparian states have different perceptions and interpretations. Regardless of how specifically the body of law might identify what really constitutes "equitable and reasonable" distribution, the parties are inclined to interpret the law according to their own interests. Therefore, the riparians' arguments on what constitutes equitable and reasonable distribution of water reflect their interests and needs. Within this context, riparian states have sought for regional basin-wide regimes in order to resolve transboundary water management problems instead of just relying on existing international water regimes.

Given its economic value, in Central Asia, where water scarcity and competition are acute, water has become a part of high politics and the possibility of water related conflicts has been increasing. The problems of increasing demand and declining supplies have led to unfettered competition for water. Tensions focus on the two main rivers of the region that both flow to the Aral Sea: the Syr Darya from Kyrgyzstan through Uzbekistan and Kazakhstan, and the Amu Darya from Tajikistan through Uzbekistan and Turkmenistan. The Amu Darya and its tributaries form part of the border between the Central Asian states and Afghanistan (see figure 1: Map of Aral Sea Basin). So far the tensions have been contained without any conflict, but because the regional states continue to consider the problem to be a “zero-sum game”, the possibility of a cooperative resolution is getting harder to reach.

Around 90% of the region’s crops need irrigation. Cotton is the most valuable product for the regional economies, particularly for Turkmenistan and Uzbekistan. Cotton production employs 44% of Turkmenistan’s work force and makes up 76% of Uzbekistan’s revenues (Horsman 2001). As far as upstream countries are concerned, over 50% of Kyrgyzstan’s and Tajikistan’s electricity production relies on hydroelectric power. Within this context:

...an annual cycle of disputes has developed between the three downstream countries - Kazakhstan, Turkmenistan and Uzbekistan - that are all heavy consumers of water for growing cotton, and the upstream nations - Kyrgyzstan and Tajikistan. The downstream countries require more water for their growing agricultural sectors and rising populations, while the economically weaker upstream countries are trying to win more control over their resources and want to use more water for electricity generation and farming (ICG Asia Report 2002:i).

After the collapse of the Soviet Union, water management has become a complex transboundary water management problem. During the Soviet Union era, the Ministry of Land Reclamation and Water Resources in Moscow was the single official agency responsible for water allocation. It was also assigned as the final arbiter for solving disagreements. With the independence of the Central Asian states, this centralized structure fragmented into the hands of five governments who have different policy priorities and are very reluctant to work together. Furthermore competition among regional states has caused failures in providing a feasible regional approach to replace the Soviet water management system, in which quotas, fixed by Moscow, favoured the downstream cotton-producers at the

expense of mountainous and less developed Kyrgyzstan and Tajikistan (ICG Asia Report 2002).

In other regions, where water is shared by different states, water management strategies between riparians have evolved gradually. But in the Central Asia case, states were forced to develop a ground for water management as a result of an urgent need for a set of implicit or explicit principles, norms, rules, and decision-making procedures regulating water allocation relations among regional states. With the interventions of international donor organizations and environmental NGOs, five newly independent states signed the *Almaty Agreement* in 1992, as an expression of their willingness to work towards joint coordination and action over water resources. Following the *Almaty Agreement*, a number of institutions concerning water management were established: the Interstate Coordinating Water Commission (ICWC), the sub-ordinate Amu Darya and Syr Darya Basin Management Authorities (BVOs), the Interstate Council on Problems of the Aral Sea Basin (ICAS), and the International Fund for the Aral Sea (IFAS). In spite of the existence of external intervention in the regime formation over shared river basins, the “water regime” that is formed by Central Asian states cannot be called an imposed regime. Rather, it has emerged from converging expectations and formed spontaneously, aiming at water allocation among the republics, regulation, use and protection of watercourses, and avoidance of disputes before they arise.

While some optimistic donor organizations and international institutions consider these institutionalisation efforts to establish a water regime as an example of a success story, there are still serious areas of tensions over water management among the Central Asian states. According to the ICG’s report entitled *Central Asia: Water and Conflict*, these institutionalised efforts for transboundary water management in the region have just imposed a very similar version of Soviet central planning and not provided an effective ground for long-term water allocation disputes since the new states will not be satisfied with the economic roles previously assigned by Moscow. Furthermore, the inter-state institutions’, namely the ICWC and the IFAS, lack of transparency and narrow focus emphasizing mainly water division, have led to a failure in dealing with rising tensions over water resources (ICG Asia Report 2002). In spite of the agreements signed, institutional arrangements cannot be regarded as successful because of the weak political commitment and cooperation, and financial and legal constraints (Bedford and Micklin in Horsman 2001). In this regard, the question that arises is:

can transboundary water management in Central Asia be considered as a regional water regime?

According to Krasner, in the international system the main function of regimes is to help achieve desired outcomes which cannot be achieved through uncoordinated individual self-interests (Krasner 1991). In order to form international regimes, rational self-interested calculations must lead actors to abandon independent decision-making in favour of joint decision-making. However, in the Central Asia case, individual states still put their own self-interest and decision-making before joint interests and decision-making. The disunified character of the internal dynamics of the region does not encourage efforts to form a regional water regime. Furthermore, amongst the Central Asian states there is no particular state that has the power to enforce a regime formation. As previously mentioned, Turkmenistan, Kazakhstan and Uzbekistan are equally powerful and they are far from forming alignments with each other especially in light of the political rivalry between the leaders of Turkmenistan and Uzbekistan. Thus, as far as regional decisions are concerned this rivalry restricts the potential for compromise.

The potentially unstable water security issue of the region has attracted extra-regional interests. Three neighbouring states, Afghanistan, China and Iran, outside the Commonwealth of Independent States, plus the US have direct impacts on regional water security because of their hydrologic boundaries with the regional states. Among the three, Iran has a trivial effect because only 2% of its territory and less than 1% of its population are within the basin (Horsman 2001). On the other hand, Afghanistan with 40% of its territory and 33% of its population within the Aral Sea Basin has a more complex impact. The absence of Afghanistan from regional water institutions weakens the possibility of a long-term regional water regime. For China, water demands and policies are interlinked with its economic and political objectives in Xinjiang region. China has planned to extract water from two of the tributaries in order to stimulate the economy of Xinjiang, to raise living standards and to reduce support for Uigur irredentism. If this plan succeeds, it will reduce one of the sources of transboundary security issues for the region (Horsman 2001). As far as the US is concerned, it has used environmental assistance for security objectives. According to Weinthal, the Aral Sea crisis has offered a safe issue area for US foreign policy in Central Asia (Weinthal 2000). Through the Agency for International Development (USAID), confidence building and cooperation among regional states have been attempted and some

environmental projects have been implemented. But the main objective for the US is to create a stable regional environment for its economic interests in the oil and gas sector and create a counter balance for Iranian influence in the region.

CONCLUSION

Disputes over water resources are one of the major threats for the Central Asian republics' security. After the dissolution of the Soviet Union, water management has turned into a very complicated transboundary water management problem among five Central Asian states. Both internal and external dynamics of the Central Asian regional security complex have played roles in the resolution or non-resolution of the water management disputes.

In spite of the existence of some half-hearted attempts, a regional water security regime has not been achieved yet. As a result of the competition among regional states in terms of enforcing their own national interests at the expense of other states' vulnerabilities, regional cooperation over water allocation is still problematic and fragile.

Internal dynamics of the region, competing interests, and the absence of powerful actors among the regional states has negatively effected the formation of a water regime. On the other hand, international involvement has acted neither as a medium nor as a solution for regional water disputes. External actors are unable to influence the internal dynamics of the region since their involvement has been aimed at securing their own interests regardless of regional dynamics.

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